

ZOOTAXA

65

A catalog of the Nicrophorinae (Coleoptera: Silphidae) of the world

DEREK S. SIKES, RONALD B. MADGE & ALFRED F. NEWTON



Magnolia Press
Auckland, New Zealand

DEREK S. SIKES, RONALD B. MADGE & ALFRED F. NEWTON

A catalog of the Nicrophorinae (Coleoptera: Silphidae) of the world

(*Zootaxa* 65)

304 pp.; 30 cm.

29 August 2002

ISBN 0-9582395-0-9 (Paperback)

ISBN 0-9582395-1-7 (Online edition)

PUBLISHED BY

Magnolia Press

3-6 Willcott Street

Auckland 1003

New Zealand

e-mail: zootaxa@mapress.com

<http://www.mapress.com/zootaxa/>

© 2002 Magnolia Press

All rights reserved.

No part of this publication may be reproduced, stored, transmitted or disseminated, in any form, or by any means, without prior written permission from the publisher, to whom all requests to reproduce copyright material should be directed in writing.

This authorization does not extend to any other kind of copying, by any means, in any form, and for any purpose other than private research use.

ISSN 1175-5326 (Print edition)

ISSN 1175-5334 (Online edition)

A catalog of the Nicrophorinae (Coleoptera: Silphidae) of the world

DEREK S. SIKES¹, RONALD B. MADGE² & ALFRED F. NEWTON³

¹*Department of Ecology and Evolutionary Biology, University of Connecticut, Storrs, CT 06269, USA
(dss95002@uconn.edu)*

²*1637 16 Street S. E., Calgary, Alberta, T2G 3P6, Canada*

³*Department of Zoology, Field Museum of Natural History, Roosevelt Road at Lake Shore Drive, Chicago, IL
60605, USA (anewton@fieldmuseum.org)*

Table of Contents

Abstract	4
Introduction	6
History	7
Type Specimens	7
Format	8
Terms	9
Acknowledgements	12
References [Introduction]	13
Available species group names of the Nicrophorinae	14
Eonecrophorus	20
Nicrophorus	20
Ptomascopus	222
Palaeosilpha	228
Nomina dubia	229
Lapsus calami	229
References	230
Index to genus- and species-group names	301

Abstract

All available species-group names of the subfamily Nicrophorinae (Coleoptera: Silphidae) are cataloged herein. There are currently 68 valid species, three of which are fossils; and 168 invalid species-group names, 2 of which are *nomina dubia* and 17 of which are junior homonyms and thus objectively invalid; for a total of 236 available species-group names. The type specimens of 38 valid names and 63 invalid names were found and studied. The original descriptions of 65 valid species-group names and 130 invalid species-group names were found and studied. An annotated bibliography of 1151 references that cite nicrophorine names covering the years 1752 – early 2002 is presented.

The following 18 nomenclatural acts are made:

Lectotype designations (16): Type depositories precede species names. HNHM: Budapest: *Nicrophorus antennatus* (Reitter) / BMNH: London: *Nicrophorus interruptus* Stephens; *Nicrophorus mexicanus* Matthews; *Nicrophorus montivagus* Lewis; *Nicrophorus tenuipes* Lewis / MNHN: Paris: *Nicrophorus didymus* Brullé; *Nicrophorus insularis* Grouvelle; *Nicrophorus interruptus* var. *algericus* Pasquet; *Nicrophorus podagricus* Portevin; *Nicrophorus quadraticollis* Portevin; *Nicrophorus scrutator* Blanchard / ZMAS: St. Petersburg: *Nicrophorus mongolicus* Shchegoleva-Barovskaya; *Nicrophorus przewalskii* Semenov-Tian-Shanskij; *Nicrophorus reichardti* Kieseritzky / ZMHB: Berlin: *Nicrophorus japonicus* Harold / MCZC: Cambridge: *Nicrophorus defodiens* Mannerheim;

New nomina protecta/oblita (2): *Silpha* (*Nicrophorus*) *orientalis* (Herbst, 1784) NEW NOMEN OBLITUM (article 23.9.2 ICZN ed. 4); *Nicrophorus americanus* Olivier, 1790 NEW NOMEN PROTECTUM (see *N. orientalis*);

The following 93 taxonomic changes are made:

New status as valid species (2): *Nicrophorus sepulchralis* Heer NEW STATUS as valid species; *Nicrophorus morio* Gebler NEW STATUS as valid species;

New combination (1): *Silpha* (*Nicrophorus*) *orientalis* Herbst NEW COMBINATION as *Nicrophorus orientalis* (Herbst);

New species-group revised synonyms (12): These are junior synonyms or names of subspecific rank that are being moved to new senior synonyms (as absolute synonyms, i.e. rankless): *N. tibetanus* Hlissnikovsky REVISED SYNONYM of *N. argutor* Jakovlev; *N. lateralis* Portevin REVISED SYNONYM of *N. defodiens* Mannerheim; *N. plagiatus* Motschulsky REVISED SYNONYM of *N. defodiens* Mannerheim; *N. humeralis* Pic REVISED SYNONYM of *N. insularis* Grouvelle; *N. gallicus* Jacquelin du Val REVISED SYNONYM of *N. interruptus* Stephens; *N. suturalis* Motschulsky REVISED SYNONYM of *N. interruptus* Stephens; *N. submaculatus* Reitter REVISED SYNONYM of *N. investigator* Zetterstedt; *N. funebris* Jakovlev REVISED SYNONYM of *N. morio* Gebler; *N. requiescator* Gistel REVISED SYNONYM of *N. tomentosus* Weber; *N. interruptiolus* Strand REVISED SYNONYM of *N. vestigator* Herschel; *N. interruptus* Brullé REVISED SYNONYM of *N. brullei* Jakobson, (syn. of *N. vestigator* Herschel); *P. weberi* Bodemeyer REVISED SYNONYM of *Ptomascopus plagiatus* (Ménétriés);

New species-group synonyms (25): These are species-group names of specific rank that have not been synonymized previously. *N. pseudobrutator* Reitter NEW SYNONYM of *N. argutor* Jakovlev; *N. cadaverinus* Gistel NEW SYNONYM of *N. germanicus* (L.); *N. ornatus* Hlissnikovsky NEW SYNONYM of *N. germanicus* (L.); *N. proserpinae* Gistel NEW SYNONYM of *N. germanicus* (L.); *N. basalis* Gistel NEW SYNONYM of *N. interruptus* Stephens; *N. fossor* Erichson NEW SYNONYM of *N. interruptus* Stephens; *N. grahami* Swan & Papp NEW SYNONYM of *N.*

investigator Zetterstedt; *N. maritimus* Gistel NEW SYNONYM of *N. investigator* Zetterstedt; *N. praedator* (Reitter) NEW SYNONYM of *N. investigator* Zetterstedt; *N. karafutonis* Kôno NEW SYNONYM of *N. maculifrons* Kraatz; *N. lunulatus* Gistel NEW SYNONYM of *N. marginatus* Fabricius; *N. lunatus* Gistel NEW SYNONYM of *N. marginatus* Fabricius; *N. mixtus* Hlisnikovsky NEW SYNONYM of *N. montivagus* Lewis; *N. rugulipennis* Jakovlev NEW SYNONYM of *N. morio* Gebler; *N. benguetensis* Arnett NEW SYNONYM of *N. nepalensis* Hope; *N. burmanicus* Hlisnikovsky NEW SYNONYM of *N. oberthuri* Portevin; *N. unifasciatus* Hlisnikovsky NEW SYNONYM of *N. oberthuri* Portevin; *N. pulsator* Gistel NEW SYNONYM of *N. sayi* Laporte; *N. temporalis* Shchegoleva-Barovskaya NEW SYNONYM of *N. semenowi* (Reitter); *N. fasciatus* Hlisnikovsky NEW SYNONYM of *N. tenuipes* Lewis; *N. marginatus* Gistel NEW SYNONYM of *N. tomentosus* Weber; *N. bifasciatus* Hausmann NEW SYNONYM of *N. vespillo* (L.); *N. hadenius* Gistel NEW SYNONYM of *N. vespillo* (L.); *N. oregonensis* Swann & Papp NEW SYNONYM of *N. vespilloides* Herbst; *N. olfactor* Gistel NEW SYNONYM of *N. vestigator* Herschel;

New status as absolute synonyms (53): These are species-group names of subspecific rank that we consider to be invalid synonyms without rank. *N. centralis* Portevin NEW STATUS as absolute syn. of *N. antennatus* (Reitter); *N. rotundicollis* Portevin NEW STATUS as absolute syn. of *N. concolor* Kraatz; *N. armeniacus* Portevin NEW STATUS as absolute syn. of *N. germanicus* (L.); *N. bimaculatus* Haworth NEW STATUS as absolute syn. of *N. germanicus* (L.); *N. bipunctatus* Kraatz NEW STATUS as absolute syn. of *N. germanicus* (L.); *N. fascifer* (Reitter) NEW STATUS as absolute syn. of *N. germanicus* (L.); *N. speciosus* (J.D. Schulze) NEW STATUS as absolute syn. of *N. germanicus* (L.); *N. quadriguttata* Angell NEW STATUS as absolute syn. of *N. guttula* Motschulsky; *N. vandykei* Angell NEW STATUS as absolute syn. of *N. guttula* Motschulsky; *N. atricornis* Meier NEW STATUS as absolute syn. of *N. humator* (Gleditsch); *N. maculosus* Meier NEW STATUS as absolute syn. of *N. humator* (Gleditsch); *N. minnesotianus* Hatch NEW STATUS as absolute syn. of *N. hybridus* Hatch & Angell; *N. brunnipes* Gradl NEW STATUS as absolute syn. of *N. interruptus* Stephens; *N. centrimaculatus* Reitter NEW STATUS as absolute syn. of *N. interruptus* Stephens; *N. corsicus* Laporte NEW STATUS as absolute syn. of *N. interruptus* Stephens; *N. funereus* Gén  NEW STATUS as absolute syn. of *N. interruptus* Stephens; *N. infuscaticornis* Portevin, NEW STATUS as absolute syn. of *N. interruptus* Stephens; *N. laportei* Meier NEW STATUS as absolute syn. of *N. interruptus* Stephens; *N. nigricans* Pasquet NEW STATUS as absolute syn. of *N. interruptus* Stephens; *N. pasqueti* Pic NEW STATUS as absolute syn. of *N. interruptus* Stephens; *N. trimaculatus* Gradl NEW STATUS as absolute syn. of *N. interruptus* Stephens; *N. trinitatus* Reitter NEW STATUS as absolute syn. of *N. interruptus* Stephens; *N. vodozi* Meier NEW STATUS as absolute syn. of *N. interruptus* Stephens; *N. algiricus* Pasquet NEW STATUS as absolute syn. of *N. interruptus* Stephens; *N. funerator* Fauvel NEW STATUS as absolute syn. of *N. investigator* Zetterstedt; *N. funeror* (Reitter) NEW STATUS as absolute syn. of *N. investigator* Zetterstedt; *N. insularis* Lafer NEW STATUS as absolute syn. of *N. investigator* Zetterstedt; *N. intermedius* Reitter NEW STATUS as absolute syn. of *N. investigator* Zetterstedt; *N. latifasciatus* Lewis NEW STATUS as absolute syn. of *N. investigator* Zetterstedt; *N. maritimus* Mannerheim NEW STATUS as absolute syn. of *N. investigator* Zetterstedt; *N. variolosus* Portevin NEW STATUS as absolute syn. of *N. investigator* Zetterstedt; *N. parvulus* Hlisnikovsky NEW STATUS as absolute synonym of *N. maculifrons* Kraatz; *N. nigrifrons* Portevin NEW STATUS as absolute syn. of *N. podagricus* Portevin; *N. immaculatus* Portevin NEW STATUS as absolute syn. of *N. quadripunctatus* Kraatz; *N. bohemicus* Roubal NEW STATUS as absolute syn. of *N. vespillo* (L.); *N. bolsmanni* Westhoff NEW STATUS as absolute syn. of *N. vespillo* (L.); *N. fauveli* Fauconnet NEW STATUS as absolute syn. of *N. vespillo* (L.); *N.*

minor Westhoff NEW STATUS as absolute syn. of *N. vespillo* (L.); *N. varendorffi* Westhoff NEW STATUS as absolute syn. of *N. vespillo* (L.); *N. altumi* Westhoff NEW STATUS as absolute syn. of *N. vespilloides* Herbst; *N. aurora* Motschulsky NEW STATUS as absolute syn. of *N. vespilloides* Herbst; *N. subfasciatus* Portevin NEW STATUS as absolute syn. of *N. vespilloides* Herbst; *N. subinterruptus* Pic NEW STATUS as absolute syn. of *N. vespilloides* Herbst; *N. sylvivagus* Reitter NEW STATUS as absolute syn. of *N. vespilloides* Herbst; *N. brullei* Jacobson NEW STATUS as absolute syn. of *N. vestigator* Herschel; *N. bipunctatus* Portevin NEW STATUS as absolute syn. of *N. vestigator* Herschel; *N. carreti* Pic NEW STATUS as absolute syn. of *N. vestigator* Herschel; *N. degener* Carret NEW STATUS as absolute syn. of *N. vestigator* Herschel; *N. obscuripennis* Portevin NEW STATUS as absolute syn. of *N. vestigator* Herschel; *N. rautenbergi* Reitter NEW STATUS as absolute syn. of *N. vestigator* Herschel; *N. viturati* Pic NEW STATUS as absolute syn. of *N. vestigator* Herschel; *P. lewisi* Portevin NEW STATUS as absolute syn. of *P. morio* Kraatz; *P. villosus* Portevin NEW STATUS as absolute syn. of *P. morio* Kraatz.

Key words: Coleoptera, Silphidae, Nicrophorinae, *Nicrophorus*, *Ptomascopus*, *Palaeosilpha*, *Eonecrophorus*, burying beetle, taxonomy, bibliography, catalog, synonymy, nomenclature

Introduction

This product represents the bulk of the nomenclatural and taxonomic portion of an in-progress monographic revision of the Nicrophorinae (Coleoptera: Silphidae) by the senior author. Species descriptions, distribution maps and data, keys, and phylogenetic analyses will appear separately. This catalog and bibliography will also be available in searchable format, on-line, at 'Nicrophorus Central' (Sikes, Trumbo & Peck 1999).

What is a bibliographic taxonomic catalog? Because many species have been given multiple names it is essential that knowledge of these names and their relation to the single valid name be presented in revisionary taxonomic work. Often, this is accomplished by listing chronologically each synonym under each valid name included in a standard synonymy table. Such tables are essential for associating names with species, but unlike a bibliographic catalog, they do not include the history of each name presented. This history can sometimes be simple, such as a name being synonymized a few years after being made available and never again used as a valid species name. It can also be complex, in which numerous authors disagree on a names' validity and/or rank. This information on how the taxonomic community has treated a given name throughout its history is only available in a bibliographic catalog which attempts to list every appearance of a name in a given taxon in the literature. This catalog attempts to do just that. All available species-group names in the Nicrophorinae are listed with citations of each names' appearance in the literature. However, this catalog is not complete. Certainly references exist which were not found that cite nicrophorine names, and some references included herein cited by prior workers could not be located in libraries for verification. Nevertheless, this catalog is an approximation of a complete catalog and should provide most of the significant changes that have occurred during the history of each name in the Nicrophorinae.

History

Linnaeus named two species of *Nicrophorus* in 1758 (in the genus *Silpha*) and 14 more species were described by various authors before 1800. During the nineteenth century over 100 species-group names were published. In the first half of the twentieth century the first serious revisionary work on the subfamily was undertaken. Hatch, Portevin, Pic, Hlisnikovsky, and others added another 80 species group names and made numerous synonymies. The global revisions of Portevin and Hatch throughout the 1920s resolved some taxonomic problems in the group. However, during that era it was a standard practice to describe subspecific and infrasubspecific taxa, usually with few justificatory biological data. As a result of this practice, the revisions of Portevin and Hatch included hundreds of names of questionable validity. Hatch's bibliographic catalog (1928) included most of the relevant literature references known at the time. It wasn't until the 1980s that modern taxonomic concepts were applied to these taxa, primarily by Peck and Anderson, who revised the New World silphid fauna (Anderson & Peck 1985; Peck & Anderson 1985). This catalog builds on these prior works and includes the bibliography of the Silphidae by Young (1983).

This group of beetles, due to their conspicuous nature and unusual reproductive strategy, has been popular and has received considerable attention from biologists primarily in Europe, eastern North America, Japan, Korea, and Mexico. However, most species remain poorly known, while a few species, easily available in the regions just mentioned, have been extensively researched.

Type Specimens

The type specimens of 63 invalid names and 37 valid names were found and studied, leaving the types of 131 available species-group names unstudied. With the exception of one name, *Nicrophorus chryseus* Mazokhin-Porshnyakov, whose type(s) could not be located, the unstudied types did not belong to controversial or dubious names. The existence of the unstudied types, and their presence in the depositories indicated is based on various sources, including Horn *et al.* (1990) and the original descriptions, among others. Some type depositories could not be identified, and some type specimens could not be located in the depositories to which they were thought to belong. Few major museums have complete and verified catalogs of their type specimens – one of the many bottlenecks facing efficient taxonomic enterprise. The Museum of Comparative Zoology of Harvard University is a rare exception. The Department of Entomology there has not only put a fully searchable catalog of their type holdings on-line (over 28,000 primary types) but is rapidly adding high-quality digital images of each primary type to their on-line database. The modernization of taxonomy requires museums to follow or improve upon the MCZ example.

In the interest of establishing a single name-bearing type for each microphorine species lectotypes are designated herein for 15 valid species names and 1 junior synonym. This junior synonym, *Nicrophorus interruptus* var. *algiricus* Pasquet, represents a population of *Nicrophorus interruptus* Stephens isolated in northern Africa which may, upon further study, prove to be deserving of species rank. Data for paralectotypes are also listed. We estimate that a total of 44 of the 68 valid species of the Nicrophorinae have single primary type specimens (holotypes, neotypes, or lectotypes).

Format

There exist various layouts that have been used to present the data of a bibliographic catalog. We have compared some of the more common styles (e.g. Hatch 1928; Otte 1997; and Slater 1964) and used elements of multiple styles herein. In doing so we hope to avoid what we see as drawbacks of various presentation formats while incorporating advantages of each. Particular elements that we have used include: a linear arrangement of citations rather than a wrap-around arrangement; a complete literature cited section rather than abbreviated citations in the list itself; sorting of junior synonyms alphabetically beneath the complete listing of the senior name rather than intermixing their citations, chronologically sorted, with those of the senior name. A linear arrangement greatly improves ease of use at the cost of greater page length; a complete literature cited section both greatly facilitates future work by allowing new citations to be easily added to a database derived from the literature cited section and allows more room for notes following the citation in the species section of the catalog; sorting the junior synonyms with all their associated citations to the end of the list of valid species citations greatly simplifies future changes, such as desynonymization or movement to a new senior synonym that would be painful to accomplish if all junior synonym citations were intermixed under each senior name. All names are arranged alphabetically by their specific epithet rather than phylogenetically, as was done by Hatch (1928).

Although notes are associated with many citations, the emphasis in compiling this catalog has been on establishing the history of usage for each name rather than creating a compilation of all biological, distributional, and other miscellaneous information for each entry. Nevertheless, an effort has been made to include the more important works on biology, behavior, distribution, immature stages, etc. The information in parentheses following a citation refers to the reference itself and not necessarily the name being cited. Following some species we include a Comments section which includes text supporting any taxonomic changes or nomenclatural acts made to names herein.

Terms

The exclamation point [!] following a type depository for a name indicates that DSS has studied the type specimens; following an original description indicates that one or more of us (M=Madge, N=Newton, S=Sikes) has seen the original description. Within the references section this code indicates that one or more of us has studied the reference so indicated. Square brackets [] following label data enclose information or comments that have been added which were not on the original labels.

For the few names of controversial validity we have indicated for each citation whether the name was used as a 'valid species' or as a 'syn. of' another name. During the history of some names the correct author of the epithet has been confused in the literature. These have been flagged by use of the term 'auth. attrib. [incorrect author name]'.

The term 'CONFIRMED as SYNONYM of ...' indicates when the type specimens of names considered junior synonyms by previous authors have been studied and we agree with the synonymy. For names that are considered junior synonyms whose type specimens have not been studied, we base our opinion of their validity on the literature cited below each.

The flagging of synonyms as "confirmed" as done herein is rare in taxonomic literature. When a name is first made available its validity is based on the hypothesis of the author who described the name. Subsequent mention of valid species names in the literature requires citation of the author of the name. This is done for the obvious reason that homonyms could be confused if presented without their authors, but presumably also because the hypothesis that the species is valid belongs to the describing author and his or her work should be cited. However, declaring a name to be a junior synonym is also a hypothesis (hopefully supported by some published data, but rarely so). Unfortunately, the authors of these hypotheses of synonymy are rarely cited by those using these synonymy decisions. Publishing hypotheses of other authors without attributing their work is essentially plagiarism. This single failing is common in taxonomic literature. Often names are presented as junior synonyms with no indication as to whether the author has studied the types and agrees with the synonymy, or, if not (as is usually the case), on what source the author based that name's status as junior synonym. As a result it is not uncommon for a name to have been synonymized early in its history and all subsequent citations of that name as a synonym have been based on that first, and only, opinion, each without attribution to the author who first made the synonymy. Such a case would not represent a consensus opinion, or significant agreement, on the validity of a name, because only one, uncredited, opinion exists! If authors would cite the sources on which they based their usage of names, assuming they were not claiming authority on the status of each name, tracking the history of a name would become far more accurate and simplified.

We have cataloged only available names herein. An available zoological name is one that meets the criteria laid forth in the International Code of Zoological Nomenclature (ICZN 1999), chapter four. It is common for catalogers to list unavailable names such as

nomina nuda, misspellings, misidentifications, *etc.* This was done in prior synonymical tracking efforts of the Nicrophorinae, such as by Hatch (1928). We indicate the more important of these in the notes following each citation rather than listing them as 'names' *per se*. This approach prevents the confusion that can result if such unavailable names are mistakenly considered true names (for example as occurred in Poole & Gentili [1997]). In the Nicrophorinae many authors published descriptions of infrasubspecific variation and attached names to these descriptions, usually denoted by the rank 'aberration'. These are clearly of infrasubspecific rank because they fall below the rank of variety (=subspecific rank) in the literature of the Nicrophorinae. These names are not available as specified in ICZN (1999) article 10.2 and not listed as names herein. Many names remain in the literature at the subspecific rank, usually designated in the Nicrophorinae by the term 'variety,' in most cases these varieties refer to mere differences in coloration of the elytra. This proliferation of names in the Nicrophorinae has been discussed and argued against by Leech (1937) and Anderson & Peck (1986) among others. We tend to agree with the opinions of Wilson and Brown (1953) and prefer that within-species variation be discussed rather than named. We have changed the status of 52 of these names, making them absolute synonyms, i.e. without subspecific rank. These status changes are indicated but not commented upon in the catalog. The exception, for which we provide commentary, being cases in which there is evidence to suggest that a subspecific name might be warranted. The term 'absolute synonym' is used in the sense of Hatch (1940: 243) to differentiate junior synonyms considered to have valid subspecific rank from those that do not.

The International Code of Zoological Nomenclature (ICZN 1999), article 76, states that the type locality of a nominal species-group name is the place of origin of the primary type, or is composed of the data from a syntype series if no primary type exists. The data from the type labels is thus given priority over whatever locality data is published in the original description, if they disagree. Following this protocol, we have listed the type label data as the type locality for each name whose types we have studied and listed the published data for the remaining names, if available. The terms "label" and "descrip." indicate the source of the type locality data presented; the former indicating data from the primary type label(s), the latter indicating data from the original description.

Distributional data are provided in brief form for widespread species but complete data by country are provided for species with small ranges. Country records that appear to be previously unpublished are indicated with an asterisk '*'.

Museum Codens: With the exception of private collections and OLML and IBPV, these codens all refer to and are derived from the index prepared by Arnett *et al.* (1993).

ANSP	Dept. of Entomology, Academy of Natural Sciences, Philadelphia, PA 19103 USA
BMNH	The Natural History Museum, Cromwell Rd, London SW7 5BD, UNITED KINGDOM
CMNH	Section of Insects and Spiders, Carnegie Museum of Natural History, 900 Forbes Ave., Pittsburgh, PA 15213 USA
DEIC	Deutsches Entomologisches Institut, Eberswalde-Finow 1, D-1300, F. R. GERMANY

- ETHZ Entomologisches Institut, Eidgenössische Technische Hochschule-Zentrum, Universitätsstrasse 2, CH-8006, Zürich, SWITZERLAND
- FMNH Field Museum of Natural History, Roosevelt Rd at Lake Shore Drive, Chicago, Illinois 60605-2496, USA
- HNHM Hungarian Natural History Museum, Coleoptera Collection, Department of Zoology, H-1088, Baross u. 13, Budapest, HUNGARY
- IBPV Institute of Biology and Pedology, Vladivostok, RUSSIA
- JHC private collection of Jirí Háva, Branická 13, CZ-147 00 Praha 4, CZECH REPUBLIC
- JSC private collection of Jan Schneider, Lipová 15, CZ-120 00 Praha 5, CZECH REPUBLIC
- LACM Natural History Museum of Los Angeles County, 900 Exposition Blvd., Los Angeles, CA 90007 USA
- LSUK Linnean Society, Burlington House, Piccadilly, London W1V 0LQ, UNITED KINGDOM
- MBBJ Museum Zoologicum Bogoriense, PO Box 110, Jalan, Juanda 3, Bogor, Java, INDONESIA
- MCZC Museum of Comparative Zoology, Harvard University, 26 Oxford St., Cambridge, Massachusetts 02138 USA
- MNHN Museum national d'Histoire naturelle, Laboratoire d'Entomologie, 45 rue Buffon, F-75005, Paris, FRANCE
- MNNC Museo Nacional de Historia Natural, Casilla 787, Santiago, CHILE
- MZHF Zoological Museum, PO Box 17, FIN-00014 University of Helsinki, Helsinki, FINLAND
- MZLU Museum of Zoology, Department of Zoology, Division of Systematics, Lund University, Helgonavagen 3, S-233 62 Lund, SWEDEN
- NMNH [=USNM] National Museum of Natural History, Smithsonian Institution, Dept. Entomology Collections Management Unit NHB MRC 165; 10th & Constitution Ave. N. W. Washington, D. C. 20560 USA
- NMPC Národní Muzeum, Entomologické oddělení, Golcova 1, CZ-148 00 Praha 4 - Kunratice, CZECH REPUBLIC
- NSMT National Science Museum, Hyakunin-cho 3-23-1 Shinjuku-ku, Tokyo, JAPAN
- OLML Oberösterreichisches Landesmuseum, Museumstraße 14, A-4010 Linz, AUSTRIA
- RMNH Nationaal Natuurhistorische Museum, Raamsteeg 2, Leiden 2311 Pl., NETHERLANDS
- SMFD Forschungsinstitut Senckenberg, Entomologie I, Senckenberganlage 25, D-60325 Frankfurt /M., F. R. GERMANY
- SMTD Staatliches Museum für Tierkunde, Augustusstraße 2, D-01067, Dresden, F. R. GERMANY
- ZMAS Russian Academy of Sciences, Zoological Institute, Universitetskaya nab. 1, 199034 St. Petersburg RUSSIA
- ZMHB Museum für Naturkunde der Humboldt-Universität zu Berlin, Invalidenstr. 43, D-10115, Berlin, F. R. GERMANY
- ZMPA Institut de Zoologie, Académie Polonaise des Sciences, ul. Wilcza 64, 00-679 Warszawa, POLAND
- ZMUC Zoologisk Museum, Universitetsparken 15, DK-2100 København O., DENMARK
- ZMUM Moscow State Spider Collection, Department of Invertebrate Zoology, Zoological Museum, University of Moscow, Herzen Str. 6, Moscow 103009 RUSSIA
- ZSMC Zoologische Staatssammlung, Münchhausenstraße 21, D-81247 München, F. R. GERMANY

Acknowledgements

This project represents a synthesis of many people's efforts and contributions. Stewart Peck and Stephen Trumbo supported this project in myriad ways, including traveling to distant locales with rotting meat in their luggage. Jan Růžička, Jan Schneider, and Jiri Háva have helped in obtaining rare literature references and species, among numerous other aspects of our collaborative microphorine studies. Carl Schaefer has never declined to cover early drafts with red ink- for this we thank him. AFN thanks all those who have helped with literature over the years including J. Růžička, S. Peck, and J. Zidek. There are dozens of others who have contributed to this endeavor including the many curators at the museums DSS visited or from which he borrowed material, including (for codens not listed above see Arnett et al. [1993]): Donald Azuma [ANSP], Cheryl Barr [EMEC], Luca Bartolozzi [MZUF], Richard Baumann [BYUC], Peter-René Becker [UMBB], N. Berti [MNHN], M. Brendell [BMNH], Robert W. Brooks [SEMC], B. Brugge [ZMAN], Mei-Ling Chan [NMNS], Liang-yih Chou [TARI], P. J. Clausen [UMSP], Curator of Coleoptera [ZSMC], Mario Elguenta D. [MNNC], Roy Danielsson [MZLU], A. Davis [CNCI], Amnon Freidberg [TAUI], F. Génier [CMNC], Wilford J. Hanson [EMUS], Brian Harris [LACM], Jiri Háva [JHC], Lee H. Herman [AMNH], E. Richard Hoebek [CUIC], Gloria N. House [USNM], Tomasz Huflejt [ZMPA], Juhani Itämies [ZMUO], Michael A. Ivie [MTEC], M. Jäch [NHMW], Olaf Jäger [SMTD], Josef Jelínek [NMPC], D. Kavanaugh [CASC], A. G. Kireitshuk [ZMAS], K. Konishi [ITLJ], Mr. Steven Krauth [IRCW], Wayne Wehling, Collection Manager [MSUC], C. Martín [MNMS], Ole Martin [ZMUC], Otto Merkl [HNHM], Masaaki Nishikawa [MNC], Shûhei Nomura [NSMT], Gerald R. Noonan [MCPM], Masahiro Ohara [EIHU], P. Parrillo [FMNH], Stewart B. Peck [SBPC], P. Perkins [MCZC], Ted von Proschwitz [GNME], Raymond J. Pupedis [PMNH], Edward G. Riley [TAMU], Roberta Salmaso [MSNV(MCVR)], G. A. Samuelson [BPBM], Wolfgang Schawaller [SMNS], Terence Lee Schiefer [MEMU], Jan Schneider [JSC], Andrey Sharkov [OSUC], Hans Silfverberg [MZHF], Robert W. Sites [UMRM], Sacha Spector [SSC], Manfred Uhlig [ZMHB], T. W. Pietsch [TAMU2], Andrea Vesmanis [SMFD], Bert Viklund [NHRS], Ken Walker [MVMA], Andrew E. Whittington [RSME], Tom Wier [ANIC], Kathleen R. Zeiders [INHS], and Le-yi Zheng [NKUM]. A number of important Russian works were translated for me by Alexey Solodovnikov. Vladislav O. Kozmynikh, provided considerable information from his studies of Russian silphids. Numerous faculty in the Ecology and Evolutionary Biology department at the University of Connecticut have assisted this project in various ways, including Janine Caira, Paul Lewis, Chris Simon, Jim Slater, and David Wagner. Expeditions to Nepal and Japan were wonderfully successful thanks to the generosity and assistance of Dhruva Manandhar (Nepal) and Seizi Suzuki, Masahiro Ôhara, Tomoyosi Nisimura, Munetoshi Maruyama, and Masahiro Nagano (Japan). DSS thanks his good friend Piotr Naskrecki for countless hours of taxonomic and computer related discussions that have made them both better taxonomists. This catalog project, in

particular, was enormously simplified by use of Piotr's custom-built database MANTIS (A Manager of Taxonomic Information and Specimens [Naskrecki 2001]), the cataloging features of which are simply awesome. Thanks also goes to all members of the C.R.A.F.T. discussion group (G. Berkowicz, N. Goldstein, T. Goode, B. Goodman, T. Hall, G. Leddie, A. Lenhart, P. Naskrecki, M. Sikes, K. Smith) for their assistance in many matters. Derek's sanity was preserved throughout this project by she who fantasticates his life: his wife Melissa. This project was supported by National Science Foundation Grant DEB-9981381 to Stephen Trumbo.

References [Introduction]

- Anderson, R.S. & Peck, S.B. (1986) Geographic patterns of colour variation in North American *Nicrophorus* burying beetles (Coleoptera; Silphidae). *Journal of Natural History*, 20(2), 283-297.
- Arnett, R.H., Jr., Samuelson, G.A. & Nishida, G.M. (1993) *The Insect and Spider Collections of the World*. 2nd ed. Sandhill Crane Press, Inc., Gainesville vi + 310
- Hatch, M.H. (1928) Silphidae II. IN: S. Schenkling (ed.). *Coleopterorum Catalogus, Pars 95*. W. Junk, Berlin. pp. 63-244.
- Hatch, M.H. (1940) Observations of Silphinae with a note on intraspecific variations and their designation. *Journal of the New York Entomological Society*, 48, 233-244.
- Horn, W., Kahle, I., Friese, G. & Gaedike, R. (1990) *Collectiones entomologicae : ein kompendium über den Verbleib entomologischer Sammlungen der Welt bis 1960 / Walther Horn ... [et al.]; aus dem Institut für Pflanzenschutzforschung Kleinmachnow der Akademie der Deutschen Demokratischen Republik*. Berlin : Akademie der Landwirtschaftswissenschaften der DDR 2 vol. 573pp.
- ICZN. (1999) *International Code of Zoological Nomenclature, Fourth Edition, adopted by the International Union of Biological Sciences*. International Trust for Zoological Nomenclature, London. Xxix + 306 pp.
- Leech, H B. (1937) Notes on certain names in use in the *vespilloides* group of *Nicrophorus* Fab. (Coleoptera: Silphidae). *Bulletin of the Brooklyn Entomological Society*, 32, 156-159.
- Naskrecki, P. (2001) *MANTIS: A Manager of Taxonomic Information and Specimens. FileMaker-Pro Database* [<http://viceroy.eeb.uconn.edu/InterKey/database.html>]
- Otte, D. (1997) *Tettigonioidea. (Orthoptera Species File series no. 7)*. Philadelphia: Orthopterists' Society at the Academy of Natural Sciences. 373 pp.
- Poole, R.W. & Gentili, P. (eds) (1997) *Nomina Insecta Nearctica: A check list of the Insects of North America: A database application for all the orders*. Entomological Information Services, Rockville, MD, CD-ROM and 14 page booklet.
- Sikes, D.S., Trumbo, S.T. & Peck, S.B. (1999) *Nicrophorus Central: A website devoted to research of all things nicrophorine*. {Apr 1999} <http://www.eeb.uconn.edu:591/nicroweb/nicrophorus.htm>
- Slater, J.A. (1964) *A catalogue of the Lygaeidae of the world*. Storrs, CT: University of Connecticut. 1668 pp.
- Wilson, E.O. & Brown, W.L.Jr. (1953) The subspecies concept and its taxonomic application. *Systematic Zoology*, 2, 97-111.
- Young, O.P. (1983) The biology of the Silphidae (Coleoptera): a coded bibliography. *Miscellaneous Publication, Maryland Agricultural Experiment Station*, 981, 47.

Available species group names of the Nicrophorinae

Each available species-group name (n=236) of all the nicrophorine genera (*Eonecrophorus*, *Nicrophorus*, *Palaeosilpha* and *Ptomascopus*) is listed alphabetically. Names first made available at the subspecific rank are annotated as such; names that are considered junior synonyms herein are listed with their senior synonyms (=). Homonyms (n =30) are underlined. Names of taxa we consider valid, as in the catalog list, are in bold.

Eonecrophorus

tenuicornis Kurosawa, 1985; Valid name

Nicrophorus

aleuticus Gistel, 1848; = *Nicrophorus investigator* Zetterstedt, 1824
 algericus Pasquet, 1916; as var. of *interruptus*; = *Nicrophorus interruptus* Stephens, 1830
 alpha Pierce, 1949; as subsp. of *investigator*; = *Nicrophorus nigrita* Mannerheim, 1843
 altumi Westhoff, 1881; as var. of *vespilloides*; = *Nicrophorus vespilloides* Herbst, 1783
americanus Olivier, 1790; Valid name
 anglicus Stephens, 1830; = *Nicrophorus vestigator* Herschel, 1807
antennatus (Reitter, 1884: 88) Valid name
 apicalis Kraatz, 1880; as var. of *germanicus*; = *Nicrophorus germanicus* (Linnaeus, 1758)
apo Arnett, 1950; Valid name
argutor Jakovlev, 1890; Valid name
 armeniacus Portevin, 1922; = *Nicrophorus germanicus* (Linnaeus, 1758)
 atricornis Meier, 1899; as var. of *humator*; = *Nicrophorus humator* (Gleditsch, 1767)
 aurigaster Portevin, 1925; as var. of *velutinus*; = *Nicrophorus tomentosus* Weber, 1801
 aurora Motschulsky, 1860; = *Nicrophorus vespilloides* Herbst, 1783
 baeckmanni Kieseritzky, 1930; = *Nicrophorus investigator* Zetterstedt, 1824
basalis Faldermann, 1835; Valid name
basalis Gistel, 1848; (junior primary homonym, not Faldermann); = *N. interruptus* Stephens, 1830
 benguetensis Arnett, 1946; = *Nicrophorus nepalensis* Hope, 1831
 bicolon Newman, 1838; = *Nicrophorus pustulatus* Herschel, 1807
 bifasciatus Hausmann, 1799; = *Nicrophorus vespillo* (Linnaeus, 1758)
 bimaculatus Haworth, 1807; = *Nicrophorus germanicus* (Linnaeus, 1758)
bipunctatus Kraatz, 1880; as var. of *germanicus*; = *Nicrophorus germanicus* (Linnaeus, 1758)
bipunctatus Portevin, 1914 (junior primary homonym, not Kraatz 1880) as var. of *vestigator*; = *Nicrophorus vestigator* Herschel, 1807
 bohemicus Roubal, 1939; as var. of *vespillo*; = *Nicrophorus vespillo* (Linnaeus, 1758)
 bolsmanni Westhoff, 1881; as var. of *vespillo*; *Nicrophorus vespillo* (Linnaeus, 1758)
 borealis Portevin, 1914a; as var. *vespilloides*; = *Nicrophorus vespilloides* Herbst, 1783
 brullei Jacobson, 1910; (nomen novum for *N. interruptus* Brullé); = *N. vestigator* Herschel, 1807

brunnipes	Gradl, 1882; as var. interruptus; = <i>Nicrophorus interruptus</i> Stephens, 1830
burmanicus	Hlisnikovsky, 1964; = <i>Nicrophorus oberthuri</i> Portevin, 1924
<u>cadaverinus</u>	Gravenhorst, 1807; = <i>Nicrophorus vespillo</i> (Linnaeus, 1758)
<u>cadaverinus</u>	Mareuse, 1840 (junior primary homonym, not Gravenhorst, 1807); as subsp. of sepultor; = <i>Nicrophorus vestigator</i> Herschel, 1807
<u>cadaverinus</u>	Gistel, 1857; (junior primary homonym, not Gravenhorst 1807); = <i>N. germanicus</i> (L., 1758)
carolinus	(Linnaeus, 1771) Valid name
carreti	Pic, 1933; as vari. of <i>vestigator</i> ; = <i>Nicrophorus vestigator</i> Herschel, 1807
centralis	Portevin, 1914; as var. of <i>antennatus</i> ; = <i>Nicrophorus antennatus</i> (Reitter, 1884)
centrimaculatus	Reitter, 1895; as var. of <i>interruptus</i> ; = <i>Nicrophorus interruptus</i> Stephens, 1830
chilensis	Philippi, 1871; Valid name
chryseus	Mazokhin-Porshnyakov, 1953; Nomen dubium
concolor	Kraatz, 1877; Valid name
confossor	LeConte, 1854; = <i>Nicrophorus investigator</i> Zetterstedt, 1824
confusus	Portevin, 1924; Valid name
conversator	Walker, 1866; = <i>Nicrophorus defodiens</i> Mannerheim, 1846
corsicus	Laporte, 1832; = <i>Nicrophorus interruptus</i> Stephens, 1830
curvipes	Duftschnid, 1825; = <i>Nicrophorus vespillo</i> (Linnaeus, 1758)
dauricus	Motschulsky, 1860; Valid name
defodiens	Mannerheim, 1846; Valid name
degener	Carret, 1901; as var. <i>vestigator</i> ; = <i>Nicrophorus vestigator</i> Herschel, 1807
didymus	Brullé, 1836; Valid name
distinctus	Grouvelle, 1885; Valid name
dolosus	Portevin, 1923; as var. <i>carolinus</i> ; = <i>Nicrophorus carolinus</i> (Linnaeus, 1771)
encaustus	Fairmaire, 1896; Valid name
fasciatus	Hlisnikovsky, 1932; = <i>Nicrophorus tenuipes</i> Lewis, 1887
fascifer	(Reitter, 1884); as var. of <i>Silpha germanica</i> ; = <i>Nicrophorus germanicus</i> (Linnaeus, 1758)
fauveli	Fauconnet, 1893; as var. of <i>vespillo</i> ; = <i>Nicrophorus vespillo</i> (Linnaeus, 1758)
flexuosus	Portevin, 1924; = <i>Nicrophorus didymus</i> Brullé, 1836
fossor	Erichson, 1837; = <i>Nicrophorus interruptus</i> Stephens, 1830
fractus	Portevin, 1914; as var. of <i>vespilloides</i> ; = <i>Nicrophorus vespilloides</i> Herbst, 1783
frontalis	Fischer von Waldheim, 1844; = <i>Nicrophorus germanicus</i> (Linnaeus, 1758)
funebriis	Jakovlev, 1890; as var. <i>morio</i> ; = <i>Nicrophorus morio</i> Gebler, 1817
funerarius	(Weigel, 1806); Nomen dubium
funerator	Fauvel, 1890; [unjust. emendation of <i>N. funeror</i> Reitter]; = <i>N. investigator</i> Zetterstedt, 1824
funereus	Géné, 1839; = <i>Nicrophorus interruptus</i> Stephens, 1830
funeror	(Reitter, 1884); = <i>Nicrophorus investigator</i> Zetterstedt, 1824
gallicus	Jacquelin du Val, 1860; = <i>Nicrophorus interruptus</i> Stephens, 1830
germanicus	(Linnaeus, 1758); Valid name
grahami	Swan & Papp, 1972; as subsp. of <i>investigator</i> ; = <i>Nicrophorus investigator</i> Zetterstedt, 1824
grandior	Angell, 1912; = <i>Nicrophorus germanicus</i> (Linnaeus, 1758)
grandis	Fabricius, 1792; = <i>Nicrophorus americanus</i> Olivier, 1790
guttula	Motschulsky, 1845; Valid name

hadenius	Gistel, 1857; = <i>Nicrophorus vespillo</i> (Linnaeus, 1758)
hallii	Kirby, 1837; = <i>Nicrophorus orbicollis</i> Say, 1825: 177
hauseri	Hlisenikovsky, 1932; = <i>Nicrophorus vespillo</i> (Linnaeus, 1758)
hebes	Kirby, 1837; = <i>Nicrophorus vespilloides</i> Herbst, 1783
hecate	Bland, 1865; = <i>Nicrophorus guttula</i> Motschulsky, 1845
heurni	Portevin, 1926; Valid name
hispaniola	Sikes & Peck, 2000; Valid name
humator	(Gleditsch, 1767); Valid name
humeralis	Pic, 1917; as var. of <i>insularis</i> ; = <i>Nicrophorus insularis</i> Grouvelle, 1893
hybridus	Hatch & Angell, 1925; Valid name
immaculatus	Portevin, 1923; as var. of <i>quadripunctatus</i> ; = <i>Nicrophorus quadripunctatus</i> Kraatz, 1877
immaculosis	Hatch, 1957; as subsp. of <i>guttulus</i> ; = <i>Nicrophorus guttula</i> Motschulsky, 1845
inclusus	Reitter, 1913; = <i>Nicrophorus quadraticollis</i> Portevin, 1903
infodiens	Mannerheim, 1853; = <i>Nicrophorus investigator</i> Zetterstedt, 1824
infuscaticornis	Portevin, 1924; as var. of <i>fossor</i> ; = <i>Nicrophorus interruptus</i> Stephens, 1830
<u>insularis</u>	Grouvelle, 1893; Valid name
<u>insularis</u>	Lafer, 1989; (junior primary homonym, not Grouvelle); as subsp. of <i>praedator</i> ; = <i>Nicrophorus investigator</i> Zetterstedt, 1824
intermedius	Reitter, 1895; as var. <i>investigator</i> ; = <i>Nicrophorus investigator</i> Zetterstedt, 1824
interruptiolus	Strand, 1917; = <i>Nicrophorus vestigator</i> Herschel, 1807
<u>interruptus</u>	Stephens, 1830; Valid name
<u>interruptus</u>	Brullé, 1832; (junior primary homonym, not Stephens 1830); = <i>Nicrophorus vestigator</i> Herschel, 1807
<u>interruptus</u>	Gistel, 1857; (junior primary homonym, not Stephens 1830); = <i>Nicrophorus vestigator</i> Herschel, 1807
investigator	Zetterstedt, 1824; Valid name
japonicus	Harold, 1877; Valid name
karafutonis	Kôno, 1929; as form of <i>maculifrons</i> ; = <i>Nicrophorus maculifrons</i> Kraatz, 1877
kieticus	Mroczkowski, 1959; Valid name
labiatus	Motschulsky, 1860; = <i>Nicrophorus investigator</i> Zetterstedt, 1824
labrae	Pierce, 1949; as subsp. of <i>guttulus</i> ; = <i>Nicrophorus marginatus</i> Fabricius, 1801
laportei	Meier, 1900; as var. of <i>corsicus</i> ; = <i>Nicrophorus interruptus</i> Stephens, 1830
lateralis	Portevin, 1903; as var. of <i>vespilloides</i> ; = <i>Nicrophorus defodiens</i> Mannerheim, 1846
latifasciatus	Lewis, 1887; = <i>Nicrophorus investigator</i> Zetterstedt, 1824
latifrons	Pierce, 1949; as subsp. of <i>investigator</i> ; = <i>Nicrophorus marginatus</i> Fabricius, 1801
listerianus	(Geoffroy, 1785); = <i>Nicrophorus germanicus</i> (Linnaeus, 1758)
<u>lunatus</u>	Fischer von Waldheim, 1842; Valid name
<u>lunatus</u>	LeConte, 1853; (junior primary homonym, not Fischer 1842); = <i>N. sayi</i> Laporte, 1840
<u>lunatus</u>	Gistel, 1857; = <i>Nicrophorus marginatus</i> Fabricius, 1801
luniger	Harold, 1868; = <i>Nicrophorus sayi</i> Laporte, 1840
lunulatus	Gistel, 1848; = <i>Nicrophorus marginatus</i> Fabricius, 1801
maculiceps	(Jakovlev, 1887); = <i>Nicrophorus maculifrons</i> Kraatz, 1877
maculifrons	Kraatz, 1877; Valid name
maculosus	Meier, 1899; as var. of <i>humator</i> ; <i>Nicrophorus humator</i> (Gleditsch, 1767)

<u>marginatus</u>	Fabricius, 1801; Valid name
<u>marginatus</u>	Gistel, 1857; (junior primary homonym, not Fabricius); = <i>N. tomentosus</i> Weber, 1801
<u>maritimus</u>	Guérin-Méneville, 1835; = <i>Nicrophorus investigator</i> Zetterstedt, 1824
<u>maritimus</u>	Mannerheim, 1843; (attrib. Eschscholtz; junior primary homonym, not Guérin-Méneville); = <i>Nicrophorus investigator</i> Zetterstedt, 1824
<u>maritimus</u>	Gistel, 1857; (junior primary homonym, not Guérin-Méneville 1835); = <i>N. investigator</i> Zetterstedt, 1824
mckittricki	Pierce, 1949; = <i>Nicrophorus marginatus</i> Fabricius, 1801
mediatus	Fabricius, 1801; = <i>Nicrophorus carolinus</i> (Linnaeus, 1771)
melsheimeri	Kirby, 1837; = <i>Nicrophorus investigator</i> Zetterstedt, 1824
mexicanus	Matthews, 1888; Valid name
microcephalus	Thomson, 1862; = <i>Nicrophorus investigator</i> Zetterstedt, 1824
minnesotianus	Hatch, 1927; as var. of <i>hybridus</i> ; = <i>Nicrophorus hybridus</i> Hatch & Angell, 1925
minor	Westhoff, 1881; as var. of <i>vespillo</i> ; = <i>Nicrophorus vespillo</i> (Linnaeus, 1758)
mixtus	Hlisnikovsky, 1964; = <i>Nicrophorus montivagus</i> Lewis, 1887
mongolicus	Shchegoleva-Barovskaya, 1933; Valid name
montezumae	Matthews, 1888; = <i>Nicrophorus marginatus</i> Fabricius, 1801
montivagus	Lewis, 1887; Valid name
morio	Gebler, 1817; Valid name
mortuorum	Fabricius, 1792; = <i>Nicrophorus vespilloides</i> Herbst, 1783
mysticallis	Angell, 1912; = <i>Nicrophorus carolinus</i> (Linnaeus, 1771)
nepalensis	Hope, 1831; Valid name
nigerrimus	Kraatz, 1884; = <i>Nicrophorus humator</i> (Gleditsch, 1767)
nigricans	Pasquet, 1916; as var. of <i>interruptus</i> ; = <i>Nicrophorus interruptus</i> Stephens, 1830
nigricornis	Faldermann, 1835; Valid name
nigrifrons	Portevin, 1922; as var. of <i>podagricus</i> ; = <i>Nicrophorus podagricus</i> Portevin, 1920
nigrita	Mannerheim, 1843; Valid name
oberthuri	Portevin, 1924; Valid name
obrutor	Erichson, 1837; = <i>Nicrophorus sepultor</i> Charpentier, 1825
obscuripennis	Portevin, 1914; as var. of <i>vestigator</i> ; = <i>Nicrophorus vestigator</i> Herschel, 1807
obscurus	Kirby, 1837; Valid name
obtusiscutellum	Pierce, 1949; = <i>Nicrophorus marginatus</i> Fabricius, 1801
ocellatus	Deyrolle & Fairmaire, 1878; = <i>Nicrophorus nepalensis</i> Hope, 1831
olfactor	Gistel, 1848; = <i>Nicrophorus vestigator</i> Herschel, 1807
olidus	Matthews, 1888; Valid name
orbicollis	Say, 1825; Valid name
oregonensis	Swann & Papp, 1972; as subsp. <i>vespilloides</i> ; = <i>Nicrophorus vespilloides</i> Herbst, 1783
<u>orientalis</u>	(Herbst, 1784); = <i>Nicrophorus americanus</i> Olivier, 1790
<u>orientalis</u>	Motschulsky, 1860; [junior secondary homonym, not Herbst 1784]; = <i>N. dauricus</i> Motschulsky, 1860
ornatus	Hlisnikovsky, 1964; = <i>Nicrophorus germanicus</i> (Linnaeus, 1758)
particeps	Fischer von Waldheim, 1844; = <i>Nicrophorus investigator</i> Zetterstedt, 1824
parvulus	Hlisnikovsky, 1964; as subsp. of <i>maculifrons</i> ; = <i>Nicrophorus maculifrons</i> Kraatz, 1877
pasqueti	Pic, 1917; as var. of <i>interruptus</i> ; = <i>Nicrophorus interruptus</i> Stephens, 1830

- peruvianus Pic, 1917; as var. of *didymus*; = *Nicrophorus didymus* Brullé, 1836
- plagiatus Motschulsky, 1870; (junior primary homonym, not Ménériés); = *Nicrophorus defodiens* Mannerheim, 1846
- pliozaenicus** Gersdorf, 1969; Valid name (fossil)
- podagricus** Portevin, 1920; Valid name
- pollinctor LeConte, 1854; (junior primary homonym, not Mannerheim 1853); = *Nicrophorus defodiens* Mannerheim, 1846
- pollinctor Mannerheim, 1853; = *Nicrophorus investigator* Zetterstedt, 1824
- portevini Pic, 1933; as var. of *flexuosus*; = *Nicrophorus didymus* Brullé, 1836
- praedator (Reitter, 1887); = *Nicrophorus investigator* Zetterstedt, 1824
- proserpinae Gistel, 1857; = *Nicrophorus germanicus* (Linnaeus, 1758)
- przewalskii** Semenov-Tian-Shanskij, 1894; Valid name
- pseudobrutor Reitter, 1895; as var. of *sepultor*; = *Nicrophorus argutor* Jakovlev, 1890:
- pulsator Gistel, 1848; = *Nicrophorus sayi* Laporte, 1840
- punctostriatus Pierce, 1949; as subsp. of *guttula*; = *Nicrophorus guttula* Motschulsky, 1845
- pustulatus** Herschel, 1807; Valid name
- pygmaeus Kirby, 1837; = *Nicrophorus vespilloides* Herbst, 1783
- quadraticollis** Portevin, 1903; Valid name
- quadricollis Hatch, 1928; (unecc. nomen novum for *N. quadraticollis* Portevin & junior primary homonym, not Gistel); = *Nicrophorus quadraticollis* Portevin, 1903
- quadricollis Gistel, 1848; = *Nicrophorus olidus* Matthews, 1888
- quadriguttata Angell, 1920; as var. of *guttula*; *Nicrophorus guttula* Motschulsky, 1845
- quadrimaculatus** Matthews, 1888; Valid name
- quadripunctatus** Kraatz, 1877; Valid name
- quadrisignatus Laporte, 1840; = *Nicrophorus orbicollis* Say, 1825
- rautenbergi Reitter, 1900; [corrected spelling]; as var. of *vestigator*; = *N. vestigator* Herschel, 1807
- reichardti** Kieseritzky, 1930; Valid name
- requiescator Gistel, 1848; = *Nicrophorus tomentosus* Weber, 1801
- rotundicollis Portevin, 1923; = *Nicrophorus concolor* Kraatz, 1877
- ruficornis Motschulsky, 1870; = *Nicrophorus nigrita* Mannerheim, 1843
- rugulipennis Jakovlev, 1890; = *Nicrophorus morio* Gebler, 1817
- ruspator Erichson, 1837; (unecc. nomen novum for *N. investigator* Zetterstedt); = *N. investigator* Zetterstedt, 1824
- ruthenus Motschulsky, 1859; = *Nicrophorus germanicus* (Linnaeus, 1758)
- satanas** Reitter, 1893; Valid name
- sasai** Růžička, Háva & Schneider, 2000; Valid name
- sayi** Laporte, 1840; Valid name
- scrutator** Blanchard, 1842; Valid name
- semenowi** (Reitter, 1887); Valid name
- sepulchralis** Heer, 1841; Valid name
- sepultor** Charpentier, 1825; Valid name
- sepultor Gyllenhal, 1827; (junior primary homonym, not Charpentier, 1825); = *N. vestigator* Herschel, 1807
- sibiricus Motschulsky, 1860; = *Nicrophorus investigator* Zetterstedt, 1824
- smefarka** Háva, Schneider & Růžička, 1999; Valid name
- speciosus (J.D. Schulze, 1775); = *Nicrophorus germanicus* (Linnaeus, 1758)

<i>spinipes</i>	Leach, 1815; = <i>Nicrophorus vespillo</i> (Linnaeus, 1758)
<i>stenophthalmus</i>	(Jakovlev, 1887) = <i>Nicrophorus lunatus</i> Fischer von Waldheim, 1842
<i>subfasciatus</i>	Portevin, 1914; as var. of <i>vespilloides</i> ; = <i>Nicrophorus vespilloides</i> Herbst, 1783
<i>subinterruptus</i>	Pic, 1917; as var. of <i>vespilloides</i> ; = <i>Nicrophorus vespilloides</i> Herbst, 1783:
<i>submaculatus</i>	Reitter, 1895; as var. of <i>interruptus</i> ; = <i>Nicrophorus investigator</i> Zetterstedt, 1824
<i>sulcatus</i>	Fischer von Waldheim, 1844; = <i>Nicrophorus humator</i> (Gleditsch, 1767)
<i>suturalis</i>	Motschulsky, 1860; = <i>Nicrophorus interruptus</i> Stephens, 1830
<i>sylvaticus</i>	Reitter, 1895; as var. of <i>vespilloides</i> ; = <i>Nicrophorus vespilloides</i> Herbst, 1783
<i>sylvivagus</i>	Reitter, 1897; as var. of <i>vespilloides</i> ; = <i>Nicrophorus vespilloides</i> Herbst, 1783:
<i>tardus</i>	Mannerheim, 1853; = <i>Nicrophorus pustulatus</i> Herschel, 1807
<i>temporalis</i>	Shchegoleva-Barovskaya, 1933; = <i>Nicrophorus semenowi</i> (Reitter, 1887)
tenuipes	Lewis, 1887; Valid name
<i>tibetanus</i>	Hlisenkovsky, 1964; = <i>Nicrophorus argutor</i> Jakovlev, 1890
tomentosus	Weber, 1801; Valid name
<i>trimaculatus</i>	Gradl, 1882; as var. of <i>interruptus</i> ; = <i>Nicrophorus interruptus</i> Stephens, 1830
<i>trinotatus</i>	Reitter, 1911; as var./ab. of <i>interruptus</i> ; = <i>Nicrophorus interruptus</i> Stephens, 1830
<i>unifasciatus</i>	Hlisenkovsky, 1964; = <i>Nicrophorus oberthuri</i> Portevin, 1924
ussuriensis	Portevin, 1923; Valid name
validus	Portevin, 1920; Valid name
<i>vandykei</i>	Angell, 1920; as var. of <i>guttula</i> ; = <i>Nicrophorus guttula</i> Motschulsky, 1845
<i>varendorffi</i>	Westhoff, 1881; as var. of <i>vespillo</i> ; = <i>Nicrophorus vespillo</i> (Linnaeus, 1758)
<i>variolosus</i>	Portevin, 1924; as var. of <i>investigator</i> ; = <i>Nicrophorus investigator</i> Zetterstedt, 1824
<i>velutinus</i>	Fabricius, 1801; = <i>Nicrophorus tomentosus</i> Weber, 1801
vespillo	(Linnaeus, 1758); Valid name
vespilloides	Herbst, 1783; Valid name
vestigator	Herschel, 1807; Valid name
<i>vicinus</i>	Shchegoleva-Barovskaya, 1933; = <i>Nicrophorus tenuipes</i> Lewis, 1887
<i>virginicus</i>	Frölich, 1792; = <i>Nicrophorus americanus</i> Olivier, 1790
<i>viturati</i>	Pic, 1917; as var. of <i>vestigator</i> ; = <i>Nicrophorus vestigator</i> Herschel, 1807
<i>vodozi</i>	Meier, 1900; as var. of <i>corsicus</i> ; = <i>Nicrophorus interruptus</i> Stephens, 1830
<i>vulgaris</i>	Fabricius, 1775; = <i>Nicrophorus vespillo</i> (Linnaeus, 1758)

Palaeosilpha

fraasii Flach, 1890; Valid name (fossil)

Ptomascopus

aveyronensis Flach, 1890; Valid name (fossil)

carbunculus Lewis, 1879; = *Ptomascopus morio* Kraatz, 1877

dauidis Deyrolle & Fairmaire, 1878; = *Ptomascopus plagiatus* (Ménétriés, 1854)

lewisi Portevin, 1914b; as var. of *morio*; = *Ptomascopus morio* Kraatz, 1877: 104

morio Kraatz, 1877; Valid name

- plagiatiipennis Lewis, 1879; = *Ptomascopus plagiatus* (Ménétriés, 1854)
plagiatus (Ménétriés, 1854) Valid name
 quadrimaculatus Kraatz, 1877; = *Ptomascopus plagiatus* (Ménétriés, 1854)
 villosus Portevin, 1923; as var. of *morio*; = *Ptomascopus morio* Kraatz, 1877
 weberi Bodemeyer, 1916; = *Ptomascopus plagiatus* (Ménétriés, 1854)
zhangla Háva, Schneider & Růžička, 1999; Valid name

EONECROPHORUS Kurosawa, 1985: 45

Type species: *Eonecrophorus tenuicornis* Kurosawa, 1985 (orig. des.)

Eonecrophorus tenuicornis Kurosawa, 1985

Type locality: “Nepal: Kalapokhri 3000m, Singalila Dara” [27°28'00"N 88°04'00"E; label]

Type depository: NSMT: Tokyo [!] holotype male

Distribution: Oriental: Himalayas: far eastern Nepal

- 1985b Kurosawa: 47 (descriptions) >> Orig. comb.: *Eonecrophorus tenuicornis* [!N, S]
 1986 Nishikawa: 99 (catalog in Japanese (English summary))
 2000 Sikes & Peck: 396 (descriptions, phylogenetics)
 2001 Peck: 269 (keys, descriptions and distributions)
 2001 Trumbo et al.: 558 (biology, ecology, behavior) >> suggests behavioral studies of this species to be a high priority
 2002 Nikolajev & Kozminykh: 93 (catalog, distribution, descriptions, keys, figures in Russian (English summary))

NICROPHORUS Fabricius, 1775: (13), 71.

Type species: *Silpha vespillo* L. 1758 (des. Latreille, 1810: 427)

=*Necrophorus* Thunberg, 1789: 7 (unjust. emend. *Nicrophorus*)

=*Necrophagus*; Leach, 1815: 88 (subseq. missp. *Necrophorus*)

=*Cyrtoscelis* Hope, 1840: 149

Type species: *Silpha vespillo* Linnaeus, 1758 (orig. des.)

=*Necrophorus* (*Acanthopsilus*) Portevin, 1914c: 223

Type species: *Necrophorus concolor* Kraatz, 1877 (monotypy)

=*Necrocharis* Portevin, 1923b: 68

Type species: *Silpha carolina* Linnaeus, 1771 (monotypy)

=*Necrophorus* (*Eunecrophorus*) Semenov-Tian-Shanskij, 1933: 152

Type species: *Nicrophorus americanus* Olivier, 1790 (orig. des.)

=*Necrophorus* (*Necrophoricus*) Semenov-Tian-Shanskij, 1933: 152

Type species: *Necrophorus lunatus* Fischer, 1842 (orig. des.)

=*Necrophorus* (*Nesonecrophorus*) Semenov-Tian-Shanskij, 1933: 153

Type species: *Necrophorus podagricus* Portevin, 1920 (orig. des.)

- =Necrophorus (Necrophorindus) Semenov-Tian-Shanskij, 1933: 153
Type species: *Necrophorus validus* Portevin, 1920 (orig. des.)
- =Necrophorus (Necrocleptes) Semenov-Tian-Shanskij, 1933: 153
Type species: *Silpha humator* Gleditsch, 1767 (orig. des.)
- =Necrophorus (Nesonecropter) Semenov-Tian-Shanskij, 1933: 154
Type species: *Necrophorus distinctus* Grouvelle, 1885 (orig. des.)
- =Necrophorus (Necropter) Semenov-Tian-Shanskij, 1933: 154
Type species: *Necrophorus investigator* Zetterstedt, 1824 (orig. des.)
- =Necrophorus (Stictonecropter) Semenov-Tian-Shanskij, 1933: 154
Type species: *Necrophorus pustulatus* Herschel, 1807 (orig. des.)
- =Necrophorus (Neonicrophorus) Hatch, 1946: 99
Type species: *Silpha germanica* Linnaeus, 1758 (orig. des.)
- =Necroxenus Semenov-Tian-Shanskij, 1926: 46
Type species: *Necrophorus przewalskii* Semenov-Tian-Shanskij 1894: 528 (orig. des.)
- 1950 Neumann & Sellnick: 643 (*Nicrophorus* as mite host, species not mentioned, in German)
- 1957 Belozarov: 1802 (*Nicrophorus* as mite host, species not mentioned, in Russian)
- 1960 Duporte: 674 (morphology of head in *Nicrophorus*, species not mentioned)
- 1961 Balfour-Browne: 345 (morphology in *Nicrophorus*, species not mentioned)
- 1963 Arnett: 332 (*Nicrophorus* generic characters, biology; species not listed but 1 figured)
- 1965 Evans: 408 (morphology: gular size in *Nicrophorus*, species not mentioned)
- 1973 Hlavac: 155 (morphology: prothorax, procoxa in *Nicrophorus*, species not mentioned)
- 1974 Evans: 69 (morphology: prothorax, procoxa in *Nicrophorus*, species not mentioned)
- 1981 Pirone & Sullivan: 191 (ecology, as family only, no genera or species mentioned)
- 1982a Korn: 261 (*Nicrophorus* as mite host, species not mentioned, in German)
- 1984 Müller & Dressel: 377 (biology, brief abstract, genus *Nicrophorus* but no species mentioned)
- 1986 Caveney: 1798 (morphology: *Nicrophorus* ommatidium structure, species not mentioned)
- 1989 Elgueta & Arriagada: 13 (distribution, species not listed, in Spanish)
- 1998 Robertson et al.: 265-286 (biology, *Nicrophorus* but species not named in abstract)
- 2000 Peck: 270 (*Nicrophorus* generic characters, biology; species not listed but 1 figured)

Nicrophorus americanus Olivier, 1790 NEW NOMEN PROTECTUM (see *N. orientalis*)

Type locality: "Ame'rique, New Jersey" [label]

Type depository: MNHN: Paris [!] holotype male

Distribution: Nearctic: eastern North America [now extirpated over 95% of range]

1774 DeGeer: 168 (biology in French) >> misid as var. of *N. vespillo* after Olivier (1790)

- 1790 Olivier: no. 10, p. 6 (descriptions in French) >> Orig. comb.: *Nicrophorus americanus*; habitus figured [!N, S]
- 1792 Fabricius: 247 (descriptions) >> as syn. of *N. grandis*
- 1801 Fabricius: 334 (descriptions) >> as syn. of *N. grandis*
- 1806 Melsheimer: 16 (catalog) >> auth. attrib. "K."
- 1826 Sturm: 173 (catalog in German)
- 1840 Laporte: 2 (descriptions in French) >> as syn. of *N. grandis*
- 1853 LeConte: 276 (descriptions) >> as valid species & senior syn. of *N. grandis*
- 1853 Melsheimer: 39 (catalog)
- 1854 Emmons: 57 (descriptions)
- 1862 Osten-Sacken: 408 (biology, behavior in German)
- 1868 Gemminger & Harold: 717 (catalog)
- 1869 Glover (biology, behavior)
- 1871 LeBaron
- 1873 Crotch: 37 (checklist) >> as *Silpha americana*
- 1877 Harold: 345 (descriptions in German) >> as *N. americanus*; compared with *N. japonicus*
- 1878b Hubbard & Schwarz: 650 (checklist)
- 1880 Horn: 229 (revision: key, descriptions & catalog)
- 1885 Henshaw: 26 (checklist)
- 1895 Clark: 61 (biology, behavior) >> feeding on maggots
- 1895 Hamilton: 324 (checklist)
- 1902 Dury: 12 (checklist)
- 1903 Portevin: 330 (descriptions in French)
- 1904 Davis: 18 (checklist)
- 1904 Needham: 295 (biology, ecology)
- 1908 Heyne & Taschenberg: 38 (descriptions in German) >> brief description
- 1910 Barkowski: 79 (key, descriptions, regional in German)
- 1910 Blatchley: 274 (key, descriptions, regional)
- 1910 Smith: 229 (checklist)
- 1911 Wickham: 10 (checklist)
- 1915 Frost: 209 (biology, ecology)
- 1915 Jaques: 526 (biology, ecology)
- 1920 Britton: 224 (checklist)
- 1920 Leng: 86 (catalog)
- 1921 Lutz (biology, ecology, behavior)
- 1922 Sherborn: 261 (catalog - index)
- 1923 Portevin: 305 (key, descriptions in French)
- 1926a Portevin: 204 (revision: key, descriptions & catalog in French)
- 1927b Abbott: 208-216 (biology, behavior) >> "Physiology, smell" - Hatch 1928
- 1927a Hatch: 5, 7, 19 (key, descriptions, description of variation)
- 1927b Hatch: 354 (revision: key, descriptions & catalog)
- 1928 Hatch: 132 (catalog)
- 1928 Leonard: 270 (checklist)
- 1930 Johnson: 44 (checklist)
- 1932 Jones: 352 (biology, ecology) >> not accepted as prey by birds in tests

- 1933 Semenov-Tian-Shanskij: 150 (catalog in Russian & Latin) >> as type sp. of new subgenus *Eunecrophorus*
- 1933a Shchegoleva-Barovskaya: 164 (revision: key, descriptions & catalog in Russian)
- 1935 Balduf: 69 (biology, ecology, behavior)
- 1936 Meserve: 132 (checklist, distribution)
- 1938 Bimley: 135 (checklist)
- 1944 Arnett: 5, 22 (morphology: female genitalia) >> female genitalia figured, pl. 3, fig. 1
- 1944 Blackwelder: 99 (catalog)
- 1945 Löding: 32 (checklist)
- 1949 Bliss: 200 (morphology: sexual dimorphism)
- 1949 Horion: 78 (biology, ecology, distribution in German)
- 1951 Jaques: 83 (key, descriptions)
- 1957 Walker: 273 (biology, ecology)
- 1958 Madge: 29 (revision: key, descriptions, ecology, distributions)
- 1961 Dillon & Dillon: 175 (key, descriptions)
- 1969 Gersdorf: 305 (fossils, descriptions in German) >> auth. attrib. Say
- 1969 Kirk: 28 (checklist)
- 1970 Gersdorf: 366 (morphology: female genitalia in German) >> auth. attrib. Say
- 1971 Lumpkin (biology, ecology) >> 19 specimens recorded from different elevations in Tennessee
- 1972 Swan & Papp: 356 (description) >> brief description
- 1973 Blackwelder: 4 (checklist, synonymy)
- 1975 Baldwin: 22 (key, description, distribution, ecology)
- 1975 Kirk & Balsbaugh: 52 (checklist)
- 1976 Shubeck: 265 (biology, ecology) >> cites Smith (1910)
- 1977 Headstrom: 105 (description) >> brief description
- 1980 Arnett et al.: 128 (key, descriptions)
- 1980 Davis: 247 (biology, conservation) >> with discussion of this sp. decline
- 1980 Milne & Milne: 550 (field guide, brief descriptions, ecology) >> "may be extinct"
- 1981 Kozol: 1-164 (biology, conservation, genetics) >> focal species
- 1982b Anderson: 362-365 (biology, conservation) >> focal species
- 1982 Milne & Milne (biology)
- 1983 IUCN: 379 (biology, conservation)
- 1983 Lago & Miller: 84 (checklist)
- 1983 White: 121 (field guide) >> descriptive note
- 1984 Papp: 69 (descriptions) >> brief description
- 1985 Anderson & Peck: 54 (revision: key, descriptions & catalog)
- 1985 Opler (biology, conservation)
- 1985 Peck & Anderson: 276 (key, descriptions, phylogenetics)
- 1986 Nishikawa: 99 (catalog in Japanese (English summary))
- 1987 Peck & Kaulbars: 54 (checklist)
- 1987 Schweitzer & Master: 1-13 (biology, conservation) >> focal species
- 1987 Staines: 16 (key, descriptions) >> Maryland records
- 1988 Recce (biology, conservation)
- 1989 Anonymous (biology, conservation)

- 1989 Kozol: 1-10 (biology, conservation) >> focal species
 1989 Kozol et al.: 167-176 (biology, conservation) >> focal species
 1989 Lamson: 29652 (biology, conservation)
 1990 Amaral & Morse: 3-10 (biology, conservation) >> focal species
 1990 Kozol: 1-17 (biology, conservation) >> focal species
 1990 Moore (biology, conservation) >> focal species
 1990 Peck: 1121 (key)
 1990 Schweitzer (biology, conservation) >> focal species
 1991 Anonymous (biology, conservation) >> focal species
 1991 Campbell: 85 (catalog, distribution)
 1991 Jameson & Ratcliffe (biology, conservation)
 1991 Kozol: 1-15 (biology, conservation) >> focal species
 1991 Laplante et al.: 29 (checklist in French)
 1991 Marshall: 110 (biology, conservation) >> records from 1972 in S. Ontario
 1991 Raithel: 1-80 (biology, conservation) >> focal species
 1992a Amaral: 1-8 (biology, conservation) >> focal species
 1992b Amaral: 509 (biology, conservation) >> focal species
 1992 Ashton (biology, conservation) >> focal species
 1992a Creamer: 288-293 (biology, conservation) >> focal species
 1992 Jameson: 18-20 (biology, conservation) >> focal species
 1992 Ratcliffe & Jameson: 421-425 (biology, conservation) >> focal species
 1992 Will: 10-11 (biology, conservation) >> focal species
 1993 Ashton (biology, conservation) >> focal species
 1993 Creamer: 136-141 (biology, conservation) >> focal species
 1993 Creighton et al.: 275-277 (biology, conservation) >> focal species
 1993 Creighton et al. (biology, conservation) >> focal species
 1993 Marrone (biology, conservation) >> focal species
 1993 Peck & Miller: 7 (species-group catalog)
 1993 Quisenberry & Purcell: 77 (biology, conservation) >> focal species
 1994 Backlund (biology, conservation) >> focal species
 1994 Kozol et al.: 928-935 (biology, conservation, genetics) >> focal species
 1994 Kozol et al.: 112 (biology, conservation) >> focal species
 1994a Marrone (biology, conservation) >> focal species
 1994b Marrone (biology, conservation) >> focal species
 1994 Neal et al.: 127-129 (checklist) >> focal species
 1994 Peyton: 1-12 (biology, conservation) >> focal species
 1994 Sharps (biology, conservation) >> focal species
 1995 Ashton (biology, conservation)
 1995 Backlund & Marrone: 1-11 (biology, conservation) >> focal species
 1995 Lingafelter: 219 (biology, ecology) >> not found
 1995 Lomolino et al.: 605-614 (biology, conservation in English (Spanish summary))
 >> focal species
 1995 Matthews (biology, conservation) >> focal species
 1995a Ratcliffe (biology, conservation) >> focal species
 1995b Ratcliffe (biology, conservation) >> focal species
 1995 Wetzel: 562-566 (biology, conservation) >> focal species

- 1996 Downie & Arnett: 356 (key, descriptions, regional) >> misspelled as *N. americanum*
- 1996 Dunn: 169 (catalog)
- 1996 Lomolino & Creighton: 235-241 (biology, conservation) >> focal species
- 1996 Peyton: 1-16 (biology, conservation) >> focal species
- 1996 Ratcliffe: 60 (revision: key, descriptions & catalog) >> focal species
- 1996 Wetzel: 12 (biology, conservation)
- 1997 Amaral et al.: 121-132 (biology, conservation) >> focal species
- 1997 Backlund & Marrone: 53-58 (biology, conservation) >> focal species
- 1997 Bedick: 1-94 (biology, conservation) >> focal species
- 1997 Guarisco: 116-122 (biology, conservation) >> focal species
- 1997 Holloway & Schnell: 145-152 (biology, conservation) >> focal species
- 1997 King & Cummings: 1088-1095 (biology, genetics)
- 1997 Miller & McDonald: 22 (biology, conservation) >> focal species
- 1998 Carlton & Rothwein: 179-185 (biology, conservation) >> focal species
- 1998 Creighton & Schnell: 281-287 (biology, conservation) >> focal species
- 1998 Peck & Thomas: 37 (checklist, distribution)
- 1998 Schnell & Hiott (biology, conservation) >> focal species
- 1998b Scott: 599+ (biology, review of: ecology, behavior)
- 1999 Amaral & Prospero: 10 (biology) >> focal species
- 1999 Backlund & Marrone (biology, conservation) >> focal species
- 1999 Bedick et al.: 171-181 (biology, conservation) >> focal species
- 1999a Schnell & Hiott (biology, conservation) >> focal species
- 1999b Schnell & Hiott (biology, conservation) >> focal species
- 1999c Schnell & Hiott: 1-18 (biology, conservation) >> focal species
- 2000 Horn: 20-23 (biology, conservation) >> focal species
- 2000 Sikes & Peck: 394 (descriptions, phylogenetics) >> in key only
- 2000 Szalanski et al.: 589-594 (biology, conservation, phylogenetics, genetics) >> focal species

= *grandis* Fabricius, 1792

Type locality: "in America" [descrip.]

Type depository: ZMUC: Kiel, 2 syntypes

- 1792 Fabricius: 247 (descriptions) >> Orig. comb.: *Nicrophorus grandis* [!N, S]
- 1793 Herbst: 152 (catalog in German) >> as valid species
- 1801 Fabricius: 334 (descriptions) >> as valid species; senior syn to *N. americanus*
- 1807 Herschel: 268 (descriptions in German) >> as valid species
- 1821 Dejean: 42 (catalog) >> as valid species
- 1833 Dejean: 117 (catalog in French) >> as valid species
- 1836 Dejean: 131 (catalog in French) >> as valid species
- 1840 Laporte: 2 (descriptions in French) >> as valid species; senior syn to *N. americanus*
- 1853 LeConte: 276 (descriptions) >> as syn. of *N. americanus*
- 1853 Melsheimer: 39 (catalog) >> as syn. of *N. americanus*
- 1854 Lacordaire: 200 (biology, catalog in French) >> as valid species

- 1868 Gemminger & Harold: 717 (catalog) >> as syn. of *N. americanus*
 1880 Horn: 314 (revision: key, descriptions & catalog) >> as syn. of *N. americanus*
 1890 Flach: 106 (descriptions in German) >> as valid species
 1920 Leng: 86 (catalog) >> as syn. of *N. americanus*
 1926a Portevin: 252 (revision: key, descriptions & catalog in French) >> as syn. of *N. americanus*
 1928 Hatch: 132 (catalog) >> as syn. of *N. americanus*
 1944 Arnett: 5 (morphology: female genitalia) >> as syn. of *N. americanus*
 1985 Anderson & Peck: 54 (revision: key, descriptions & catalog) >> as syn. of *N. americanus*
 1993 Peck & Miller: 7 (species-group catalog) >> as syn. of *N. americanus*
 1996 Ratcliffe: 60 (revision: key, descriptions & catalog) >> as syn. of *N. americanus*

= *orientalis* (Herbst, 1784) NEW NOMEN OBLITUM (article 23.9.2 ICZN ed. 4);
 NEW COMBINATION as *Nicrophorus orientalis* (Herbst); NEW SYNONYM of *N. americanus* Oliv.

Type locality: unknown

Type depository: ZMHB: Berlin?

- 1784 Herbst: 77 (descriptions in German) >> Orig. comb.: *Silpha* (*Nicrophorus*) *orientalis* [!M]

= *virginicus* Frölich, 1792

Type locality: "Virginien" [USA: Virginia; descrip.]

Type depository: ZSMC: München?

- 1792 Frölich: 123 (descriptions in German) >> Orig. comb.: *Nicrophorus virginicus* [!N, S]
 1853 Melsheimer: 39 (catalog) >> as syn. of *N. americanus*
 1868 Gemminger & Harold: 717 (catalog) >> as syn. of *N. americanus*
 1880 Horn: 314 (revision: key, descriptions & catalog) >> as syn. of *N. americanus*
 1920 Leng: 86 (catalog) >> as syn. of *N. americanus*
 1926a Portevin: 252 (revision: key, descriptions & catalog in French) >> as syn. of *N. americanus*
 1928 Hatch: 132 (catalog) >> as syn. of *N. americanus*
 1944 Arnett: 5 (morphology: female genitalia) >> as syn. of *N. americanus*
 1985 Anderson & Peck: 54 (revision: key, descriptions & catalog) >> as syn. of *N. americanus*
 1993 Peck & Miller: 7 (species-group catalog) >> as syn. of *N. americanus*
 1996 Ratcliffe: 60 (revision: key, descriptions & catalog) >> as syn. of *N. americanus*

Comments: Article 23.9 of the ICZN ed. 4 provides means by which stability can be maintained when a commonly used but younger name is threatened by synonymy with a forgotten older name. In this case the name *Nicrophorus orientalis* Herbst, 1784 threatens stability by being older than its presumed synonym *Nicrophorus americanus* Olivier, 1790 (synonymy based on interpretation of the original description). The older name has not been used in any publication found other than the original description, thereby satisfying

the condition of article 23.9.1.1. The younger name has been used in over 80 works by over 20 authors in the immediate preceding 50 years over the time span 1957 - 2000 (as can be seen above), and thus satisfies the condition of article 23.9.1.2. Therefore the older name has been placed in synonymy herein as a *nomen oblitum* under the younger name.

Nicrophorus antennatus (Reitter, 1884) desig. lectotype

Type locality: "Tiflis, Kaukas" [Caucasus; label]

Type depository: HNHM: Budapest (!) lectotype male, 1 paralectotype male

Distribution: Palearctic: cEurope; India: Kashmir; Iran; Israel; Turkey; China:

Heilongjiang; Turkmenistan; Kazakhstan; Uzbekistan; Tajikistan; Russian plain

1884 Reitter: 88 (descriptions in German) >> Orig. comb.: *Silpha antennata* [!N, S]

1885 Reitter: 324 (in German)

1891 Heyden et al.: 139 (checklist) >> as *N. vestigator* var. *antennatus*

1893 Heyden: 51 (checklist in German) >> as *N. vestigator* var. *antennatus*

1895b Reitter: 330 (description of variation in German) >> as valid species

1896 Heyden: 38 (checklist in German) >> as valid species

1899 Ganglbauer: 167 (key, descriptions, in German) >> as valid species

1899 Meier: 99 (description of variation in German) >> as valid species

1906 Heyden et al.: 247 (checklist)

1909 Reitter: 241 (in German) >> description of variation: 1 unavailable name

1910 Jakobson: 612 (checklist in Russian)

1911 Reitter: 106 (description of variation in German) >> description of variation: 1
unavailable name

1913 Kuhnt: 336 (in German)

1916 Pasquet: 172 (description of variation in French)

1916 Schaufuss: 274 (checklist in German)

1925 Portevin: 169 (description of variation in French)

1925 Winkler: 265 (catalog)

1926 Porta: 333 (key, checklist in Italian)

1926a Portevin: 248 (revision: key, descriptions & catalog in French)

1927b Hatch: 362 (revision: key, descriptions & catalog)

1928 Hatch: 149 (catalog)

1929 Hlisnikovsky (in German)

1930 Roubal: 241 (catalog in Czech)

1932 Hlisnikovsky: 30 (key, descriptions in German)

1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin)

1933a Shchegoleva-Barovskaya: 181 (revision: key, descriptions & catalog in Russian)

1935 Kanabé: 64 (in German)

1939 Roubal: 85 (description of variation in Czech (French summary))

1942 Hlisnikovsky: 579 (nomenclature in German) >> synonymy of unavailable names

1942 Roubal: 17 (description of variation in Czech) >> description of variation: 1
unavailable name

1949 Horion: 78 (biology, ecology, distribution in German)

1953 Akopyan (biology, ecology in Russian)

1955 Mroczkowski: 23 (key, descriptions in Polish)

- 1970 Franz: 213 (checklist, distribution in German)
 1970 Gersdorf: 368 (morphology: female genitalia in German)
 1971 Freude: 194 (key in German)
 1973 Audisio (checklist) >> 1972 record of this sp. in Friuli, Italy
 1975b Emetz: 103 (checklist in Russian)
 1978 Burakowski et al.: 199 (catalog, distribution, synonymy in Polish)
 1981 Šustek: 40 (key, descriptions, regional in Czech)
 1984a Bredohl: 11-25 (morphology: stridulatory files in German (English summary))
 1985 Zahradník: 122 (catalog, annotated & figured in German)
 1986 Nishikawa: 98 (catalog in Japanese (English summary))
 1987 Lucht: 67 (catalog in German)
 1989 Koch: 165 (biology, ecology in German)
 1990 Zahradník: 122 (key in Spanish)
 1992 Kozminykh: 64 (checklist in Russian)
 1992 Kozminykh & Esjunin: 68 (checklist in Russian)
 1993b Kozminykh: 65 (key, descriptions, regional in Russian)
 1993 Růžička: 34 (checklist, distribution in English & Czech)
 1994 Kozminykh & Esjunin: 78 (biology, ecology in English (Russian summary))
 1995 Angelini et al.: 10 (checklist, distribution in Italian)
 1995 Kozminykh: 110 (key in Russian)
 1995 Kozminykh & Nemkov: 112 (catalog in Russian)
 1996 Alexandrovich et al.: 17 (checklist, distribution in Russian & English)
 1996 Bertin & Lebboroni: 155 (checklist in Italian (English summary))
 1997 Kozminykh: 66 (checklist in Russian)
 1998 Háva et al.: 178 (distribution note in English (Czech summary))
 1998 Pushkin & Sigida: 84 (biology, ecology in Russian)
 2000b Parkhomenko: 160-164 (morphology, larval stages in Ukrainian (English summary)) >> description of larva; misspelled as *N. antennatus* throughout
 2002 Nikolajev & Kozminykh: 113 (catalog, distribution, descriptions, keys, figures in Russian (English summary))

= *centralis* Portevin, 1914 NEW STATUS as absolute syn. of *N. antennatus* (Reitter)

Type locality: "Roumélie" [descrip.]

Type depository: DEIC: Eberswalde, holotype?

- 1914a Portevin: 196 (description of variation in French) >> Orig. comb.: *Necrophorus antennatus* var. *centralis* [!N, S]
 1925 Portevin: 169 (description of variation in French) >> as *N. antennatus* ab. *centralis*
 1925 Winkler: 265 (catalog) >> as *N. antennatus* ab. *centralis*
 1926a Portevin: 248 (revision: key, descriptions & catalog in French) >> as *N. antennatus* ab. *centralis*
 1928 Hatch: 149 (catalog) >> as *N. antennatus* ab. *centralis*
 1933a Shchegoleva-Barovskaya: 181 (revision: key, descriptions & catalog in Russian) >> as *N. antennatus* ab. *centralis*

Comments: Lectotype data for *Nicrophorus antennatus* (Reitter, 1884: 88) "Holotypus 1884 *Nicrophorus antennatus* Reitter" [red-bordered]/ "coll. Reitter"; [this is not the holotype as Reitter did not designate holo/paratypes- this is a syntype that we designated as the lectotype]/ Tiflis, Kaukas., red rectangular label with double black border "LECTOTYPE *Nicrophorus antennatus* (Reitter 1884) det. Sikes 1997"- male (Budapest [HNHM]); pronotal width: 6.10 mm.

Paralectotype data "Paratypus 1884 *Nicrophorus antennatus* Reitter [red-bordered] / "coll. Reitter"; [this is not the paratype as Reitter did not designate holo/paratypes- this is a syntype that we designated as the paralectotype.]/[AUSTRIA]: Umgebung Wiens, (coll. Reitter) red rectangular label with double black border "PARALECTOTYPE *Nicrophorus antennatus* (Reitter 1884) det. Sikes 1997"- male (Budapest [HNHM]).

Nicrophorus apo Arnett, 1950

Type locality: "Mt. Apo, Mindanao" [Philippines; label]

Type depository: NMNH: Washington, D. C. [!] holotype female, allotype male, 50 paratypes [BMNH, FMNH, USNM]

Distribution: Oriental: Philippines: Mindanao

- 1950 Arnett: 67 (description) >> Orig. comb.: *Nicrophorus apo*; female genitalia figured [!N, S]
 1969 Hinton: 186 (morphology: diffraction gratings) >> notes iridescent morphology
 1986 Nishikawa: 98 (catalog in Japanese (English summary))
 1990 Hanski & Niemelä: 149 (biology: ecology)
 1991 Hanski & Krikken: 195 (biology: ecology)
 2001 Peck: 94 (keys, descriptions and distributions)

Nicrophorus argutor Jakovlev, 1890

Type locality: "in Mongolia septentrionali propr Naryn-gol" [near Naryn river, flowing west into east Ubsa Nor (lake), nw Mongolia (Urgam); descrip.]

Type depository: ZMAS: St. Petersburg? [not found]

Distribution: Palearctic: Russia: Siberia; Mongolia; China: Gansu*, Tibet, Beijing; Kazakhstan

- 1890 Jakovlev: 127 (descriptions in Russian) >> Orig. comb.: *Nicrophorus argutor* [!N, S]
 1893 Heyden: 51 (checklist in German)
 1895b Reitter: 328 (description of variation in German)
 1896 Heyden: 38 (checklist in German)
 1910 Jakobson: 612 (checklist in Russian)
 1916 Pasquet (description of variation in French)
 1924 Portevin: 292 (key, descriptions in French)
 1925 Winkler: 264 (catalog)
 1926a Portevin: 232 (revision: key, descriptions & catalog in French)
 1928 Hatch: 136 (catalog)
 1930 Kieseritzky: 62 (descriptions in Russian (German summary))
 1932 Hlisnikovsky: 29 (key, descriptions in German)

- 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin)
 1933a Shchegoleva-Barovskaya: 188 (revision: key, descriptions & catalog in Russian)
 1933b Shchegoleva-Barovskaya: 252 (descriptions in Russian)
 1975a Emetz: 58 (checklist in German)
 1975b Emetz: 103 (checklist in Russian)
 1986 Nishikawa: 98 (catalog in Japanese (English summary))
 1992 Kozminykh: 64 (checklist in Russian) >> as valid species
 1993b Kozminykh: 66 (key, descriptions, regional in Russian) >> as *Necrophorus sepul-*
tor subsp. *argutor*
 1996 Růžička & Schneider: 81 (checklist in English (Czech summary)) >> as valid
 species
 2002 Nikolajev & Kozminykh: 122 (catalog, distribution, descriptions, keys, figures in
 Russian (English summary))

= pseudobrutor Reitter, 1895 NEW SYNONYM of *N. argutor* Jakovlev

Type locality: "Nordl. Mongolei Changai" [label]

Type depository: HNHM: Budapest [!] 2 syntypes [HNHM, MNHN]

- 1895b Reitter: 327 (description of variation in German) >> Orig. comb.: *Necrophorus*
sepulor var. *pseudobrutor* [!N, S]
 1896 Heyden: 38 (checklist in German) >> as *N. sepulor* var. *pseudobrutor*
 1899 Ganglbauer: 165 (key, descriptions, in German) >> as *N. sepulor* var. *pseudo-*
brutor
 1906 Heyden et al.: 247 (checklist) >> as *N. sepulor* var. *pseudobrutor*
 1913 Kniephof: 187 (in German) >> as *N. sepulor* var. *pseudobrutor*
 1916 Pasquet: 156 (description of variation in French)
 1916 Schaufuss: 273 (checklist in German)
 1924 Portevin: 147 (key, descriptions in French) >> as valid species
 1925 Winkler: 264 (catalog) >> as questionable syn. of *N. argutor*
 1926a Portevin: 219 (revision: key, descriptions & catalog in French) >> as valid spe-
 cies
 1927b Hatch: 359 (revision: key, descriptions & catalog) >> as valid species
 1928 Hatch: 145 (catalog) >> as valid species
 1930 Kieseritzky: 62 (descriptions in Russian (German summary)) >> as syn. of *N.*
argutor
 1932 Hlisnikovsky: 28 (key, descriptions in German) >> as valid species
 1933a Shchegoleva-Barovskaya: 188 (revision: key, descriptions & catalog in Russian)
 >> as syn. of *N. argutor*
 1964a Hlisnikovsky: 223 (key, descriptions in German) >> as valid species
 1975b Emetz: 103 (checklist in Russian) >> as syn. of *N. argutor*
 1986 Nishikawa: 98 (catalog in Japanese (English summary)) >> as valid species
 2002 Nikolajev & Kozminykh: 122 (catalog, distribution, descriptions, keys, figures in
 Russian (English summary)) >> as syn. of *N. argutor*

= tibetanus Hlisnikovsky, 1964 REVISED SYNONYM of *N. argutor* Jakovlev

Type locality: "Asien, Khamba Jong. Sikkim" [Kamba Dzong, s Tibet; just north of
 Sikkim; label]

Type depository: BMNH: London [!] holotype female, allotype male [BMNH], paratype male [NMPC]

- 1964b Hlisnikovsky: 241 (descriptions in German) >> Orig. comb.: *Necrophorus* (*Necropter*) *tibetanus* [!N, S]
 1982 Schawaller: 255 (checklist in German (English summary)) >> as syn. of *N. semenowi*
 1986 Nishikawa: 98 (catalog in Japanese (English summary)) >> as valid species
 1993b Kozminykh: 67 (key, descriptions, regional in Russian) >> as syn. of *N. semenowi*

Comments: Schawaller (1981) placed *N. tibetanus* Hlisnikovsky into synonymy under *N. semenowi*. We have studied the type specimens of both *N. tibetanus* and *N. semenowi* and these types are not conspecific. Among numerous differing characters, the former species displays a glabrous area immediately posterior to the mesocoxae, a state apparently synapomorphic for *N. hybridus*, *N. confusus*, *N. sepultor*, and *N. argutor*, that the latter species does not have. The metasternal pubescence of *N. tibetanus* and *N. argutor* is golden while that of *N. semenowi* is brown. The type locality of *N. tibetanus* and the lack of characters differing it from *N. argutor* indicate that it is conspecific, and thus we make it a junior synonym.

Necrophorus sepultor var. *pseudobrutor* Reitter has been synonymized under *N. argutor* previously, most recently by Emetz (1975b), but was listed as a valid name by Nishikawa (1986) and Hlisnikovsky (1964a). We have studied the type specimens in both the HNHM and the MNHN and agree with Emetz (1975b), Kieseritzky (1930), and Shchegoleva-Barovskaya (1933a) who considered this name a synonym of *N. argutor*. It shares with *N. argutor* the following key traits: epipleura orange with the basal black band of the elytra extending into the epipleura; posterior fascia of elytra reaching epipleura broadly; and few to no setae behind the mesocoxae.

***Necrophorus basalis* Faldermann, 1835**

Type locality: "Mongolia"[descrip.]

Type depository: ZMAS: St. Petersburg [as stated in orig. desc. but types not found, (Gusarov in litt.)]

Distribution: Palearctic: Russia: eSiberia; nChina: Heilongjiang*, Jiangsu*; Korea; Mongolia

- 1835b Faldermann: 364 (descriptions) >> Orig. comb.: *Necrophorus basalis* [!M, S]
 1833 Dejean: 117 (catalog in French) >> nomen nudum; auth. attrib. Dejean
 1849 Gaubil: 55 (catalog in French) >> attrib. "Dej. Cat."; as valid species
 1868 Gemminger & Harold: 717 (catalog)
 1877 Harold: 346 (descriptions in German) >> compared with *N. japonicus*
 1877 Kraatz: 102 (descriptions in German)
 1880 Heyden: 87 (checklist in German)
 1884 Marseul: 189 (key, descriptions in French)
 1885 Marseul: 169 (catalog in French)

- 1895b Reitter: 326 (description of variation in German) >> as valid species; but unseen by author (in footnote)
- 1896 Heyden: 38 (checklist in German)
- 1905a Portevin: 51 (nomenclature in French) >> distinguishing traits from *N. japonicus*
- 1910 Jakobson: 612 (checklist in Russian)
- 1917 Strand: 83 (descriptions in German)
- 1922 Portevin: 57 (descriptions in French) >> description of variation: 1 unavailable name
- 1922 Sherborn: 666 (catalog - index)
- 1924 Portevin: 287 (key, descriptions in French)
- 1925 Winkler: 264 (catalog)
- 1926a Portevin: 227 (revision: key, descriptions & catalog in French)
- 1927b Hatch: 360 (revision: key, descriptions & catalog)
- 1928 Hatch: 146 (catalog)
- 1930 Kieseritzky: 64 (descriptions in Russian (German summary))
- 1932 Hlisnikovsky: 29 (key, descriptions in German)
- 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin)
- 1933a Shchegoleva-Barovskaya: 184 (revision: key, descriptions & catalog in Russian)
- 1937 Wu (catalog)
- 1943 Portevin: 48 (description of variation in French) >> description of variation: 1 unavailable name
- 1953 Mazokhin-Porshnyakov: 236 (descriptions, catalog in Russian)
- 1966c Mroczkowski: 436 (checklist)
- 1975b Emetz: 104 (checklist in Russian)
- 1980 Schawaller: 153 (checklist in German (English summary))
- 1986 Nishikawa: 98 (catalog in Japanese (English summary))
- 1988 Cho et al.: 9 (phylogenetics)
- 1989 Lafer: 339 (key, descriptions, description of variation in Russian)
- 1992 Cho & Lee: 25 (revision: key, descriptions & catalog)
- 1992 Kozminykh: 64 (checklist in Russian)
- 1993b Kozminykh: 67 (key, descriptions, regional in Russian) >> ungrouped; incertae sedis
- 2002 Nikolajev & Kozminykh: 127 (catalog, distribution, descriptions, keys, figures in Russian (English summary))

***Nicrophorus carolinus* (Linnaeus, 1771)**

Type locality: "in Carolina" [USA; descrip.]

Type depository: LSUK: London

Distribution: Nearctic: southeastern and central North America

- 1771 Linnaeus: 530 (descriptions) >> Orig. comb.: *Silpha carolina* [!N, S]
- 1807 Herschel: 269 (descriptions in German) >> as *N. carolinus*; compared to *N. mediatius*
- 1853 LeConte: 278 (descriptions)
- 1853 Melsheimer: 39 (catalog) >> as questionable syn. of *N. mediatius*
- 1868 Gemminger & Harold: 717 (catalog)
- 1873 Crotch: 37 (checklist) >> as *Silpha carolina*

- 1877 Harold: 345 (descriptions in German) >> as *N. carolinus*; compared with *N. japonicus*
- 1878 Schwarz: 443 (checklist)
- 1880 Horn: 229 (revision: key, descriptions & catalog)
- 1885 Henshaw: 26 (checklist)
- 1903 Portevin: 330 (descriptions in French)
- 1907 Fall & Cockerell: 164 (checklist)
- 1908 Heyne & Taschenberg: 38 (descriptions in German) >> brief description
- 1910 Barkowski: 79 (key, descriptions, regional in German)
- 1912 Angell: 307 (descriptions) >> compared to *N. mysticallis*
- 1920 Leng: 86 (catalog)
- 1923 Portevin: 142 (key, descriptions in French) >> as *Necrocharis carolinus*, description of variation: 1 unavailable name
- 1923 Stickney: 23-41 (morphology: head capsule) >> Morphology: Head capsule
- 1926a Portevin: 187 (revision: key, descriptions & catalog in French) >> as *Necrocharis carolinus*
- 1927b Hatch: 364 (revision: key, descriptions & catalog) >> as *Nicrophorus (Necrocharis) carolinus*
- 1928 Hatch: 153 (catalog) >> as *Nicrophorus (Necrocharis) carolinus*
- 1933 Semenov-Tian-Shanskij: 149 (catalog in Russian & Latin) >> as type sp. of genus *Necrocharis* Port.
- 1933a Shchegoleva-Barovskaya: 162 (revision: key, descriptions & catalog in Russian) >> as *Necrocharis carolinus*, in key
- 1934 Hatch & Rueter: 159 (key, distribution, variation, descriptions) >> as *Nicrophorus carolinus*
- 1936 Meserve: 132 (checklist, distribution)
- 1938 Brimley: 135 (checklist) >> also as *ab. floridae*
- 1944 Arnett: 3, 20 (morphology: female genitalia) >> female genitalia figured, pl. 2, fig. 8
- 1944 Blackwelder: 100 (catalog)
- 1945 Löding: 32 (checklist)
- 1946a Arnett: 132 (biology) >> first? observation of burying behavior in *N. carolinus*
- 1949 Bliss: 200 (morphology: sexual dimorphism)
- 1958 Madge: 58 (revision: key, descriptions, ecology, distributions)
- 1966 Payne & Crossley: 56 (biology, ecology)
- 1969 Gersdorf: 304 (fossils, descriptions in German)
- 1969 Kirk: 28 (checklist)
- 1970 Kirk: 25 (checklist)
- 1970 Payne & King: 230 (biology, ecology)
- 1973 Blackwelder: 3 (checklist, synonymy) >> misspelled as *N. carolinensis*
- 1975 Baldwin: 20 (key, description, distribution, ecology)
- 1975 Kirk & Balsbaugh: 52 (checklist)
- 1980 Madge: 356 (catalog)
- 1982 Conley: 11-15 (biology, ecology) >> focal species
- 1983 Lago & Miller: 84 (checklist)
- 1985 Anderson & Peck: 55 (revision: key, descriptions & catalog)
- 1985 Peck & Anderson: 276 (key, descriptions, phylogenetics)

- 1986 Anderson & Peck: 283 (morphology: color variation)
 1986 Nishikawa: 99 (catalog in Japanese (English summary)) >> as *Necrocharis carolinus*
 1987 Peck & Kaulbars: 54 (checklist) >> as *Nicrophorus carolinus*
 1987 Staines: 16 (key, descriptions) >> brief descriptions
 1988 Scott et al.: 325-331 (biology, ecology) >> focal species
 1990 Peck: 1121 (key)
 1991 Campbell: 85 (catalog, distribution)
 1993 Peck & Miller: 7 (species-group catalog)
 1995 Lingafelter: 219 (biology, ecology)
 1996 Downie & Arnett: 356 (key, descriptions, regional)
 1996 Lomolino & Creighton: 238 (biology, conservation)
 1996 Ratcliffe: 65 (revision: key, descriptions & catalog)
 1997 Backlund & Marrone: 56 (biology, conservation)
 1998 Peck & Thomas: 37 (checklist, distribution)
 1999 Bedick et al.: 177 (biology, conservation)
 2000 Sikes & Peck: 394 (descriptions, phylogenetics)

= *dolosus* Portevin, 1923

Type locality: unknown

Type depository: MNHN: Paris [not found]

- 1923 Portevin: 142 (key, descriptions in French) >> Orig. comb.: *Necrocharis carolinus* var. *dolosus* [!N, S]
 1926a Portevin: 249 (revision: key, descriptions & catalog in French) >> as *N. carolinus* var. *dolosus*
 1927b Hatch: 364 (revision: key, descriptions & catalog) >> as *N. carolinus* ab. *dolosus*; specimens not seen by Hatch
 1928 Hatch: 153 (catalog) >> as *N. carolinus* ab. *dolosus*
 1944 Arnett: 3 (morphology: female genitalia) >> as *N. carolinus* ab. *dolosus*
 1985 Anderson & Peck: 55 (revision: key, descriptions & catalog) >> as syn. of *N. carolinus*
 1996 Ratcliffe: 65 (revision: key, descriptions & catalog) >> as syn. of *N. carolinus*

= *mediatus* Fabricius, 1801 CONFIRMED as SYNONYM of *N. carolinus* (L.)

Type locality: "Carolina" [USA; label]

Type depository: ZMUC: Kiel; syntype: MNHN: Paris [!] 2 (or more) syntypes

- 1801 Fabricius: 334 (descriptions) >> Orig. comb.: *Nicrophorus mediatus* [!N, S]
 1807 Herschel: 269 (descriptions in German) >> as valid species; compared to *N. carolinus*
 1807 Latreille: 5 (catalog) >> as valid species
 1815 Leach: 86 (descriptions) >> as valid species; misspelled as *N. medianus*
 1821 Dejean: 42 (catalog) >> as valid species
 1833 Dejean: 117 (catalog in French) >> as valid species
 1836 Dejean: 131 (catalog in French) >> as valid species
 1839 Matzek: 23 (morphology: internal & external anatomy in Latin) >> as valid species; as *N. mediatum*

- 1840 Laporte: 2 (descriptions in French) >> as valid species
 1853 LeConte: 275 (descriptions) >> as valid species
 1853 Melsheimer: 39 (catalog) >> as valid species
 1854 Lacordaire: 200 (biology, catalog in French) >> as valid species
 1859c LeConte: 37 (checklist) >> as valid species
 1860 Motschulsky: 126 (descriptions in French) >> as valid species; compared with *N. dauricus*; misspelled as *N. medius*
 1868 Gemminger & Harold: 717 (catalog) >> as syn. of *N. carolinus*
 1873 Crotch: 37 (checklist) >> as *Silpha mediata*, syn of *Silpha carolina*
 1903 Portevin: 330 (descriptions in French) >> as *Necrophorus mediatus*, syn. of *N. carolinus*
 1908 Heyne & Taschenberg: 38 (descriptions in German) >> as valid species
 1920 Leng: 86 (catalog) >> as syn. of *N. carolinus*
 1926a Portevin: 249 (revision: key, descriptions & catalog in French) >> as syn. of *N. carolinus*
 1928 Hatch: 153 (catalog) >> as syn. of *N. carolinus*
 1944 Arnett: 3 (morphology: female genitalia) >> as syn. of *N. carolinus*
 1985 Anderson & Peck: 55 (revision: key, descriptions & catalog) >> as syn. of *N. carolinus*
 1993 Peck & Miller: 7 (species-group catalog) >> as syn. of *N. carolinus*
 1996 Ratcliffe: 65 (revision: key, descriptions & catalog) >> as syn. of *N. carolinus*

= *mysticallis* Angell, 1912 CONFIRMED as SYNONYM of *N. carolinus* (L.)

Type locality: "Tuba, Arizona" [USA; label]

Type depository: NMNH: Washington, D. C. [!] holotype male

- 1912 Angell: 307 (descriptions) >> Orig. comb.: *Necrophorus mysticallis* [!M, N, S]
 1920 Leng: 86 (catalog) >> as valid species
 1923 Portevin: 142 (key, descriptions in French) >> as syn./status as *N. carolinus* ab. *mysticallis*
 1926a Portevin: 249 (revision: key, descriptions & catalog in French) >> as *N. carolinus* ab. *mysticallis*
 1927b Hatch: 364 (revision: key, descriptions & catalog) >> as *N. carolinus* ab. *mysticallis*
 1928 Hatch: 153 (catalog) >> as *N. carolinus* ab. *mysticallis*
 1944 Arnett: 3 (morphology: female genitalia) >> as *N. carolinus* ab. *mysticallis*
 1985 Anderson & Peck: 55 (revision: key, descriptions & catalog) >> as absolute syn. of *N. carolinus*
 1993 Peck & Miller: 7 (species-group catalog) >> as syn. of *N. carolinus*
 1996 Ratcliffe: 65 (revision: key, descriptions & catalog) >> as syn. of *N. carolinus*; misspelled as *N. mystacallis*

Comments: The name *N. mysticallis* Angell was given to a population of *N. carolinus* that shows considerable melanism and is disjunct from the main range of *N. carolinus* (Anderson & Peck 1985; Peck & Kaulbars 1987). DSS was able to sample, extract, and sequence mtDNA (the COII gene) from both the melanic population and the nominal population in

Florida. The melanic population was 3.3% different (uncorrected "p" distance) from the Florida population which represents the greatest within-species distance observed for COII in the Nicrophorinae (unpub. data). The next greatest within-species distance is a full 1% smaller (2.3%) between samples of *N. nepalensis* from Nepal (Mustang Dist.) and from Malaysia (Cameron). All remaining within-species distances fall continuously, i.e. without large gaps, from 2.3% to 0%. However, with the exception of three cases, all among-species distances are above 5.5% and range to 18%, thus the *N. mysticallis* population appears, based on COII distances alone, to be not clearly differentiated from the nominal *N. carolinus* at the species rank. Taxonomists so inclined could make a case for this population to deserve subspecific rank, however.

Nicrophorus chilensis Philippi, 1871

Type locality: "Santa Cruz, Prov. Curicó" [Chile: Maule: 35°S, 71.25°W; descrip.]

Type depository: MNNC (MNSC): Santiago holotype [no. 171.]

Distribution: Neotropical: southern Chile, Argentina

- 1871 Philippi: 293 (descriptions in German) >> Orig. comb.: *Nicrophorus chilensis* [!S]
 1876 Reed: 274 (catalog in Spanish)
 1881 Berg: 54 (checklist in German)
 1887 Philippi: 667 (catalog in Spanish)
 1901 Berg: 325 (key, catalog, in Spanish)
 1911 Germain: 62 (catalog, distribution in Spanish)
 1915 Bruch: 307 (catalog, distribution in Spanish)
 1924 Portevin: 292 (key, descriptions in French)
 1926a Portevin: 233 (revision: key, descriptions & catalog in French)
 1928 Hatch: 139 (catalog)
 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin)
 1944 Blackwelder: 100 (catalog)
 1981 Peña: 10 (distribution note in Spanish)
 1985 Peck & Anderson: 269 (key, descriptions, phylogenetics)
 1986 Nishikawa: 98 (catalog in Japanese (English summary))
 1996 Peña: 130 (biology, ecology in Spanish)
 1999 Háva et al.: 78 (key, descriptions)
 2000 Sikes & Peck: 395 (descriptions, phylogenetics)

Nicrophorus concolor Kraatz, 1877

Type locality: "Japan" [descrip.]

Type depository: DEIC: Eberswalde 1 syntype (=holotype?)

Distribution: Palearctic: Japan; Korea; China: Hunan, Sichuan, Yunnan*, Guizhou, Zhejiang, Heilongjiang; Taiwan; nIndia; Nepal; Bhutan; Russia: Ussuri reg.

- 1877 Kraatz: 100 (descriptions in German) >> Orig. comb.: *Nicrophorus concolor* [!N, S]
 1887 Lewis: 339 (description)
 1891 Fairmaire: 191 (checklist in French)

- 1893 Heyden: 51 (checklist in German)
- 1895b Reitter: 324 (description of variation in German)
- 1896 Heyden: 38 (checklist in German)
- 1908 Heyne & Taschenberg: 38 (descriptions in German) >> brief description
- 1910 Jakobson: 611 (checklist in Russian)
- 1914b Portevin: 223 (description of variation in French) >> as *Acanthopsilus concolor*
- 1920 Portevin: 399 (descriptions in French) >> as *N. (Acanthopsilus) concolor*
- 1923 Portevin: 324 (key, descriptions in French) >> as *Acanthopsilus concolor*
- 1925 Winkler: 265 (catalog) >> as *Acanthopsilus concolor*
- 1926a Portevin: 194 (revision: key, descriptions & catalog in French) >> as *Acanthopsilus concolor*
- 1927b Hatch: 355 (revision: key, descriptions & catalog) >> as *Nicrophorus concolor*
- 1928 Hatch: 136 (catalog) >> as *Nicrophorus concolor*
- 1929 Kôno: 164 (checklist, annotated)
- 1930 Yokoyama: 120 (descriptions in Japanese)
- 1931 Miwa: 47 (catalog)
- 1933 Semenov-Tian-Shanskij: 154 (catalog in Russian & Latin) >> as type sp. of genus *Acanthopsilus* Port.
- 1933a Shchegoleva-Barovskaya: 191 (revision: key, descriptions & catalog in Russian) >> as *Acanthopsilus concolor*
- 1936 Cho: 155 (checklist in Korean) >> as *Nicrophorus concolor*
- 1937 Mochizuki & Tsunekawa (checklist)
- 1937 Wu (catalog)
- 1938 Mori & Cho (checklist)
- 1953 Mazokhin-Porshnyakov: 237 (descriptions, catalog in Russian) >> as *Acanthopsilus concolor*
- 1955a Nakane: 48 (checklist, brief descriptions) >> as *N. concolor*
- 1955b Nakane: 53 (key, descriptions in Japanese)
- 1956 Esaki et al.: 1028 (checklist, descriptions in Japanese)
- 1957 Cho (catalog in Korean)
- 1963 Cho (catalog in Korean)
- 1963 Nakane: 75 (checklist, brief descriptions in Japanese)
- 1964 Kamimura et al.: A19 (biology, ecology)
- 1966c Mroczkowski: 436 (checklist) >> as *Nicrophorus concolor*
- 1969 Gersdorf: 305 (fossils, descriptions in German)
- 1969 Shibata: 53 (catalog)
- 1970 Gersdorf: 365 (morphology: female genitalia in German) >> as *Nicrophorus (Acanthopsilus) concolor*; female genitalia figured
- 1977 Schawaller: 259 (checklist in German) >> as *Acanthopsilus concolor* subsp. *rotundicollis*
- 1978 Kim: 61 (catalog, distribution) >> misspelled as *N. concolor*
- 1979 Nakane & Baba: 10 (checklist, distribution in Japanese) >> as *N. concolor*
- 1980 Schawaller: 152 (checklist in German (English summary)) >> as *N. concolor*
- 1982 Schawaller: 253 (checklist in German (English summary))
- 1985a Kurosawa: 247 (checklist) >> color habitus figure pl. 44
- 1985 Lee et al. (checklist in Korean)
- 1985 Paik: 2-12

- 1986 Cho & Lee: 20 (phylogenetics)
 1986 Hayashi: Pl. 15 (morphology, larval stages in Japanese) >> larva
 1986 Katakura et al.: 43-55 (biology, ecology)
 1986 Nishikawa: 98 (catalog in Japanese (English summary)) >> as *Acanthopsilus concolor*
 1988 Cho et al.: 9 (phylogenetics) >> as *Necrophorus concolor*
 1989 Lafer: 340 (key, descriptions, description of variation in Russian) >> as *Acanthopsilus concolor*
 1989 Martin: 876-879 (biology, ecology) >> as *N. concolor*
 1992 Cho & Lee: 21 (revision: key, descriptions & catalog) >> misspelled as *N. concolor*
 1992 Morimoto: 27 (descriptions in Japanese) >> photo
 1992 Nomura & Lee: 81 (catalog) >> as *Nicrophorus concolor*
 1992 Zhang (checklist in Chinese (English summary))
 1993b Kozminykh: 63 (key, descriptions, regional in Russian) >> as *N. concolor*
 1993 Zhang (in Chinese (English summary))
 1995 Kon (biology, behavior in Japanese)
 1995 Lomolino et al.: 604 (biology, conservation in English (Spanish summary))
 1996 Lomolino & Creighton: 236 (biology, conservation)
 1996 Růžička & Schneider: 80 (checklist in English (Czech summary))
 1997 Eggert & Müller: 222 (biology, review of: ecology, behavior)
 1998 Harusawa: 34 (key in Japanese)
 1999 Kurosa: 41 (biology, symbionts: mites in English (Japanese summary))
 2000 Sikes & Peck: 396 (descriptions, phylogenetics)
 2001 Trumbo et al.: 543-560 (biology, ecology, behavior) >> focal species
 2002 Nikolajev & Kozminykh: 105 (catalog, distribution, descriptions, keys, figures in Russian (English summary))

= *rotundicollis* Portevin, 1923 NEW STATUS as absolute syn. of *N. concolor* Kraatz

Type locality: "Thibet"; "Himalaya:Kulu" [n India]; "Kiang-Si" [Jiangxi Province China]; and "Tchang-Yang" [Changyang, Hebei Province, China; descrip]

Type depository: MNHN: Paris [!] 1 (or more) syntype female

- 1923 Portevin: 227 (key, descriptions in French) >> Orig. comb.: *Necrophorus (Acanthopsilus) rotundicollis* [!N, S]
 1925 Winkler: 265 (catalog) >> as valid species; as *Acanthopsilus rotundicollis*
 1926a Portevin: 195 (revision: key, descriptions & catalog in French) >> as valid species
 1927b Hatch: 355 (revision: key, descriptions & catalog) >> as valid species as *Nicrophorus rotundicollis*
 1928 Hatch: 136 (catalog) >> as *N. concolor* subsp. *rotundicollis*
 1933 Semenov-Tian-Shanskij: 149 (catalog in Russian & Latin) >> as *N. concolor* subsp. *rotundicollis*
 1933a Shchegoleva-Barovskaya: 191 (revision: key, descriptions & catalog in Russian) >> as *N. concolor* form *rotundicollis*
 1944 Arnett: 7 (morphology: female genitalia) >> as valid species
 1964b Hlisnikovskiy: 245 (descriptions in German) >> as *Acanthopsilus rotundicollis*

- 1975 Emetz & Schawaller: 231 (checklist in German (English summary)) >> as *N. (Acanthopsilus) concolor* subsp. *rotundicollis*
- 1977 Schawaller: 259 (checklist in German) >> as *N. concolor* subsp. *rotundicollis*
- 1982 Schawaller: 253 (checklist in German (English summary)) >> as *N. concolor* subsp. *rotundicollis*
- 1993b Kozminykh: 63 (key, descriptions, regional in Russian) >> as *N. concolor* subsp. *rotundicollis*
- 2002 Nikolajev & Kozminykh: 105 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as *N. concolor* subsp. *rotundicollis*

***Nicrophorus confusus* Portevin, 1924**

Type locality: “Tchian-Chan: Karagai-Tau, Kouldscha” [Tian Shan Mts., Karagai Tau, Yining, Xinjiang Uygur autonomous region, China; Kazakhstan; descrip.]

Type depository: MNHN: Paris [!] holotype male

Distribution: Palearctic: China: Tian Shan Mts; Russian Georgia; Caucasus; Turkey; Ukraine

- 1924 Portevin: 147 (key, descriptions in French) >> Orig. comb.: *Nicrophorus confusus* [!N, S]
- 1925 Winkler: 264 (catalog) >> as valid species
- 1926a Portevin: 256 (revision: key, descriptions & catalog in French) >> as valid species
- 1927b Hatch: 359 (revision: key, descriptions & catalog) >> as valid species; specimens not seen by Hatch
- 1928 Hatch: 145 (catalog) >> as valid species
- 1930 Kieseritzky: 62 (descriptions in Russian (German summary)) >> as valid species
- 1932 Hlisnikovsky: 28 (key, descriptions in German) >> as valid species
- 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin) >> as valid species
- 1933a Shchegoleva-Barovskaya: 184 (revision: key, descriptions & catalog in Russian) >> as valid species
- 1964a Hlisnikovsky: 223 (key, descriptions in German) >> as valid species
- 1975b Emetz: 104 (checklist in Russian) >> as valid species
- 1986 Nishikawa: 98 (catalog in Japanese (English summary)) >> as valid species
- 1992 Kozminykh: 64 (checklist in Russian) >> as valid species
- 1993b Kozminykh: 66 (key, descriptions, regional in Russian) >> as *N. sepultor* subsp. *confusus*
- 1998 Háva et al.: 179 (distribution note in English (Czech summary)) >> as valid species
- 2002 Nikolajev & Kozminykh: 123 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as valid species

Comments: This species was made a junior synonym of *N. sepultor* by Kozminykh (1993) but treated most recently as valid by Háva et al. (1998) and otherwise considered valid throughout its history. It is clearly closely related to *N. sepultor* and these two taxa are probably sister species, if not conspecific. The only diagnosable difference found between

N. confusus and *N. sepultor* is the metasternal pubescence of the posterior margin of the metasternum which is brown in the former and golden in the latter (medially and anteriorly both “species” share brown setae). Although the majority of the *N. sepultor* records are from Europe, we have seen specimens that match *N. sepultor* from much further east, in the Tian Shan mountain range in western China. These specimens show the diagnosable golden metasternal pubescence and overlap the known records of *N. confusus*, thus demonstrating sympatry without intermediates – if this color difference correlates with species-boundaries, or indicating that *N. sepultor* is polymorphic with respect to metasternal setae color. Another possibility is that the specimens with golden setae in western China are not *N. sepultor*, but represent polymorphism in metasternal setae color in *N. confusus*. RM argues that *N. sepultor* is polymorphic and that the differences in metasternal setae color form a cline from golden in Europe to brown/ golden-brown mixed in China. Few species of *Nicrophorus* show polymorphism in the color of the metasternal setae. Also, this character is difficult to score consistently due to problems of specimen cleanliness (dirty specimens often have darker setae). Kozminykh (*in litt.* 1998) who has collected extensively in the Republic of Georgia, reports having collected over 2000 specimens of *N. confusus*. Despite his treatment of *N. confusus* as a subspecies (Kozminykh 1993) of *N. sepultor*, he is now convinced (*in litt.* 1998) that *N. confusus* is not conspecific with *N. sepultor* based on morphological characters (primarily setal color), distribution, and ecological distinctions such as seasonality. This case remains equivocal and additional data, such as DNA sequences or breeding trials, are required to confidently refute or corroborate species rank for this name.

***Nicrophorus dauricus* Motschulsky, 1860**

Type locality: “dans les parties orientales de la Daourie” [descrip.]

Type depository: ZMUM: Moscow

Distribution: Palearctic: Russia: eSiberia, Amur, Ussuri reg.; Korea; China: Heilongjiang, Gansu, Sichuan, Qinghai, Beijing; Mongolia

1860 Motschulsky: 125 (descriptions in French) >> Orig. comb.: *Nicrophorus dauricus* [!N, S]

1859c Motschulsky: 491 (catalog in French) >> as valid species but nomen nudum

1868 Gemminger & Harold: 718 (catalog)

1877 Kraatz: 102 (descriptions in German)

1880 Heyden: 86 (checklist in German) >> as syn. of *N. investigator*

1884 Marseul: 190 (key, descriptions in French) >> as syn. of *N. ruspator* var. *microcephalus*

1884 Reitter: 88 (descriptions in German) >> as valid and new comb. as *Silpha daurica*

1885 Marseul: 169 (catalog in French) >> as *N. ruspator* var. *dauricus*

1885 Reitter: 323 (in German)

1893 Heyden: 51 (checklist in German) >> as valid species

1895b Reitter: 329 (description of variation in German) >> as valid species

1896 Heyden: 38 (checklist in German) >> as valid species

1910 Jakobson: 612 (checklist in Russian) >> as valid species

- 1914b Portevin: 224 (description of variation in French)
 1916 Pasquet: 173 (description of variation in French)
 1925 Portevin: 167 (description of variation in French)
 1925 Winkler: 265 (catalog)
 1926a Portevin: 246 (revision: key, descriptions & catalog in French)
 1927b Hatch: 362 (revision: key, descriptions & catalog)
 1928 Hatch: 149 (catalog)
 1929 Kôno: 164 (checklist, annotated)
 1932 Hlisnikovsky: 30 (key, descriptions in German)
 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin)
 1933a Shchegoleva-Barovskaya: 179 (revision: key, descriptions & catalog in Russian)
 1936 Cho: 155 (checklist in Korean)
 1937 Wu (catalog)
 1939 Masui (checklist)
 1953 Mazokhin-Porshnyakov: 236 (descriptions, catalog in Russian)
 1955b Nakane: 54 (key, descriptions in Japanese)
 1957 Cho (catalog in Korean)
 1966c Mroczkowski: 436 (checklist)
 1975a Emetz: 59 (checklist in German)
 1975b Emetz: 104 (checklist in Russian)
 1980 Schawaller: 153 (checklist in German (English summary))
 1986 Nishikawa: 98 (catalog in Japanese (English summary))
 1987 Ryabukhin & Matis: 8 (key, descriptions, distributions in Russian)
 1988 Cho et al.: 9 (phylogenetics)
 1989 Lafer: 338 (key, descriptions, description of variation in Russian)
 1992 Cho & Lee: 28 (revision: key, descriptions & catalog)
 1992 Kozminykh: 64 (checklist in Russian)
 1992 Kozminykh & Esjunin: 68 (checklist in Russian)
 1993b Kozminykh: 65 (key, descriptions, regional in Russian)
 1994 Kozminykh & Esjunin: 78 (biology, ecology in English (Russian summary))
 1995 Kozminykh: 110 (key in Russian)
 1995 Kozminykh & Nemkov: 112 (catalog in Russian)
 1996 Růžička & Schneider: 81 (checklist in English (Czech summary))
 1999 Háva et al.: 76 (key, descriptions) >> compared to *N. smefarka*
 2002 Nikolajev & Kozminykh: 115 (catalog, distribution, descriptions, keys, figures in Russian (English summary))

= *orientalis* Motschulsky, 1860 [junior secondary homonym, not Herbst 1784]

Type locality: "Sibérie orientale" [descrip.]

Type depository: ZMUM: Moscow

- 1860 Motschulsky: 126 (descriptions in French) >> Orig. comb.: *Necrophorus orientalis* [!N, S]
 1859c Motschulsky: 491 (catalog in French) >> as valid species but nomen nudum
 1868 Gemminger & Harold: 719 (catalog) >> as valid species
 1877 Kraatz: 102 (descriptions in German) >> as valid species
 1880 Heyden: 86 (checklist in German) >> as valid species

- 1884 Marseul: 185 (key, descriptions in French) >> as valid species
 1884 Reitter: 87 (descriptions in German) >> as *Silpha orientalis*; as valid species (in footnote)
 1885 Marseul: 169 (catalog in French) >> as *Necrophorus orientalis*
 1887 Reitter: 217 (descriptions in German) >> as *Silpha orientalis*
 1888 Fairmaire: 115 (checklist, annotated in French) >> as *Necrophorus orientalis*; as valid species
 1893 Heyden: 51 (checklist in German) >> as valid species
 1895b Reitter: 329 (description of variation in German) >> as doubtfully valid, prob. syn. of *N. dauricus*
 1896 Heyden: 38 (checklist in German) >> as syn. of *N. dauricus*
 1910 Jakobson: 612 (checklist in Russian) >> as syn. of *N. dauricus*
 1925 Winkler: 265 (catalog) >> as syn. of *N. dauricus*
 1926a Portevin: 261 (revision: key, descriptions & catalog in French) >> as syn. of *N. dauricus*
 1928 Hatch: 149 (catalog) >> as syn. of *N. dauricus*
 1933a Shchegoleva-Barovskaya: 179 (revision: key, descriptions & catalog in Russian) >> as syn. of *N. dauricus*
 1993b Kozminykh: 65 (key, descriptions, regional in Russian) >> as syn. of *N. dauricus*
 1995 Kozminykh & Nemkov: 112 (catalog in Russian) >> as syn. of *N. dauricus*
 2002 Nikolajev & Kozminykh: 115 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as syn. of *N. dauricus*

***Nicrophorus defodiens* Mannerheim, 1846** desig. lectotype

Type locality: “Kodiak” [USA: Alaska: 57.78° N 152.4°W; label]

Type depository: MCZC: Cambridge [!] lectotype male, 3 paralectotypes [MZHF]

Distribution: Nearctic: northern and west coast North America

- 1846 Mannerheim: 513 (descriptions in German) >> Orig. comb.: *Necrophorus defodiens* [!N, S]
 1853 LeConte: 278 (descriptions) >> as valid species
 1853 Mannerheim: 172 (descriptions in German) >> as valid species
 1853 Melsheimer: 39 (catalog) >> as valid species
 1854 Lacordaire: 200 (biology, catalog in French) >> as valid species
 1866a LeConte: 367 (nomenclature) >> “..seems to be a larger form of *N. pygmaeus*,”
 1868 Gemminger & Harold: 719 (catalog) >> as syn. of *N. pygmaeus*
 1870 LeConte: 398 (nomenclature) >> as syn. of *N. pygmaeus*
 1873 Crotch: 37 (checklist) >> as *Silpha vespilloides* var. *defodiens*
 1880 Horn: 314 (revision: key, descriptions & catalog) >> as syn. of *N. vespilloides*
 1885 Henshaw: 26 (checklist) >> as syn. of *N. vespilloides*
 1891 Heyden et al.: 139 (checklist) >> as syn. of *N. vespilloides*; misspelled as *N. defoliens*
 1895b Reitter: 328 (description of variation in German) >> as syn. of *N. vespilloides*; misspelled as *N. defoliens*
 1906 Heyden et al.: 247 (checklist) >> as syn. of *N. vespilloides*
 1910 Barkowski: 80 (key, descriptions, regional in German) >> as syn. of *N. vespilloides*

- 1910 Jakobson: 612 (checklist in Russian) >> as syn. of *N. vespilloides*
- 1920 Leng: 86 (catalog) >> as syn. of *N. vespilloides*
- 1922 Sherborn: 1817 (catalog - index)
- 1924 Portevin: 293 (key, descriptions in French) >> as valid species
- 1926a Portevin: 236 (revision: key, descriptions & catalog in French) >> as valid species
- 1927a Hatch: 5, 7, 19 (key, descriptions, description of variation) >> as valid species
- 1927b Hatch: 356 (revision: key, descriptions & catalog) >> as valid species; suggests *N. defodiens* may be subsp. of *N. vespilloides*
- 1928 Hatch: 138 (catalog) >> as valid species
- 1928 Milne: 43 (biology, behavior) >> as valid species
- 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin) >> as valid species
- 1934 Hatch & Rueter: 158 (key, distribution, variation, descriptions) >> as valid species
- 1934 Leech: 36 (biology, ecology, behavior) >> as possible syn. of *N. vespilloides*
- 1937 Leech: 156 (nomenclature) >> as syn. of *N. vespilloides*
- 1940 Hatch: 234 (description of variation) >> as *N. vespilloides* subsp. *defodiens*
- 1944 Arnett: 4 (morphology: female genitalia) >> as syn. of *N. vespilloides*; listed twice- also as *N. vespilloides* subsp. *defodiens*
- 1947 Arnett: 111 (catalog) >> as syn. of *N. vespilloides*
- 1949 Hoffmann et al.: 10 (comment: ecology) >> as valid species; eliminated from area sprayed with DDT, 1 year later
- 1958 Madge: 19 (revision: key, descriptions, ecology, distributions) >> as *N. vespilloides* subsp. *defodiens*
- 1972 Swan & Papp: 356 (description) >> as *N. vespilloides* subsp. *defodiens*
- 1979 Miller & Peck: 95 (fossils) >> as valid species; notes Leech (1934) misid *N. defodiens* as *N. conversator*
- 1982a Anderson: 260 (key, descriptions, morphology, larval stages) >> as valid species
- 1982c Anderson: 1316 (biology, ecology) >> as valid species
- 1982 Peck: 107 (biology, behavior) >> as valid species
- 1982 Peck & Miller: 152 (nomenclature) >> as valid species
- 1982 Wilson: 293 (biology, symbionts: mites) >> as valid species
- 1983 Wilson: 858-870 (biology, symbionts: mites) >> focal species; as valid species
- 1984 Papp: 71 (descriptions) >> figure of elytron
- 1984 Wilson & Fudge: 195-203 (biology, ecology) >> focal species
- 1984 Wilson & Knollenberg: 165-170 (biology, behavior, physiology) >> focal species
- 1984 Wilson et al.: 205-216 (biology, ecology) >> focal species
- 1985 Anderson & Peck: 56 (revision: key, descriptions & catalog)
- 1985 Peck & Anderson: 274 (key, descriptions, phylogenetics)
- 1986 Anderson & Peck: 283-297 (morphology: color variation) >> focal species
- 1986 Nishikawa: 98 (catalog in Japanese (English summary))
- 1987 Peck & Kaulbars: 52 (checklist)
- 1987 Silfverberg: 49 (nomenclature) >> 3 syntypes in the MZHF (paralectotypes)
- 1987 Wilson & Knollenberg: 139-159 (biology, symbionts: mites) >> focal species
- 1988 Scott et al.: 325-331 (biology, ecology) >> focal species
- 1989 Scott & Traniello: 32-36 (popular review) >> focal species
- 1989 Staines: 69 (key, descriptions, distributions) >> Maryland records

- 1990 Peck: 1123 (key)
 1990 Scott & Traniello: 274-283 (biology, ecology, behavior) >> focal species
 1990a Trumbo: 347-355 (biology, ecology) >> focal species
 1991 Campbell: 85 (catalog, distribution)
 1991 Laplante et al.: 29 (checklist in French)
 1992 Beninger & Peck: 79-86 (biology, ecology)
 1992 Brown & Wilson: 463-478 (biology, symbionts: mites) >> focal species
 1992 Robertson: 191 (biology, ecology)
 1992 Trumbo: 289-298 (biology, behavior) >> focal species
 1993 Peck & Miller: 7 (species-group catalog)
 1993 Trumbo & Wilson: 332-339 (biology, behavior) >> focal species
 1994 Beninger: 135-143 (biology, ecology in English (French summary))
 1994 Brown & Wilson: 3 (biology, symbionts: mites) >> focal species
 1994 Runtz et al.: 168 (biology, ecology)
 1994b Scott: 537-543 (biology, behavior) >> focal species
 1994 Trumbo: 241-249 (biology, behavior) >> focal species
 1994 Trumbo & Fiore: 169-174 (biology, behavior) >> focal species
 1994 Trumbo & Eggert: 1043-1047 (biology, ecology, behavior) >> focal species
 1995 Eggert & Sakaluk: 147-153 (biology, behavior) >> focal species
 1995 Trumbo: 125-130 (biology, behavior) >> focal species
 1996 Downie & Arnett: 356 (key, descriptions, regional)
 1997 Eggert & Müller: 225 (biology, review of: ecology, behavior)
 1998b Scott: 598+ (biology, review of: ecology, behavior)
 1998 Trumbo & Thomas: 85-95 (biology, ecology) >> focal species
 1999 Háva et al.: 78 (key, descriptions)
 2000 Dobler & Müller: 392 (phylogenetics) >> CO1 based phylogeny
 2000 Eggert & Sakaluk: 262-266 (biology, behavior) >> focal species
 2000 Sikes & Peck: 395 (descriptions, phylogenetics)
 2000 Smith et al.: 292 (biology, ecology) >> elytron length and pronotal width compared to *N. investigator*
 2000 Trumbo & Bloch: 247 (biology, ecology, conservation)
 2000 Werner & Raffa: 144 (comment: ecology)
 2001 Nishikawa: 81 (larval descriptions, phylogenetics in English (Japanese summary)) >> larva compared to *N. maculifrons*
 2001 Smith et al.: 151 (biology, ecology, behavior) >> use of pre-existing burrows for burial
 2001 Wilhelm et al.: 435-442 (biology, ecology) >> focal species

= *conversator* Walker, 1866

Type locality: "British Columbia, Slecy Station" [Canada; label]

Type depository: BMNH: London [!] holotype? male

- 1866 Walker: 320 (descriptions) >> Orig. comb.: *Necrophorus conversator* [!N]
 1868 Gemminger & Harold: 718 (catalog) >> as valid species
 1880 Horn: 314 (revision: key, descriptions & catalog) >> as syn. of *N. vespilloides*
 1910 Barkowski: 80 (key, descriptions, regional in German) >> as syn. of *N. defodiens*
 1910 Jakobson: 612 (checklist in Russian) >> as syn. of *N. vespilloides*

- 1920 Leng: 86 (catalog) >> as *N. vespilloides* subsp. *conversator*
 1924 Portevin: 293 (key, descriptions in French) >> as *N. defodiens* ab. *conversator*
 1926a Portevin: 258 (revision: key, descriptions & catalog in French) >> as *N. defodiens* ab. *conversator*
 1927b Hatch: 356 (revision: key, descriptions & catalog) >> as *N. defodiens* ab. *conversator*
 1928 Hatch: 138 (catalog) >> as *N. defodiens* ab. *conversator*
 1934 Leech: 36-40 (biology, ecology, behavior) >> as valid species
 1937 Leech: 157 (nomenclature) >> as syn. of *N. defodiens*
 1940 Hatch: 234 (description of variation) >> as syn. of *N. vespilloides* subsp. *defodiens*
 1944 Arnett: 4 (morphology: female genitalia) >> as *N. vespilloides* subsp. *defodiens* ab. *conversator*
 1947 Arnett: 111 (catalog) >> as syn. of *N. vespilloides*, as *N. defodiens* ab. *conversator*
 1979 Miller & Peck: 95 (fossils) >> as syn. of *N. defodiens*
 1982 Peck: 107 (biology, behavior) >> as syn. of *N. defodiens*
 1985 Anderson & Peck: 56 (revision: key, descriptions & catalog) >> as syn. of *N. defodiens*
 1993b Kozminykh: 65 (key, descriptions, regional in Russian) >> as syn. of *N. vespilloides*
 1993 Peck & Miller: 7 (species-group catalog) >> as syn. of *N. defodiens*

= *lateralis* Portevin, 1903 REVISSED SYNONYM of *N. defodiens* Mannerheim

Type locality: "Californie" [USA: California; label]

Type depository: MNHN: Paris [!] holotype male

- 1903 Portevin: 330 (descriptions in French) >> Orig. comb.: *Necrophorus vespilloides* var. *lateralis* [!N, S]
 1910 Jakobson: 612 (checklist in Russian) >> as *N. vespilloides* var. *lateralis*
 1924 Portevin: 293 (key, descriptions in French) >> as *N. defodiens* ab. *lateralis*
 1926a Portevin: 258 (revision: key, descriptions & catalog in French) >> as *N. defodiens* ab. *lateralis*
 1927b Hatch: 356 (revision: key, descriptions & catalog) >> as *N. defodiens* ab. *lateralis*
 1928 Hatch: 139 (catalog) >> as *N. defodiens* ab. *lateralis*
 1937 Leech: 157 (nomenclature) >> as syn. of *N. vespilloides*
 1940 Hatch: 235 (description of variation) >> as *N. vespilloides* ab. *lateralis*
 1944 Arnett: 4 (morphology: female genitalia) >> as syn. of *N. vespilloides* subsp. *defodiens*
 1993b Kozminykh: 65 (key, descriptions, regional in Russian) >> as syn. of *N. vespilloides*
 1993 Peck & Miller: 7 (species-group catalog) >> as syn. of *N. defodiens*
 1995 Kozminykh & Nemkov: 113 (catalog in Russian) >> as syn. of *N. vespilloides*

= *plagiatus* Motschulsky, 1870 (junior primary homonym, not Ménétriés, 1854)

REVISSED SYNONYM of *N. defodiens* Mannerheim

Type locality: "Californie"[USA: California; descrip.]

Type depository: ZMUM: Moscow

- 1870 Motschulsky: 352 (descriptions in French) >> Orig. comb.: *Necrophorus plagiat*
tus; New junior primary homonym, not Ménétrés, 1854 [!N, S]
- 1877 Kraatz: 102 (descriptions in German) >> as valid species
- 1895b Reitter: 325 (description of variation in German) >> as doubtfully valid species;
prob. syn. of *N. lunatus*
- 1896 Heyden: 38 (checklist in German) >> as valid species
- 1926a Portevin: 258 (revision: key, descriptions & catalog in French) >> as syn. of *N.*
defodiens ab. *binotatus* Port.
- 1928 Hatch: 139 (catalog) >> as syn. of *N. defodiens* ab. *binotatus*
- 1944 Arnett: 4 (morphology: female genitalia) >> as syn. of *N. vespilloides* subsp.
defodiens
- 1985 Anderson & Peck: 56 (revision: key, descriptions & catalog) >> as syn. of *N.*
defodiens
- 1993b Kozminykh: 65 (key, descriptions, regional in Russian) >> as syn. of *N. vespil-*
loides
- 1993 Peck & Miller: 7 (species-group catalog) >> as syn. of *N. defodiens*
- 1995 Kozminykh & Nemkov: 113 (catalog in Russian) >> as syn. of *N. vespilloides*

= pollinator LeConte, 1854 (junior primary homonym, not Mannerheim 1853)

Type locality: "Fort Vancouver to Yokolt Plain" [USA: sw Washington; descrip., no
data on label]

Type depository: MCZC: Cambridge [!] lectotype male, 2 paralectotypes

- 1854 LeConte: 19 (descriptions) >> Orig. comb.: *Necrophorus pollinator*; New junior
primary homonym, not *N. pollinator* Mannerheim 1853 [!S]
- 1868 Gemminger & Harold: 719 (catalog) >> as valid species
- 1873 Crotch: 37 (checklist) >> as syn of *Silpha vespilloides*
- 1880 Horn: 314 (revision: key, descriptions & catalog) >> as *N. vespilloides* var. *pol-*
linctor
- 1885 Henshaw: 26 (checklist) >> as valid species
- 1910 Barkowski: 80 (key, descriptions, regional in German) >> as syn. of *N. defodiens*
- 1910 Jakobson: 612 (checklist in Russian) >> as *N. vespilloides* var. *pollinator*
- 1920 Leng: 86 (catalog) >> as syn. of *N. vespilloides* subsp. *conversator*
- 1926a Portevin: 258 (revision: key, descriptions & catalog in French) >> as syn. of *N.*
defodiens ab. *conversator*
- 1928 Hatch: 139 (catalog) >> as syn. of *N. defodiens* ab. *conversator*
- 1928 Milne: 43 (biology, behavior)
- 1944 Arnett: 4 (morphology: female genitalia) >> as syn. of *N. vespilloides* subsp.
defodiens
- 1944 Milne & Milne: 312 (biology, behavior) >> notes misid of *N. orbicollis* as *N. pol-*
linctor LeC. in Milne (1928)
- 1982 Peck & Miller: 152 (nomenclature) >> as syn. of *N. defodiens*; desig. lectotype;
as junior homonym of *N. pollinator* Mannerheim
- 1985 Anderson & Peck: 56 (revision: key, descriptions & catalog) >> as syn. of *N.*
defodiens
- 1993b Kozminykh: 65 (key, descriptions, regional in Russian) >> as syn. of *N. vespil-*
loides
- 1993 Peck & Miller: 7 (species-group catalog) >> as syn. of *N. defodiens*

Comments: Lectotype data for *Nicrophorus defodiens* Mannerheim, 1846: 513 "defodiensNicrophorus defodiens Mannerheim"/ "Type 7940"/ [USA]: [Alaska], Kodiak, [57.78°N, 152.4°W,] red rectangular label with double black border "LECTOTYPE Nicrophorus defodiens (Mann. 1846) det. Sikes 1997 2000"- male (Cambridge [MCZC]). Silfverberg (1987) lists 3 specimens of Mannerheim's syntype series for *N. defodiens* housed in the University of Helsinki, Zoological Museum with the following data (taken from Silfverberg [1987]): "USA (Alaska): Sitkha, Cygnaeus (in coll. Mannerheim)." These 3 specimens are herein designated PARALECTOTYPES.

Kozminykh (1993) and Kozminykh & Nemkov (1995) treated all names commonly considered synonyms of *N. defodiens* (i.e. *N. vespilloides* var. *lateralis*, *N. pollinator*, *N. plagiatus*, and *N. conversator*) as synonyms of *N. vespilloides*. We have studied the type specimens of all but one of these synonyms and agree with the consensus of prior workers who have treated these names as synonyms of *N. defodiens*.

Nicrophorus didymus Brullé, 1836 desig. lectotype

Type locality: "Bord de la riviere altamachi" [Bolivia: Cochabamba: Altamachi River, eastern mountain slopes; label]

Type depository: MNHN: Paris [!] lectotype male, 1 paralectotype

Distribution: Neotropical: Venezuela, Colombia, Bolivia, Ecuador, Peru

- 1836 Brullé: 73 (descriptions in French) >> Orig. comb.: *Nicrophorus didymus*; as figure (later description by Blanchard: 1842: 73). [!N]
- 1854 Lacordaire: 200 (biology, catalog in French)
- 1868 Gemminger & Harold: 718 (catalog)
- 1901 Berg: 326 (key, catalog, in Spanish)
- 1903 Portevin: 331 (descriptions in French)
- 1908 Heyne & Taschenberg: 38 (descriptions in German) >> brief description
- 1915 Bruch: 307 (catalog, distribution in Spanish)
- 1922 Portevin: 57 (descriptions in French)
- 1922 Sherborn: 1912 (catalog - index)
- 1924 Portevin: 191 (key, descriptions in French) >> as *N. flexuosus* ab. *didymus*
- 1926a Portevin: 238 (revision: key, descriptions & catalog in French) >> as *N. flexuosus* ab. *didymus*
- 1927b Hatch: 353 (revision: key, descriptions & catalog) >> as valid species
- 1928 Hatch: 128 (catalog) >> as *N. didymus*; year for Brullé 1836 incorrectly listed as 1840
- 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin)
- 1944 Arnett: 7 (morphology: female genitalia)
- 1944 Blackwelder: 100 (catalog)
- 1973 Blackwelder: 6 (checklist, synonymy)
- 1985 Peck & Anderson: 268 (key, descriptions, phylogenetics)
- 1986 Nishikawa: 98 (catalog in Japanese (English summary))
- 2000 Sikes & Peck: 395 (descriptions, phylogenetics)

= *flexuosus* Portevin, 1924

Type locality: "Amérique centrale et méridionale, du Mexique au Pérou" [descrip.]

Type depository: MNHN: Paris [not found]

1924 Portevin: 191 (key, descriptions in French) >> Orig. comb.: *Necrophorus flexuosus* [!N, S]

1926a Portevin: 238 (revision: key, descriptions & catalog in French) >> as valid species

1928 Hatch: 128 (catalog) >> as syn. of *N. didymus*

1985 Peck & Anderson: 268 (key, descriptions, phylogenetics) >> as syn. of *N. didymus*

= *peruvianus* Pic, 1917 CONFIRMED as SYNONYM of *N. didymus* Blanchard

Type locality: "Pérou" [Peru; descrip., no data on type]

Type depository: MNHN: Paris [!] holotype female

1917a Pic: 2 (description of variation in French) >> Orig. comb.: *Necrophorus didymus* var. *peruvianus* [!N, S]

1924 Portevin: 191 (key, descriptions in French) >> as *N. flexuosus* ab. *peruvianus*

1926a Portevin: 238 (revision: key, descriptions & catalog in French) >> as *N. didymus* ab. *peruvianus*

1928 Hatch: 128 (catalog) >> as *N. didymus* ab. *peruvianus*

1985 Peck & Anderson: 268 (key, descriptions, phylogenetics) >> as syn. of *N. didymus*

= *portevini* Pic, 1933 CONFIRMED as SYNONYM of *N. didymus* Blanchard

Type locality: unknown

Type depository: MNHN: Paris [!] holotype female

1933b Pic: 6 (description of variation in French) >> Orig. comb.: *Necrophorus flexuosus* var. *Portevini*

1985 Peck & Anderson: 268 (key, descriptions, phylogenetics) >> as syn. of *N. didymus* (*N. flexuosus* first synonymized by Hatch 1928)

Comments: Lectotype data for *Necrophorus didymus* Brullé, 1836: pl. 5: 3 "N. didymus Brullé Type" / "MUSEUM PARIS CORDEILIERES D'ORBIGNY 1834"; /label with red ink letters: "TYPE"; /"7450 34" / [BOLIVIA]: Bard de la riviere altamachi, red rectangular label with double black border "LECTOTYPE *Necrophorus didymus* (Brullé 1846) det. Sikes 1997" - male (Paris [MNHN]); pronotal width: 7.43 mm.

Paralectotype data "N. didymus Brullé Type" / "MUSEUM PARIS CORDEILIERES D'ORBIGNY 1834"; label with red ink letters: "TYPE"; "7450 34" / [BOLIVIA]: Bard de la riviere altamachi, red rectangular label with double black border "PARALECTOTYPE *Necrophorus didymus* (Brullé 1846) det. Sikes 1997" - female (Paris [MNHN]).

Regarding *N. flexuosus* Portevin: DSS could not locate the type in the MNHN but did find a series of *N. didymus flexuosus*, one with a label "flexuosus Port" in Pic's handwriting. In lieu of the type he examined this series and concluded it is *N. didymus*, with joined elytral maculae.

Nicrophorus distinctus Grouvelle, 1885

Type locality: “Célèbes” [Indonesia: Sulawesi; descrip.]

Type depository: RMNH: Leiden? 2 syntypes?

Distribution: Australian: Sulawesi

- 1885 Grouvelle: 262 (descriptions in French) >> Orig. comb.: *Nicrophorus distinctus* [!M, S]
- 1920 Portevin: 400 (descriptions in French)
- 1924 Portevin: 377 (key, descriptions in French)
- 1926a Portevin: 241 (revision: key, descriptions & catalog in French)
- 1927b Hatch: 353 (revision: key, descriptions & catalog)
- 1928 Hatch: 129 (catalog) >> year of descrip. incorrectly as 1884
- 1933 Semenov-Tian-Shanskij: 154 (catalog in Russian & Latin) >> as type sp. of new subgenus *Nesonecropter*
- 1933a Shchegoleva-Barovskaya: 166 (revision: key, descriptions & catalog in Russian)
- 1980 Madge: 357 (catalog)
- 1985 Peck & Anderson: 274 (key, descriptions, phylogenetics)
- 1986 Nishikawa: 98 (catalog in Japanese (English summary))
- 1990 Hanski & Niemelä: 149 (biology: ecology)
- 1991 Hanski & Krikken: 185, 195 (biology: ecology)
- 2001 Peck: 94 (keys, descriptions and distributions)

Nicrophorus encaustus Fairmaire, 1896

Type locality: “Himalaya, Simla” [northern India; label]

Type depository: ZMHB: Berlin [!] holotype male

Distribution: Oriental: Himalayas: Nepal, nIndia

- 1896 Fairmaire: 82 (descriptions in French) >> Orig. comb.: *Nicrophorus encaustus* [!M, S]
- 1910 Jakobson: 612 (checklist in Russian)
- 1920 Portevin: 401 (descriptions in French)
- 1924 Portevin: 293 (key, descriptions in French)
- 1925 Winkler: 264 (catalog)
- 1926a Portevin: 233 (revision: key, descriptions & catalog in French)
- 1928 Hatch: 139 (catalog)
- 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin)
- 1975 Emetz & Schawaller: 230 (checklist in German (English summary))
- 1982 Schawaller: 255 (checklist in German (English summary))
- 1986 Nishikawa: 98 (catalog in Japanese (English summary))
- 1993b Kozminykh: 67 (key, descriptions, regional in Russian)

Nicrophorus germanicus (Linnaeus, 1758)

Type locality: “in Germania” [Germany; descrip.]

Type depository: LSUK: London

Distribution: Palearctic: Europe, Syria, Turkey, Caucasus, Russia- Russian plain, Belarus, Ukraine; Iran

- 1758 Linnaeus: 359 (descriptions in Latin) >> Orig. comb.: *Silpha germanica* [!N, S]

- 1761 Sulzer: pl. 2, fig. 10 (in German)
 1765 Pontoppidan: 200 (in German)
 1767 Gleditsch: 225 (descriptions in German) >> as *S. germanica*; illustrated, tab. 1
 1767 Linnaeus: 569 (catalog in Latin)
 1775 Fabricius: 71 (descriptions) >> as *Nicrophorus germanicus*
 1776 Müller: 96 (catalog)
 1778 Bergsträsser: 62 (catalog in German)
 1781 Fabricius: 83 (catalog in Latin)
 1783 Herbst: 32 (descriptions in German)
 1787 Fabricius: 48 (catalog)
 1789 Schrank: 63 (in German)
 1789 Villers: 73 (catalog)
 1790 Brahm: 173
 1790 Linnaeus: 1615 (catalog in Latin)
 1790 Olivier: no. 10, p. 7 (descriptions in French) >> habitus figured
 1790 Rossi: 53
 1790 Scriba: 6 (in German)
 1792 Fabricius: 246 (descriptions)
 1792 Frölich: 122 (descriptions in German)
 1793 Herbst: 154 (catalog in German)
 1794 Panzer: 117 (catalog in German)
 1797 Panzer: 1 (catalog in German)
 1798 Illiger: 353 (catalog in German)
 1798 Paykull: 322
 1801 Fabricius: 333 (descriptions)
 1802 Marsham: 113 >> as *Silpha germanica*
 1807 Herschel: 274 (descriptions in German)
 1808 Gyllenhal: 257 (descriptions, catalog)
 1808 Schönherr: 117 (in German)
 1817 Gebler: 320 (descriptions in Latin) >> compared to *N. morio*
 1821 Dejean: 42 (catalog)
 1825 Curtis: pl. 71 & 2 pp. text (checklist)
 1825 Duftschmid: 111 (descriptions in German)
 1827 Gyllenhal: 307 (descriptions)
 1829b Stephens: 74 (catalog)
 1830 Stephens: 16 (biology, descriptions)
 1831 Chapman: 187-188 (biology) >> “Biology” - Hatch 1928
 1833 Dejean: 117 (catalog in French) >> auth. incorrectly attrib. Fabricius
 1836 Dejean: 131 (catalog in French)
 1837 Erichson: 223 (species-group catalog in German)
 1838 Sturm: 57 (in German)
 1839 Westwood: 137 (biology)
 1839 Matzek: 23 (morphology: internal & external anatomy in Latin) >> as *N. germanicum*; 60 different drawings of external & internal anatomy
 1839 Stephens: 113 (descriptions)
 1840 Laporte: 2 (descriptions in French)
 1841a Heer: 386 (descriptions in German)

- 1841b Heer: 9 (checklist in German)
 1842 Fischer von Waldheim: 9 (checklist)
 1843 Contarini (catalog) >> dist. record from Padova and Venezia provinces, Italy
 1843 Klingelhöffer & Schmidt: 88 (biology in German) >> "Biology" - Hatch 1928
 1844 Fischer von Waldheim: 138 (descriptions) >> compared to *N. frontalis*
 1846 Kolenati: 49 (catalog) >> compared to *N. frontalis*
 1846a Küster: nr. 50 (catalog in German)
 1849 Bach: 153 (checklist, brief descriptions in German)
 1849 Gaubil: 55 (catalog in French)
 1849 Redtenbacher: 140 (catalog in German)
 1851 Chenu & Desmarest: 258-59 (in French) >> "Biology" - Hatch 1928
 1853 Hoffmann: 105 (description of variation in German)
 1854 Lacordaire: 199 (biology, catalog in French)
 1855 Fairmaire & : 291
 1858 Redtenbacher: 289 (catalog in German)
 1859 Gutfleisch & Bose: 202 (key, descriptions in German)
 1859 Schaum: 36 (catalog in German)
 1862 Schaum: 38 (catalog in German)
 1862 Thomson: 8 (descriptions)
 1863 Grenier: 13 (checklist in French)
 1863 Marseul: 88 (catalog in French)
 1865 Power: 198 (revision: key, descriptions & catalog)
 1866 Marseul: 38 (catalog in French)
 1868 Gemminger & Harold: 718 (catalog)
 1868 Stein: 42 (catalog in Latin)
 1869 Stierlin & Gautard: 116 (checklist in German)
 1870 Vollenhoven et al.: 54 (checklist in Dutch)
 1873 Klika: 127 (checklist in Czech)
 1873 Michow: 16, 20 (in German)
 1874 Cox: 406 (key, descriptions (brief))
 1874 Seidlitz: 216 (key in German)
 1876b Kraatz: 395 (morphology: clypeus in German)
 1876c Kraatz: 396 (in German)
 1877 Hickel & Dragicsevics: 27 (checklist in French)
 1877 Kraatz: 100 (descriptions in German) >> compared to *N. concolor*
 1877 Stein & Weise: 61 (catalog in Latin)
 1880 Heyden: 86 (checklist in German)
 1880 Kraatz: 117 (description of variation in German)
 1883 Heyden et al.: 73 (checklist)
 1884 Kraatz: 230 (descriptions in German) >> compared to *N. nigerrimus*
 1884 Marseul: 184 (key, descriptions in French)
 1884 Reitter: 86 (descriptions in German) >> as *Silpha germanicus*
 1884 Schmidt: 89-90 (biology in French) >> "Biology" - Hatch 1928
 1885 Marseul: 169 (catalog in French) >> as *N. germanicus*
 1885 Reitter: 317 (in German)
 1885 Thomson: 66 (key, checklist in Swedish)
 1888 Seidlitz: 312 (key in German) >> misspelled as *Necrophagus germanicus*

- 1889 Fowler: 43 (descriptions, catalog)
 1889 Seidlitz: 328 (key in German) >> misspelled as *Necrophagus germanicus*
 1891 Heyden et al.: 138 (checklist)
 1893 Fauconnet: 255 (description of variation)
 1893 Reitter: 147 (key, descriptions in German)
 1894 Semenov-Tian-Shanskij: 530 (description in Latin) >> compared with *N. przewalskii*
 1895b Reitter: 323 (description of variation in German)
 1896 Acloque: 241 (key in French)
 1898 Everts: 412
 1899 Ganglbauer: 162 (key, descriptions, morphology, in German)
 1901 Carret: 329 (description of variation in French)
 1905 Weber: 31 (biology, ecology, behavior in German) >> "Biology" - Hatch 1928
 1906 Heyden et al.: 247 (checklist)
 1909 Bickhardt: 74 (description of variation in German)
 1909 Reitter: 239 (in German)
 1910 Jakobson: 611 (checklist in Russian)
 1913 Fowler & Donisthorpe: 247
 1913 Kniephof: 187 (in German)
 1913 Kuhnt: 335 (in German)
 1914 Gorka: 235, 337, fig. 3 (morphology: malpighian tubules in German) >> figured
 1916 Pasquet: 134 (description of variation in French)
 1916 Schaufuss: 272 (checklist in German)
 1920 Portevin: 401 (descriptions in French) >> compared to *N. validus*
 1922 Everts: 182
 1922 Hansen: 114 (key, descriptions, morphology, larval stages in Danish)
 1923 Portevin: 228 (key, descriptions in French)
 1922 Sherborn: 2671 (catalog - index)
 1925 Weber: 124 >> "Biology" - Hatch 1928
 1925 Winkler: 263 (catalog)
 1926 Porta: 332 (key, checklist in Italian) >> record from Provinces Veneto and Venezia, Italy.
 1926a Portevin: 196 (revision: key, descriptions & catalog in French)
 1927b Hatch: 355 (revision: key, descriptions & catalog)
 1928 Hatch: 133 (catalog)
 1929 Portevin: 538 (key, intraspecific variation in French)
 1930 Roubal: 240 (catalog in Czech)
 1930 Vitzthum: 392 (biology, symbionts: mites in German) >> as mite host
 1931 Corset: 102 (morphology: elytral locking in French)
 1932 Hlisnikovsky: 24 (key, descriptions in German)
 1933 Pukowski: 518-586 (biology, ecology in German)
 1933 Rapp: 535 (biology, ecology, distribution in German)
 1933 Semenov-Tian-Shanskij: 149 (catalog in Russian & Latin) >> as type sp. of genus *Necrophorus* F.
 1933a Shchegoleva-Barovskaya: 174 (revision: key, descriptions & catalog in Russian)
 1934b Pukowski: 53-60 (morphology, larval stages in German) >> description of larva
 1935 Balduf: 70 (biology, ecology, behavior)

- 1936 Mosebach: 223 (morphology, larval stages in German)
- 1939 Lengerken: 263 (biology in German)
- 1940 Šulc: 164 (morphology in Czech (German summary))
- 1944 Arnett: 5, 22 (morphology: female genitalia) >> female genitalia figured, pl. 3, fig. 6
- 1944 Milne & Milne: 323 (biology, behavior) >> cites Pukowski's (1933) observ. of *Geotrupes* as prey
- 1945 Kloet & Hincks: 155 (checklist)
- 1946 Hatch: 99 (descriptions) >> as *Neonicrophorus germanicus* L.
- 1946 Paulian: 95 (biology, ecology in French)
- 1947 Arnett: 110 (catalog) >> as *Nicrophorus germanicus*
- 1949 Horion: 75 (biology, ecology, distribution in German)
- 1949 Mroczkowski: 196 (biology, ecology in Polish (English summary)) >> as *Neonicrophorus germanicus*
- 1950b Théodoridès: 5 (biology, ecology, morphology in French) >> as *Nicrophorus germanicus*
- 1953 Akopyan (biology, ecology in Russian)
- 1955 Mroczkowski: 21 (key, descriptions in Polish)
- 1958 Madge: 33 (revision: key, descriptions, ecology, distributions) >> dist. doubtful in North America; as *N. germanicus* subsp. *germanicus*
- 1959 Linssen: 162 (catalog)
- 1960 Hansen et al.: 72 (checklist in Danish)
- 1964 Herman: 5 (nomenclature) >> as *Nicrophorus germanicus*; cites Fabricius 1775
- 1964 Petruška: 162 (biology, ecology in Czech (German summary))
- 1968 Hansen: 17 (key, descriptions in Danish)
- 1968 Petruška: 168 (biology, ecology in Czech (English summary))
- 1969 Gersdorf: 305 (fossils, descriptions in German)
- 1970 Franz: 213 (checklist, distribution in German)
- 1970 Gersdorf: 366 (morphology: female genitalia in German)
- 1971 Freude: 194 (key in German)
- 1971 Wilson: 130 (comment)
- 1973 Blackwelder: 6 (checklist, synonymy)
- 1973 Spicarová: 297-321 (biology, behavior in Czech (English summary))
- 1974 Spicarová (biology, behavior)
- 1975b Emetz: 104 (checklist in Russian) >> as *N. germanicus* subsp. *morio*
- 1975 Pardo-Alcaide & Yus: 96 (morphology, larval stages in Spanish)
- 1976 Petruška: 168 (biology, ecology in Czech (English summary))
- 1977 Pope: 20 (checklist)
- 1978 Burakowski et al.: 197 (catalog, distribution, synonymy in Polish)
- 1979 Miller & Peck: 98 (fossils) >> does not occur in California
- 1979 Silfverberg: 12 (checklist, distribution)
- 1980 Franssen: 46 (morphology: female genitalia in French) >> female genitalia figured
- 1980 Madge: 356 (catalog)
- 1981 Šustek: 40 (key, descriptions, regional in Czech)
- 1982 Peck & Miller: 154 (nomenclature)
- 1982 Wisiniewski (biology, symbionts: mites in German)

- 1983 Putman: 38-42 (biology, ecology)
 1984a Bredohl: 11-25 (morphology: stridulatory files in German (English summary))
 1986 Nishikawa: 99 (catalog in Japanese (English summary))
 1987 Lucht: 66 (catalog in German)
 1989 Koch: 164 (biology, ecology in German)
 1989 Stresemann et al. (key in German)
 1990 Erbeling: 116 (biology, ecology in German (English summary))
 1990 Zahradník: 123 (key in Spanish)
 1991 Raithel: 2 (biology, conservation)
 1992 Kozminykh: 64 (checklist in Russian)
 1992 Silfverberg: 14 (checklist, distribution in English (Finnish & Swedish summaries))
 1993b Kozminykh: 63 (key, descriptions, regional in Russian)
 1993 Růžička: 34 (checklist, distribution in English & Czech)
 1994 Bertin & Fallaci: 218 (checklist in Italian (English summary))
 1995 Angelini et al.: 10 (checklist, distribution in Italian)
 1995 Hodge & Jones: 27 (checklist) >> “probably extinct”
 1995 Kozminykh: 108 (key in Russian)
 1995 Kozminykh & Nemkov: 111 (catalog in Russian)
 1995 Lisa (in Italian) >> New record for Sicily
 1995 Lomolino et al.: 604 (biology, conservation in English (Spanish summary))
 1996 Alexandrovich et al.: 17 (checklist, distribution in Russian & English)
 1996 Bertin & Lebboroni: 150 (checklist in Italian (English summary))
 1996 Hansen: 93 (checklist, distribution in Danish & English)
 1996 Hava: 167 (description of variation in English (Czech summary))
 1996 Knorre: 157-158 (distribution note in German)
 1996 Lomolino & Creighton: 235 (biology, conservation) >> erroneously stated as “presumed extinct”
 1996 Pushkin: 33 (biology, ecology in Russian)
 1997 Eggert & Müller: 218 (biology, review of: ecology, behavior)
 1997 Hansen: 214 (phylogenetics) >> antenna figured
 1997 Klausnitzer: 40 (morphology, larval stages in German)
 1997 Pushkin: 24 (biology, ecology in Russian)
 1997 Pushkin & Charthenko: 62 (biology, ecology in Russian)
 1997 Telnov et al. (checklist) >> “very rare”
 1998 Háva et al.: 179 (distribution note in English (Czech summary))
 1998 Pushkin & Sigida: 84 (biology, ecology in Russian)
 1998b Scott: 599+ (biology, review of: ecology, behavior)
 1999 Bertin & Lebboroni: 55 (checklist in Italian)
 1999 Háva et al.: 77 (key, descriptions)
 2000b Parkhomenko: 164 (morphology, larval stages in Ukrainian (English summary))
 2002 Nikolajev & Kozminykh: 106 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as *N. germanicus* subsp. *germanicus*

= *apicalis* Kraatz, 1880

Type locality: unknown

Type depository: DEIC: Eberswalde, holotype

- 1880 Kraatz: 117 (description of variation in German) >> Orig. comb.: *Necrophorus germanicus* var. *apicalis* [!S]
 1883 Heyden et al.: 73 (checklist) >> as *N. germanicus* var. *apicalis*
 1884 Reitter: 86 (descriptions in German) >> as *Silpha germanicus* var. *apicalis*
 1885 Marseul: 169 (catalog in French) >> as *N. germanicus* var. *apicalis*
 1885 Reitter: 318 (in German)
 1891 Heyden et al.: 138 (checklist) >> as *N. germanicus* var. *apicalis*
 1895b Reitter: 323 (description of variation in German) >> as syn. of *N. germanicus* var. *frontalis*
 1906 Heyden et al.: 247 (checklist) >> as syn. of *N. germanicus* var. *frontalis*
 1909 Bickhardt: 74 (description of variation in German) >> as syn. of *N. germanicus* var. *frontalis*
 1909 Reitter: 239 (in German)
 1910 Jakobson: 611 (checklist in Russian) >> as *N. germanicus* var. *apicalis*
 1925 Winkler: 263 (catalog) >> as *N. germanicus* ab. *apicalis*
 1926a Portevin: 250 (revision: key, descriptions & catalog in French) >> as syn. of *N. germanicus* ab. *bimaculatus*
 1928 Hatch: 134 (catalog) >> as syn. of *N. germanicus* ab. *bimaculatus*
 1930 Roubal: 240 (catalog in Czech) >> as *N. germanicus* f. *apicalis*
 1933a Shchegoleva-Barovskaya: 174 (revision: key, descriptions & catalog in Russian) >> as *N. germanicus* ab. *apicalis*
 1944 Arnett: 5 (morphology: female genitalia) >> as *N. germanicus* ab. *apicalis*
 1993b Kozminykh: 63 (key, descriptions, regional in Russian) >> as syn. of *N. germanicus*
 1995 Kozminykh & Nemkov: 111 (catalog in Russian) >> as syn. of *N. germanicus*

= *armeniacus* Portevin, 1922 NEW STATUS as absolute syn. of *N. germanicus* (L.)

Type locality: "Kagysman" [ne Turkey: Kagisman; label]

Type depository: MNHN: Paris [!] holotype male

- 1922 Portevin: 54 (descriptions in French) >> Orig. comb.: *Necrophorus armeniacus* [!N, S]
 1923 Portevin: 231 (key, descriptions in French) >> as valid species
 1925 Winkler: 263 (catalog) >> as valid species
 1926a Portevin: 199 (revision: key, descriptions & catalog in French) >> as valid species
 1927b Hatch: 355 (revision: key, descriptions & catalog) >> as valid species; specimens not seen by Hatch
 1928 Hatch: 133 (catalog) >> as valid species
 1932 Hlisnikovsky: 25 (key, descriptions in German) >> as valid species
 1933 Semenov-Tian-Shanskij: 155 (catalog in Russian & Latin) >> as syn. of *N. fascifer*
 1933a Shchegoleva-Barovskaya: 175 (revision: key, descriptions & catalog in Russian) >> as syn. of *N. germanicus fascifer*
 1986 Nishikawa: 99 (catalog in Japanese (English summary)) >> as valid species
 1993b Kozminykh: 63 (key, descriptions, regional in Russian) >> as syn. of *N. germanicus* subsp. *fascifer*

2002 Nikolajev & Kozminykh: 106 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as syn. of *N. germanicus* subsp. *fascifer*

= *bimaculatus* Haworth, 1807 NEW STATUS as absolute syn. of *N. germanicus* (L.)

Type locality: "prope Londinum" [England: London; descrip.]

Type depository: BMNH: London [not found]

- 1807 Haworth: 82 (descriptions) >> Orig. comb.: *Necrophorus bimaculatus* [!S]
 1825 Curtis: pl. 71 (checklist) >> text accompanying Plate 71; as "only a variety of *N. humator*"
 1829b Stephens: 75 (catalog) >> auth. correctly attrib. Haworth 1807
 1868 Gemminger & Harold: 718 (catalog) >> auth. incorrectly attrib. Stephens
 1877 Stein & Weise: 61 (catalog in Latin) >> as *N. humator* var. *bimaculatus*
 1883 Heyden et al.: 73 (checklist) >> as *N. humator* var. *bimaculatus*; auth. attr. Steph.
 1884 Marseul: 185 (key, descriptions in French) >> as *N. humator* var. *bimaculatus*; auth. incorrectly attrib. Steph.
 1885 Marseul: 169 (catalog in French) >> as *N. humator* var. *bimaculatus*
 1885 Reitter: 317 (in German)
 1891 Heyden et al.: 138 (checklist) >> as *N. humator* var. *bimaculatus* Steph.
 1895b Reitter: 324 (description of variation in German) >> as *N. humator* var. *bimaculatus* Steph.
 1899 Ganglbauer: 162 (descriptions, in German) >> as *N. germanicus* var. *bimaculatus*
 1906 Heyden et al.: 247 (checklist) >> as *N. germanicus* var. *bimaculatus*; auth. attr. Steph.
 1909 Bickhardt: 74 (description of variation in German) >> as *N. humator* var. *bimaculatus*
 1910 Jakobson: 611 (checklist in Russian) >> as syn. of *N. germanicus*; auth. incorrectly attrib. Ganglb. 1899; also as syn. of *N. humator*; incorrectly attrib. Steph.
 1916 Pasquet: 137 (description of variation in French)
 1916 Schaufuss: 137 (checklist in German)
 1923 Portevin: 229 (key, descriptions in French) >> as *N. germanicus* ab. *bimaculatus* auth. attrib. Stephens
 1925 Winkler: 263 (catalog) >> as syn. of *N. humator* ab. *frontalis*; auth. attrib. Stephens
 1926a Portevin: 197 (revision: key, descriptions & catalog in French) >> as *N. germanicus* ab. *bimaculatus*; auth. incorrectly attrib. to Stephens 1830
 1928 Hatch: 134 (catalog) >> as *N. germanicus* ab. *bimaculatus*
 1933a Shchegoleva-Barovskaya: 174 (revision: key, descriptions & catalog in Russian) >> auth. incorrectly attrib. Ganglb. 1899.
 1944 Arnett: 5 (morphology: female genitalia) >> as *N. germanicus* ab. *bimaculatus*; auth. incorrectly attrib. Steph.

= *bipunctatus* Kraatz, 1880 NEW STATUS as absolute syn. of *N. germanicus* (L.)

Type locality: unknown

Type depository: unknown; not DEIC: Eberswalde[L. Zerche, in litt.]

- 1880 Kraatz: 117 (description of variation in German) >> Orig. comb.: *Necrophorus germanicus* var. *bipunctatus* [!S]

- 1883 Heyden et al.: 73 (checklist) >> as *N. germanicus* var. *bipunctatus*; misspelled as *hipunctatus*
- 1884 Reitter: 86 (descriptions in German) >> as *Silpha germanicus* var. *bipunctata*
- 1885 Marseul: 169 (catalog in French) >> as *N. germanicus* var. *bipunctatus*
- 1885 Reitter: 318 (in German)
- 1891 Heyden et al.: 138 (checklist) >> as *N. germanicus* var. *bipunctatus*
- 1895b Reitter: 323 (description of variation in German) >> as *N. germanicus* var. *bipunctatus*
- 1898 Everts: 412
- 1899 Ganglbauer: 162 (descriptions, in German) >> as *N. germanicus* var. *bipunctatus*
- 1906 Heyden et al.: 247 (checklist) >> as *N. germanicus* var. *bipunctatus*
- 1909 Bickhardt: 74 (description of variation in German) >> as *N. germanicus* var. *bipunctatus*
- 1909 Reitter: 239 (in German)
- 1910 Jakobson: 611 (checklist in Russian) >> as *N. germanicus* var. *bipunctatus*
- 1913 Kniephof: 187 (in German) >> as *N. germanicus* ab. *bipunctatus*
- 1913 Kuhnt: 335 (in German)
- 1916 Pasquet: 137 (description of variation in French)
- 1916 Schaufuss: 272 (checklist in German)
- 1923 Portevin: 229 (key, descriptions in French) >> as *N. germanicus* ab. *bipunctatus*
- 1925 Winkler: 263 (catalog) >> as *N. germanicus* ab. *bipunctatus*
- 1926a Portevin: 197, 251 (revision: key, descriptions & catalog in French) >> as *N. germanicus* ab. *bipunctatus*
- 1928 Hatch: 135 (catalog) >> as *N. germanicus* ab. *bipunctatus*
- 1930 Roubal: 240 (catalog in Czech) >> as *N. germanicus* f. *bipunctata*
- 1933a Shchegoleva-Barovskaya: 174 (revision: key, descriptions & catalog in Russian) >> as *N. germanicus* ab. *bipunctatus*
- = *cadaverinus* Gistel, 1857 (junior primary homonym, not Gravenhorst 1807) NEW
SYNONYM of *N. germanicus* (L.)
Type locality: "Monacensis regio" [descrip.]; "Munich"[Hatch 1928]
Type depository: ZSMC: München?
1857b Gistel: 565 (in German) >> Orig. comb.: *Necrophorus cadaverinus*; (attr. to Dejean); New junior primary homonym, not *N. cadaverinus* Gravenhorst 1807 or *N. cadaverinus* Mareuse 1840] [!N]
1917 Strand: 83 (descriptions in German) >> as doubtful but valid species
1928 Hatch: 153 (catalog) >> as doubtful but valid species, ungrouped, incertae sedis
- = *fascifer* (Reitter, 1884) NEW STATUS as absolute syn. of *N. germanicus* (L.)
Type locality: "Caucasus, Armenien" [descrip.]
Type depository: HNHM: Budapest? [not found]
1884 Reitter: 86 (descriptions in German) >> Orig. comb.: *Silpha germanica* var. *fascifera* [!N, S]
1885 Reitter: 317 (in German)
1891 Heyden et al.: 138 (checklist) >> as *N. germanicus* var. *fascifer*
1894 Semenov-Tian-Shanskij: 530 (description in Latin) >> as *N. germanicus* var. *fascifer*; compared with *N. przewalskii*

- 1895b Reitter: 324 (description of variation in German) >> as *N. germanicus* var. *fascifer*
- 1899 Ganglbauer: 162 (descriptions, in German) >> as *N. germanicus* var. *fascifer*
- 1906 Heyden et al.: 247 (checklist) >> misspelled as *N. germanicus* var. *fasciifer*
- 1909 Bickhardt: 74 (description of variation in German) >> as *N. germanicus* var. *fascifer*
- 1909 Reitter: 239 (in German) >> as *N. germanicus* var. *fascifer*
- 1910 Jakobson: 611 (checklist in Russian) >> misspelled as *N. germanicus* var. *fasciifer* Rt.
- 1916 Pasquet: 137 (description of variation in French)
- 1922 Everts: 182
- 1923 Portevin: 229 (key, descriptions in French) >> as *N. germanicus* ab. *fascifera*
- 1925 Winkler: 263 (catalog) >> as *N. germanicus* ab. *fascifer*
- 1926a Portevin: 197 (revision: key, descriptions & catalog in French) >> as *N. germanicus* ab. *fascifera*
- 1928 Hatch: 135 (catalog) >> as *N. germanicus* var. *fascifera*
- 1933 Semenov-Tian-Shanskij: 155 (catalog in Russian & Latin) >> as senior syn. of *N. armeniacus*
- 1933a Shchegoleva-Barovskaya: 175 (revision: key, descriptions & catalog in Russian) >> as *N. germanicus* subsp. *fascifera*; as senior syn. of *N. armeniacus*
- 1944 Arnett: 5 (morphology: female genitalia) >> misspelled as *N. germanicus* ab. *fascifer*
- 1992 Kozminykh: 64 (checklist in Russian) >> as *N. germanicus* subsp. *fascifer*
- 1993b Kozminykh: 63 (key, descriptions, regional in Russian) >> as *N. germanicus* subsp. *fascifera*
- 2002 Nikolajev & Kozminykh: 106 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as *N. germanicus* subsp. *fascifer*

= *frontalis* Fischer von Waldheim, 1844

Type locality: "Bucharìa" [Bucharà, Uzbekistan; locality doubtful; descrip.]

Type depository: Moscow, Leningrad, or Dresden ?

- 1844 Fischer von Waldheim: 138 (descriptions) >> Orig. comb.: *Necrophorus frontalis* [!M, N, S]
- 1846 Kolenati: 49 (catalog) >> as valid species; spec. 201 in list
- 1846b Küster: nr. 50 (catalog in German (English summary)) >> as syn. of *N. germanicus*
- 1854 Lacordaire: 200 (biology, catalog in French) >> as *N. germanicus* var. *frontalis*
- 1863 Marseul: 88 (catalog in French) >> as *N. germanicus* var. *frontalis*
- 1868 Gemminger & Harold: 718 (catalog) >> as *N. germanicus* var. *frontalis*
- 1877 Stein & Weise: 61 (catalog in Latin) >> as *N. germanicus* var. *frontalis*
- 1880 Heyden: 86 (checklist in German) >> as *N. germanicus* var. *frontalis*
- 1884 Marseul: 184 (key, descriptions in French) >> as *N. germanicus* var. *frontalis*
- 1885 Marseul: 169 (catalog in French) >> as *N. germanicus* var. *frontalis*
- 1891 Heyden et al.: 138 (checklist) >> as *N. germanicus* var. *frontalis*
- 1895b Reitter: 323 (description of variation in German) >> as *N. germanicus* var. *frontalis*

- 1898 Everts: 412
 1906 Heyden et al.: 247 (checklist) >> as *N. germanicus* var. *frontalis*
 1909 Bickhardt: 73 (description of variation in German) >> as *N. germanicus* var. *frontalis*
 1910 Jakobson: 612 (checklist in Russian) >> as *N. humator* var. *frontalis* Fisch.
 1913 Kniephof: 187 (in German) >> as *N. germanicus* ab. *frontalis*
 1913 Kuhnt: 335 (in German)
 1925 Winkler: 263 (catalog) >> as *N. humator* ab. *frontalis*
 1926a Portevin: 250 (revision: key, descriptions & catalog in French) >> as syn. of *N. germanicus* ab. *bimaculatus*
 1928 Hatch: 134 (catalog) >> as syn. of *N. germanicus* ab. *bimaculatus*
 1933a Shchegoleva-Barovskaya: 174 (revision: key, descriptions & catalog in Russian) >> as *N. germanicus* ab. *frontalis*
 1944 Arnett: 5 (morphology: female genitalia) >> as *N. germanicus* ab. *frontalis*
 1993b Kozminykh: 63 (key, descriptions, regional in Russian) >> as syn. of *N. germanicus*
 1995 Kozminykh & Nemkov: 111 (catalog in Russian) >> as syn. of *N. germanicus*

= *grandior* Angell, 1912 CONFIRMED as SYNONYM of *N. germanicus* (L.)

Type locality: "California" [USA; label]

Type depository: NMNH: Washington, D. C. [!] lectotype male

- 1912 Angell: 307 (descriptions) >> Orig. comb.: *Necrophorus grandior* [!M, N, S]
 1920 Leng: 86 (catalog) >> as valid species
 1926a Portevin: 236 (revision: key, descriptions & catalog in French) >> as *N. defodiens* ab. *grandior*
 1927b Hatch: 354 (revision: key, descriptions & catalog) >> as syn. of *N. germanicus* ab. *bipunctatus*; paratype is *N. humator*; holotype is *N. germanicus*
 1928 Hatch: 135 (catalog) >> as syn. of *N. germanicus* ab. *bipunctatus*
 1944 Arnett: 4 (morphology: female genitalia) >> as syn. of *N. humator*
 1944 Arnett: 5 (morphology: female genitalia) >> as syn. of *N. germanicus*
 1947 Arnett: 110 (catalog) >> as syn. of *N. germanicus*; also listed as a syn. of *N. humator*
 1965 Báguena: 52 (checklist in Spanish) >> as syn. of *N. humator*
 1970 Gersdorf: 368 (morphology: female genitalia in German) >> as possible syn. of *N. humator* or *N. defodiens*
 1979 Miller & Peck: 98 (fossils) >> as syn. of *N. germanicus*
 1982 Peck & Miller: 153 (nomenclature) >> as syn. of *N. germanicus* in part and *N. humator* in part; desig. lectotype

= *listerianus* (Geoffroy, 1785)

Type locality: unknown

Type depository: MNHN: Paris? [not found]

- 1785 Fourcroy: 17 (descriptions) >> Orig. comb: *Dermestes Listerianus* Geoffroy; description by Geoffroy (see Hagen [1862 p.246]) [!S]
 1829b Stephens: 74 (catalog) >> as syn. of *N. germanicus*
 1868 Gemminger & Harold: 718 (catalog) >> as syn. of *N. germanicus*

- 1884 Marseul: 184 (key, descriptions in French) >> as syn. of *N. germanicus*
 1885 Marseul: 169 (catalog in French) >> as syn. of *N. germanicus*
 1910 Jakobson: 611 (checklist in Russian) >> as syn. of *N. germanicus* (as *N. listerianus* Geoffr.)
 1926a Portevin: 250 (revision: key, descriptions & catalog in French) >> as syn. of *N. germanicus*
 1928 Hatch: 134 (catalog) >> as syn. of *N. germanicus*
 1944 Arnett: 5 (morphology: female genitalia) >> as syn. of *N. germanicus*
 1993b Kozminykh: 63 (key, descriptions, regional in Russian) >> as syn. of *N. germanicus*
 1995 Kozminykh & Nemkov: 111 (catalog in Russian) >> as syn. of *N. germanicus*

= *ornatus* Hlisnikovsky, 1964 NEW SYNONYM of *N. germanicus* (L.)

Type locality: "Asien, Thailand, Kon-khen" [Huang Khon Kaen (alt. lower than 550 ft.), central Thailand; erroneous locality; label]

Type depository: NMPC: Praha [!] holotype male

- 1964c Hlisnikovsky: 131 (descriptions in German) >> Orig. comb.: *Necrophorus* (*Necrophorindus*) *ornatus* [!N, S]
 1986 Nishikawa: 99 (catalog in Japanese (English summary)) >> as valid species

= *proserpinae* Gistel, 1857 NEW SYNONYM of *N. germanicus* (L.)

Type locality: "Switzerland" [Hatch 1928]

Type depository: ZSMC: München?

- 1857b Gistel: 571 (in German) >> Orig. comb.: *Necrophorus proserpinae* [!N]
 1917 Strand: 84 (descriptions in German) >> as doubtful but valid species
 1928 Hatch: 153 (catalog) >> as doubtful but valid species, ungrouped, incertae sedis

= *ruthenus* Motschulsky, 1859

Type locality: unknown

Type depository: ZMUM: Moscow

- 1859b Motschulsky: 304 (descriptions in French) >> Orig. comb.: *Necrophorus ruthenus* [!M]
 1863 Marseul: 88 (catalog in French) >> as valid species
 1866 Marseul: 38 (catalog in French) >> as valid species
 1868 Gemminger & Harold: 719 (catalog) >> as valid species
 1877 Stein & Weise: 61 (catalog in Latin) >> as valid species
 1883 Heyden et al.: 73 (checklist) >> as valid species
 1884 Marseul: 184 (key, descriptions in French) >> as *N. germanicus* var. *ruthenus*
 1884 Reitter: 86 (descriptions in German) >> as *Silpha ruthenus*; as valid species
 1885 Marseul: 169 (catalog in French) >> as *N. germanicus* var. *ruthenus*
 1885 Reitter: 317 (in German)
 1891 Heyden et al.: 138 (checklist) >> as syn. of *N. germanicus*
 1895b Reitter: 323 (description of variation in German) >> as syn. of *N. germanicus*
 1899 Ganglbauer: 162 (in German) >> as syn. of *N. germanicus*
 1906 Heyden et al.: 247 (checklist) >> as *N. germanicus* var. *ruthenus*

- 1909 Bickhardt: 73 (description of variation in German) >> as *N. germanicus* var. *ruthenus*
 1910 Jakobson: 612 (checklist in Russian) >> as *N. germanicus* var. *ruthenus*
 1916 Pasquet: 137 (description of variation in French)
 1923 Portevin: 228 (key, descriptions in French) >> as *N. germanicus* var. *ruthenus*
 1925 Winkler: 263 (catalog) >> as *N. germanicus* ab. *ruthenus*
 1926a Portevin: 197 (revision: key, descriptions & catalog in French) >> as *N. germanicus* var. *ruthenus*
 1928 Hatch: 135 (catalog) >> as *N. germanicus* var. *ruthenus*; year of orig. comb. incorrectly as 1860
 1933a Shchegoleva-Barovskaya: 174 (revision: key, descriptions & catalog in Russian) >> as syn. of *N. germanicus*
 1944 Arnett: 5 (morphology: female genitalia) >> as *N. germanicus* var. *ruthenus*
 1993b Kozminykh: 63 (key, descriptions, regional in Russian) >> as syn. of *N. germanicus*
 1995 Kozminykh & Nemkov: 111 (catalog in Russian) >> as syn. of *N. germanicus*

= *speciosus* (J.D. Schulze, 1775) NEW STATUS as absolute syn. of *N. germanicus* (L.)

Type locality: "in Germania" [Germany; descrip.]

Type depository: unknown

- 1775 Schulze: 95 (descriptions in German) >> Orig. comb.: *Silpha speciosa* [!N, S]
 1777 Goeze: 190 (in German) >> as *N. germanicus* ab. *speciosus*
 1862 Schaum: 38 (catalog in German) >> as *N. germanicus* var. *speciosus*
 1868 Gemminger & Harold: 718 (catalog) >> as *N. germanicus* var. *speciosus*
 1868 Stein: 42 (catalog in Latin) >> as *N. germanicus* var. *speciosus*
 1877 Stein & Weise: 61 (catalog in Latin) >> as *N. germanicus* var. *speciosus*
 1880 Kraatz: 117 (description of variation in German) >> as *N. germanicus* var. *speciosus*
 1883 Heyden et al.: 73 (checklist) >> as *N. germanicus* var. *speciosus*
 1884 Marseul: 184 (key, descriptions in French) >> as syn. of *N. germanicus* var. *frontalis*
 1884 Reitter: 86 (descriptions in German) >> as *Silpha germanica* var. *speciosa*
 1885 Marseul: 169 (catalog in French) >> as syn. of *N. germanicus* var. *frontalis*
 1891 Heyden et al.: 138 (checklist) >> as *N. germanicus* var. *speciosus*
 1895b Reitter: 324 (description of variation in German) >> as *N. germanicus* var. *speciosus*
 1906 Heyden et al.: 247 (checklist) >> as *N. germanicus* var. *speciosus*
 1909 Bickhardt: 74 (description of variation in German) >> as *N. germanicus* ab. *speciosus*
 1910 Jakobson: 611 (checklist in Russian) >> as *N. germanicus* var. *speciosus*
 1925 Winkler: 263 (catalog) >> as *N. germanicus* ab. *speciosus*
 1926 Porta: 332 (key, checklist in Italian) >> as *N. germanicus* var. *speciosus*
 1926a Portevin: 250 (revision: key, descriptions & catalog in French) >> as *N. germanicus* ab. *speciosus*
 1928 Hatch: 134 (catalog) >> as *N. germanicus* ab. *speciosus*

1930 Roubal: 240 (catalog in Czech) >> as *N. germanicus* f. *speciosa*

1944 Arnett: 5 (morphology: female genitalia) >> as *N. germanicus* ab. *speciosus*

Comments: The names proposed by Gistel (1848, 1857), all presumably lacking types, have long been a source of confusion in the taxonomy of *Nicrophorus* – an issue that was commented on by Strand (1917). Hatch (1928) and others treated them as *nomina dubia*. RM has studied translations of the original descriptions and proposed most probable synonyms for all of Gistel's names. Herein we synonymize two of them (*N. proserpinae* Gistel, 1857 and *N. cadaverinus* Gistel, 1857) under *N. germanicus*.

DSS has studied the holotype of Hlisenkovsky's *N. ornatus* in Praha, which has a type locality of lowland Thailand, and it is clearly a specimen of *N. germanicus* with erroneous locality data. The type has swollen metatibiae, black antennal clubs and red epipleura – states which diagnose *N. germanicus*, a European species that does not occur east of 50 ° E longitude. No additional specimens to corroborate such an Asian population have been found.

***Nicrophorus guttula* Motschulsky, 1845**

Type locality: “Sitka” [USA: Alaska; erroneous locality; descrip.]

Type depository: ZMUM: Moscow

Distribution: Nearctic: western North America (incl. south-western Canada)

1845a Motschulsky: 53 (descriptions in French) >> Orig. comb.: *Nicrophorus guttula* [!N, S]

1845b Motschulsky: 363 (descriptions in French) >> suggests poss. syn. of unavailable Dejean/Esch. name *N. lateralis*

1852 Mannerheim: 331 (checklist, descriptions in German) >> with *N. “auripilosus?”* Eschscholtz, Dejean Cat. 3-ème édit, p. 131” as synonym

1853 LeConte: 276 (descriptions)

1853 Melsheimer: 39 (catalog)

1854 Lacordaire: 200 (biology, catalog in French)

1868 Gemminger & Harold: 718 (catalog)

1873 Crotch: 37 (checklist) >> as *Silpha guttula*

1880 Horn: 314 (revision: key, descriptions & catalog)

1885 Henshaw: 26 (checklist)

1894 Hamilton: 15 (checklist)

1901 Fall: 13, 58 (checklist)

1907 Fall & Cockerell: 164 (checklist)

1910 Barkowski: 80 (key, descriptions, regional in German)

1920 Angell: 89 (description of variation)

1920 Leng: 86 (catalog)

1922 Sherborn: 2870 (catalog - index)

1924 Portevin: 87 (key, descriptions in French)

1925 Hatch & Angell: 216 (descriptions) >> compared with *N. hybridus*

1926a Portevin: 217 (revision: key, descriptions & catalog in French)

1927b Hatch: 360, 362 (revision: key, descriptions & catalog) >> description of variation: 1 unavailable name: *N. guttulus hecate* ab. *immaculosis*

- 1928 Hatch: 146 (catalog) >> Misidentification of *N. nigrita* (ab. *ruficornis*) as *N. guttulus* (ab. *ruficornis*)
- 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin)
- 1936 Meserve: 133 (checklist, distribution)
- 1937 Moore: 21 (checklist)
- 1940 Hatch: 235 (description of variation)
- 1944 Arnett: 5, 24 (morphology: female genitalia) >> female genitalia figured, pl. 4, fig. 4
- 1949 Bliss: 202 (morphology: sexual dimorphism)
- 1949 Pierce: 63 (fossils, descriptions)
- 1951 Jaques: 83 (key, descriptions) >> as *N. guttulus*
- 1957 Hatch: 14 (description of variation) >> as *N. guttulus*
- 1958 Madge: 70 (revision: key, descriptions, ecology, distributions) >> as *N. guttula* subsp. *guttula*
- 1973 Blackwelder: 6 (checklist, synonymy)
- 1979 Miller & Peck: 97 (fossils)
- 1980 Arnett et al.: 129 (key, descriptions) >> as *N. guttulus*
- 1982a Anderson: 260 (key, descriptions, morphology, larval stages)
- 1982 Peck & Miller: 152 (nomenclature)
- 1985 Anderson & Peck: 58 (revision: key, descriptions & catalog)
- 1985 Peck & Anderson: 267 (key, descriptions, phylogenetics)
- 1986 Anderson & Peck: 283-297 (morphology: color variation) >> focal species
- 1986 Nishikawa: 98 (catalog in Japanese (English summary)) >> as *N. guttulus*
- 1987 Peck & Kaulbars: 54 (checklist)
- 1990 Peck: 1122 (key) >> misspelled as *N. gutula*
- 1991 Campbell: 85 (catalog, distribution)
- 1993 Peck & Miller: 7 (species-group catalog)
- 1993 Sikes: 231 (description of variation)
- 1995 Navarrete-Heredia: 14 (biology, ecology, key in Spanish)
- 1996 Ratcliffe: 67 (revision: key, descriptions & catalog)
- 1996 Sikes: 75 (biology, ecology)
- 1999 Bedick et al.: 177 (biology, conservation)
- 2000 Navarrete-Heredia & Fierros-López: 407 (checklist, distribution in Spanish (English summary))
- 2000 Sikes & Peck: 395 (descriptions, phylogenetics)
- 2001 Navarrete-Heredia: 170 (checklist, distribution in Spanish)

= *hecate* Bland, 1865

Type locality: "Colorado Territory" [Peck & Miller 1993]

Type depository: ANSP: Philadelphia

- 1865 Bland: 382 (descriptions) >> Orig. comb.: *Necrophorus Hecate* [!M, S]
- 1866a LeConte: 367 (nomenclature) >> as valid species
- 1868 Gemminger & Harold: 718 (catalog) >> as valid species
- 1873 Crotch: 37 (checklist) >> as *Silpha guttula* var. *hecate*
- 1880 Horn: 314 (revision: key, descriptions & catalog) >> as syn. of *N. guttula*
- 1885 Henshaw: 26 (checklist) >> as syn. of *N. guttula*
- 1907 Fall & Cockerell: 164 (checklist) >> as *N. guttula* var. *hecate*

- 1910 Barkowski: 80 (key, descriptions, regional in German) >> as *N. guttula* var. *hecate*
 1920 Leng: 86 (catalog) >> as *N. guttulus* subsp. *hecate*
 1924 Portevin: 85 (key, descriptions in French) >> as valid species; description of variation: 2 unavailable names
 1926a Portevin: 254 (revision: key, descriptions & catalog in French) >> as valid species: *N. Hecate* Blandford
 1927b Hatch: 360 (revision: key, descriptions & catalog) >> as *N. guttulus* subsp. *hecate*
 1928 Hatch: 146 (catalog) >> as *N. guttulus* subsp. *Hecate*
 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin) >> as valid species
 1934 Hatch & Rueter: 160 (key, distribution, variation, descriptions) >> as *N. guttulus* subsp. *hecate*
 1936 Meserve: 133 (checklist, distribution) >> as *N. guttula* subsp. *hecate*
 1944 Arnett: 6, 15, 24 (morphology: female genitalia) >> as valid species; female genitalia figured, pl. 4, fig. 7
 1946 Hatch: 99 (descriptions) >> as valid species (following Arnett 1944)
 1949 Bliss: 202 (morphology: sexual dimorphism) >> as valid species
 1958 Madge: 71 (revision: key, descriptions, ecology, distributions) >> as *N. guttula* subsp. *hecate*
 1973 Blackwelder: 6 (checklist, synonymy) >> as valid species
 1979 Miller & Peck: 97 (fossils) >> as doubtfully valid species; desig. lectotype
 1982 Peck & Miller: 153 (nomenclature) >> as syn. of *N. guttula*
 1985 Anderson & Peck: 58 (revision: key, descriptions & catalog) >> as syn. of *N. guttula*
 1986 Anderson & Peck: 283,293 (morphology: color variation) >> reconfirmation of *N. hecate* as syn. of *N. guttula*
 1993 Peck & Miller: 7 (species-group catalog) >> as syn. of *N. guttula*
 1996 Ratcliffe: 67 (revision: key, descriptions & catalog) >> as syn. of *N. guttula*

= *immaculosis* Hatch, 1957

Type locality: unknown

Type depository: DEIC: Eberswalde, holotype

- 1927b Hatch: 362 (revision: key, descriptions & catalog) >> description of variation: 1 unavailable name
 1957 Hatch: 15 (description of variation) >> as available, subspecific name: *N. hecate* subsp. *immaculosis* [!N]
 1982 Peck & Miller: 153 (nomenclature) >> as syn. of *N. hecate* (and *N. hecate* as syn. of *N. guttula*)
 1985 Anderson & Peck: 58 (revision: key, descriptions & catalog) >> as syn. of *N. guttula*, as *N. hecate immaculosis*
 1993 Peck & Miller: 7 (species-group catalog) >> as syn. of *N. guttula*
 1996 Ratcliffe: 67 (revision: key, descriptions & catalog) >> as syn. of *N. guttula*

= *punctostriatus* Pierce, 1949 [fossil]

Type locality: "Pit A" [USA: California: Rancho La Brea; descrip.]

Type depository: LACM: Los Angeles [holotype#: LACMIP 3947]

- 1949 Pierce: 66 (fossils, descriptions) >> Orig. comb.: *Nicrophorus guttulus punctostriatus* [fossil] [!N, S]
 1979 Miller & Peck: 97 (fossils) >> as syn. of *N. guttula*
 1985 Anderson & Peck: 58 (revision: key, descriptions & catalog) >> as syn. of *N. guttula*
 1993 Peck & Miller: 7 (species-group catalog) >> as syn. of *N. guttula*
 1996 Ratcliffe: 67 (revision: key, descriptions & catalog) >> as syn. of *N. guttula*

= *quadriguttata* Angell, 1920 NEW STATUS as absolute syn. of *N. guttula* Motschulsky

Type locality: "San Francisco, California" [USA; label]

Type depository: NMNH: Washington, D. C. [!] holotype male

- 1920 Angell: 90 (description of variation) >> Orig. comb.: *Nicrophorus guttula* var. *quadriguttata* (sic) [!M, N, S]
 1926a Portevin: 254 (revision: key, descriptions & catalog in French) >> as *N. Hecate* ab. 4 *guttata*
 1927b Hatch: 360 (revision: key, descriptions & catalog) >> Revised syn. as *N. guttulus* ab. *quadriguttatus*
 1928 Hatch: 146 (catalog) >> as *N. guttulus* ab. *quadriguttatus*
 1944 Arnett: 5 (morphology: female genitalia) >> as *N. guttula* subsp. *guttula* ab. *quadriguttatus*

= *vandykei* Angell, 1920 NEW STATUS as absolute syn. of *N. guttula* Motschulsky

Type locality: "Shasta Co. Calif." [USA; label]

Type depository: NMNH: Washington, D. C. [!] holotype female

- 1920 Angell: 90 (description of variation) >> Orig. comb.: *Nicrophorus guttula* var. *Van Dykei* [!M, N, S]
 1926a Portevin: 254 (revision: key, descriptions & catalog in French) >> as *N. Hecate* ab. *Vandykei*
 1927b Hatch: 361 (revision: key, descriptions & catalog) >> as *N. guttula* ab. *vandykei*
 1928 Hatch: 146 (catalog) >> as *N. guttulus* ab. *Vandykei*
 1940 Hatch: 235 (description of variation) >> as *N. guttulus* ab. *vandykei*
 1944 Arnett: 5 (morphology: female genitalia) >> as *N. guttula* subsp. *guttula* ab. *vandykei*

Nicrophorus heurni Portevin, 1926

Type locality: "Nouvelle-Guinée: campement de Doormanpad, 1410 m" [Mamberamo R., nw New Guinea (prob. w Irian, Indonesia); descrip.]

Type depository: MBBJ: (Mus. Boitenzorg) Bogor / Bandung, Java, holotype, 5 paratypes [MNHN [!], DEIC]

Distribution: Australian: New Guinea, (Irian Jaya)

- 1926a Portevin: 209 (revision: key, descriptions & catalog in French) >> Orig. comb.: *Nicrophorus Heurni* [!N, S]
 1926b Portevin: 211 (descriptions in French) >> detailed redescription
 1927b Hatch: 354 (revision: key, descriptions & catalog) >> specimens not seen by Hatch

- 1928 Hatch: 130 (catalog)
 1933 Semenov-Tian-Shanskij: 155 (catalog in Russian & Latin)
 1959 Mroczkowski: 66 (description) >> compared to *N. kieticus*
 1969 Hinton: 186 (morphology: diffraction gratings) >> has iridescent morphology
 1985 Peck & Anderson: 274 (key, descriptions, phylogenetics)
 1986 Nishikawa: 99 (catalog in Japanese (English summary))
 1990 Hanski & Niemelä: 149 (biology: ecology)
 1991 Hanski & Krikken: 195 (biology: ecology)
 2000 Růžička et al.: 381 (descriptions)
 2000 Sikes & Peck: 393 (descriptions, phylogenetics) >> tibia figured; nomen nudum: *N. heurni* subsp. *portevin*
 2001 Peck: 94 (keys, descriptions and distributions) >> dist. figured

***Nicrophorus hispaniola* Sikes & Peck, 2000**

Type locality: “Hispaniola: Dominican Republic: Pedernales, 8 km NE Los Arroyos, elev. 1940 m, 18° 16' N, 71° 44'W” [label]

Type depository: CMNH: Pittsburgh [!] holotype female, 10 paratypes [SBPC, CMNH, MAIC, FSCA]

Distribution: Neotropical: Hispaniola: southwestern mountainous Dominican Republic

- 2000 Sikes & Peck: 391 (descriptions, phylogenetics) >> Orig. comb.: *Nicrophorus hispaniola* [!S]

***Nicrophorus humator* (Gleditsch, 1767)**

Type locality: unknown

Type depository: unknown

Distribution: Palearctic: Europe, nAfrica: Morocco, Iran, Israel*, Russian plain, Turkmenistan, Armenia, Afghanistan, Kazakhstan, Turkey; Transcaucasia, Kyrgyzstan, Uzbekistan, Tajikistan

- 1767 Gleditsch: 224 (descriptions in German) >> Orig. comb.: *Silpha humator*; illustrated, tab. 1 [!S]
 1777 Goeze: 190 (in German) >> as *Nicrophorus humator*
 1778 Bergsträsser: 64 (catalog in German)
 1790 Olivier: no. 10, p. 8 (descriptions in French) >> habitus figured
 1790 Scriba: 168 (in German)
 1792 Fabricius: 247 (descriptions) >> incorrect auth. attrib: *N. humator* Olivier
 1792 Frölich: 122 (descriptions in German)
 1792 Kugelann: 503 (in German)
 1793 Herbst: 156 (catalog in German)
 1795 Panzer: 117 (catalog in German)
 1797 Panzer: 2 (catalog in German)
 1798 Cederhielm: 45 (catalog)
 1798 Illiger: 352 (catalog in German)
 1798 Paykull: 323
 1801 Fabricius: 333 (descriptions)
 1802 Marsham: 114 >> as *Silpha humator*

- 1807 Haworth: 82 (descriptions) >> compared to *N. bimaculatus*
 1807 Herschel: 274 (descriptions in German)
 1808 Gyllenhal: 258 (descriptions, catalog)
 1808 Schönherr: 118 (in German)
 1821 Dejean: 42 (catalog)
 1825 Curtis: Pl. 71 (checklist) >> text accompanying Plate 71.
 1825 Duftschmid: 111 (descriptions in German)
 1827 Gyllenhal: 307 (descriptions)
 1829b Stephens: 74 (catalog)
 1830 Stephens: 17 (biology, descriptions)
 1832 Ménériés: 167 (checklist in French)
 1833 Dejean: 117 (catalog in French) >> incorrect auth. attrib. Fabricius
 1836 Dejean: 131 (catalog in French)
 1837 Erichson: 223 (species-group catalog in German)
 1838 Sturm: 59 (in German)
 1839 Matzek: 21 (morphology: internal & external anatomy in Latin) >> as *N. Humatorum*
 1839 Stephens: 113 (descriptions)
 1839 Westwood: 138 (biology)
 1840 Laporte: 2 (descriptions in French)
 1841a Heer: 386 (descriptions in German)
 1841b Heer: 9 (checklist in German)
 1843 Mannerheim: 251 (descriptions in German) >> compared to *N. nigrita*
 1846 Kolenati: 49 (catalog) >> spec. 202 in list
 1846a Küster: nr. 51 (catalog in German)
 1847 Rosenhauer: 105 (checklist in German)
 1849 Bach: 153 (checklist, brief descriptions in German)
 1849 Gaubil: 55 (catalog in French)
 1849 Redtenbacher: 140 (catalog in German)
 1853 Hoffmann: 105 (description of variation in German)
 1854 Lacordaire: 199 (biology, catalog in French)
 1855 Fairmaire & : 271
 1858 Calwer: 106 (checklist, brief descriptions in German)
 1858 Redtenbacher: 289 (catalog in German)
 1859 Gutfleisch & Bose: 202 (key, descriptions in German)
 1859 Schaum: 36 (catalog in German)
 1862 Schaum: 38 (catalog in German) >> incorrect auth. attr. F.
 1862 Thomson: 8 (descriptions)
 1863 Grenier: 13 (checklist in French)
 1863 Marseul: 88 (catalog in French)
 1865 Power: 198 (revision: key, descriptions & catalog)
 1866 Marseul: 38 (catalog in French)
 1868 Gemminger & Harold: 718 (catalog)
 1868 Stein: 42 (catalog in Latin)
 1869 Stierlin & Gautard: 116 (checklist in German)
 1870 Motschulsky: 352 (descriptions in French) >> compares *N. ruficornis* Mots. to *N. humator*

- 1870 Vollenhoven et al.: 54 (checklist in Dutch)
- 1873 Bell: 94 (biology, behavior) >> "Biology" - Hatch 1928
- 1873 Klika: 127 (checklist in Czech)
- 1873 Michow: 18, 20 (in German)
- 1873 Wood: 90 (biology, ecology)
- 1874 Cox: 406 (key, descriptions (brief))
- 1874 Seidlitz: 216 (key in German)
- 1874 Solsky: 213 (checklist in Russian)
- 1876b Kraatz: 395 (morphology: clypeus in German)
- 1877 Hickel & Dragicsevics: 27 (checklist in French)
- 1877 Stein & Weise: 61 (catalog in Latin)
- 1880 Heyden: 86 (checklist in German)
- 1883 Heyden et al.: 73 (checklist) >> incorrect auth. attr. Goeze
- 1884 Marseul: 185 (key, descriptions in French) >> as senior syn. of *N. bimaculatus*
- 1884 Reitter: 86 (descriptions in German) >> as *Silpha humator*
- 1884 Schmidt: 90 (biology in French) >> "Biology" - Hatch
- 1885 Marseul: 169 (catalog in French) >> as *Necrophorus humator*
- 1885 Reitter: 86 (in German)
- 1885 Thomson: 66 (key, checklist in Swedish)
- 1887 Lewis: 341 (description) >> compared with *N. tenuipes*
- 1888 Seidlitz: 312 (key in German) >> misspelled as *Necrophagus humator*
- 1889 Fowler: 43 (descriptions, catalog)
- 1889 Seidlitz: 328 (key in German) >> misspelled as *Necrophagus humator*
- 1891 Heyden et al.: 138 (checklist)
- 1892 Xambeu: 150 (biology in French) >> "Larva" - Hatch 1928
- 1893 Fauconnet: 255 (description of variation)
- 1893 Heyden: 51 (checklist in German)
- 1893 Reitter: 147 (key, descriptions in German)
- 1894 Semenov-Tian-Shanskij: 530 (description in Latin) >> compared to *N. przewalskii*
- 1895b Reitter: 324 (description of variation in German)
- 1896 Acloque: 241 (key in French)
- 1896 Heyden: 38 (checklist in German)
- 1898 Everts: 412
- 1899 Ganglbauer: 163 (key, descriptions, morphology, in German)
- 1899 Herms: 316 (in German) >> "Biology" - Hatch 1928
- 1899 Meier: 98 (description of variation in German)
- 1901 Carret: 329 (description of variation in French)
- 1902 Johnson & Halbert: 690 (checklist)
- 1905 Voigts & Oudemans (biology, symbionts: mites in German)
- 1905 Weber: 31 (biology, ecology, behavior in German)
- 1906 Heyden et al.: 247 (checklist)
- 1909 Bickhardt: 73 (description of variation in German)
- 1909 Reitter: 239 (in German)
- 1910 Jakobson: 611 (checklist in Russian)
- 1913 Delahon: 530 (checklist in German) >> description of variation: 1 unavailable name

- 1913 Kuhnt: 335 (in German)
- 1914 Gorke: 235, 337, fig 2 (morphology: malpighian tubules in German) >> figured
- 1914 Sainte-Claire-Deville: 162 (checklist, discussion of variation in French)
- 1916 Pasquet: 134 (description of variation in French)
- 1916 Schaufuss: 272 (checklist in German)
- 1922 Everts: 182
- 1922 Gimingham (biology, symbionts: mites)
- 1922 Hansen: 114, 115 (key, descriptions, morphology, larval stages in Danish)
- 1922 Henriksen: 257 (key) >> "Larva" - Hatch 1928
- 1922 Portevin: 55 (descriptions in French) >> compared to *N. tenuipes*
- 1922 Sherborn: 3052 (catalog - index)
- 1923 Portevin: 303 (key, descriptions in French)
- 1923 Portevin: 67 (key, descriptions in French) >> comment that this sp. can be found on mushrooms
- 1924 Jakobson: 236 (catalog)
- 1925 Delahon: 306 (comment in German) >> 1 unavailable name
- 1925 Fuente y Morales: 119 (checklist in Spanish)
- 1925 Weber: 124 >> "Biology" - Hatch 1928
- 1925 Winkler: 263 (catalog) >> incorrect auth. attr. Goeze
- 1926 Porta: 332 (key, checklist in Italian)
- 1926a Portevin: 202 (revision: key, descriptions & catalog in French)
- 1927b Hatch: 354 (revision: key, descriptions & catalog)
- 1928 Hatch: 130 (catalog)
- 1929 Kôno: 161, 164 (checklist, annotated) >> incorrect auth. attr. Oliv.; as senior syn. of *N. tenuipes*
- 1929 Portevin: 538 (key, intraspecific variation in French)
- 1930 Collett: 258 (biology, behavior)
- 1930 Roubal: 240 (catalog in Czech)
- 1930 Vitzthum: 390 (biology, symbionts: mites in German) >> as mite host
- 1931 Walsh (biology)
- 1932 Joy: 466 (key)
- 1933 Pukowski: 518-586 (biology, ecology in German)
- 1933 Rapp: 535 (biology, ecology, distribution in German)
- 1933 Semenov-Tian-Shanskij: 150 (catalog in Russian & Latin) >> as type sp. of new subgenus *Necrocleptes*
- 1933a Shchegoleva-Barovskaya: 172 (revision: key, descriptions & catalog in Russian)
- 1933 Walsh: 28 (biology, ecology)
- 1934 Peyerimhoff: 333 (distribution note in French) >> record from Algeria, massif des Mouzaïa
- 1934a Pukowski: 4 (biology, ecology in German)
- 1934b Pukowski: 53-60 (morphology, larval stages in German) >> description of larva
- 1934c Pukowski: 112 (biology, behavior in German)
- 1935 Balduf: 69 (biology, ecology, behavior)
- 1936 Takagi: 192 (checklist in Japanese)
- 1936 Thiel: 415 (morphology: proventriculus in German)
- 1937 Kaufmann: 232 (biology, ecology) >> incorrect auth. attrib. Goeze
- 1938 Crowson: 407 (morphology: metendosternite) >> metendosternite

- 1939 Lengerken: 263 (biology in German)
- 1941 Paulian: 111 (morphology, larval stages in French) >> description of larva; larval mouthparts figured
- 1942 Pickles: 40, 42 (comment: ecology)
- 1943 Cooreman (biology, symbionts: mites in French)
- 1943 Neumann (biology, symbionts: mites in German)
- 1944 Arnett: 4, 22 (morphology: female genitalia) >> female genitalia figured, pl. 3, fig. 5
- 1945 Kloet & Hincks: 155 (checklist)
- 1945 Samsinak: 91 (description of variation in Czech) >> description of variation: 1 unavailable name
- 1946 Paulian: 95 (biology, ecology in French)
- 1947 Arnett: 111 (catalog)
- 1947 Cantonnet & Lecordier: 134 (biology, ecology in French)
- 1949 Horion: 76 (biology, ecology, distribution in German)
- 1949 Mroczkowski: 196 (biology, ecology in Polish (English summary))
- 1949 Roehrich: 44 (biology, ecology in French)
- 1950 Emden: 196 (biology, parasites) >> as host of *Sarcophaga nigriventris* Meig. (Diptera, Sarcophagidae)
- 1950a Théodorides: 97 (checklist in French) >> reliable record from Iberian peninsula
- 1950b Théodoridès: 5 (biology, ecology, morphology in French)
- 1952 Benick: 32 (biology, ecology in German)
- 1952 Novak: 62 (checklist in Croatian)
- 1955 Chapman & Sankey: 396 (biology, ecology)
- 1955 Moore: 292 (biology, ecology)
- 1955 Mroczkowski: 21 (key, descriptions in Polish)
- 1956 Esaki et al.: 1029 (checklist, descriptions in Japanese)
- 1958 Madge: 25 (revision: key, descriptions, ecology, distributions) >> dist. doubtful in North America
- 1959 Linssen: 161 (catalog)
- 1960 Hansen et al.: 72 (checklist in Danish)
- 1960 Théodoridès (biology, symbionts: mites in French)
- 1962 Boeckh: 214 (morphology: antennal in German)
- 1962 Pearson: 133, 146 (fossils) >> fossils from 10,500 B.P., England
- 1964 Petruška: 162 (biology, ecology in Czech (German summary))
- 1965 Báguena: 52 (checklist in Spanish)
- 1965 Lane & Rothschild: 157 (biology, behavior) >> could not be made to stridulate
- 1966 Korbel: 146 (biology, ecology in German (Czech & Russian summary))
- 1968 Hansen: 18 (key, descriptions in Danish)
- 1968 Petruška: 168 (biology, ecology in Czech (English summary))
- 1968 Springett: 417-424 (biology, symbionts: mites) >> focal species
- 1969 Ernst: 75 (morphology: antennal sensillae in German (English summary))
- 1969 Gersdorf: 305 (fossils, descriptions in German)
- 1970 Franz: 214 (checklist, distribution in German)
- 1970 Gersdorf: 366 (morphology: female genitalia in German)
- 1971 Freude: 193 (key in German)
- 1971 Kryzhanovskiy: 212 (in Russian (English summary))

- 1972b Ernst: 96 (morphology: antennal sensillae in German (English summary))
- 1973 Blackwelder: 3 (checklist, synonymy)
- 1973 Krivolutskaya: 70 (checklist in Russian (with electronic english translation))
- 1973 Nabaglo (biology, ecology)
- 1973 Schumacher: 65-75 (morphology: stridulatory files in German (English summary)) >> focal species
- 1973 Spicarová: 297-321 (biology, behavior in Czech (English summary))
- 1975 Schneider: 223 (morphology, behavior: wing motion in German)
- 1976 Bils: 118 (morphology: female abdominal musculature in German)
- 1976 Tischler: 100 (biology, ecology in German)
- 1977 Bockeler: 48 (biology, parasites in German (English summary))
- 1977 Matuszewski et al.: 884 (biology, cytology)
- 1977 Pope: 20 (checklist)
- 1978 Andre (biology, ecology in French)
- 1978 Blas: 51 (key, descriptions in Spanish)
- 1978 Burakowski et al.: 198 (catalog, distribution, synonymy in Polish)
- 1978 Mroczkowski: 239 (biology, ecology in Polish (Russian & German summary))
- 1978 Putman: 136 (biology, ecology) >> incorrect auth. attrib. Cz.
- 1978 Schneider: 199 (morphology: wing folding in German)
- 1979 Blum: 536 (morphology: wing folding, abdominal structure in German)
- 1979 Hammond: 133, 138 (morphology: wing folding) >> SEM of microtrichia on wing surfaces, and abdominal terga
- 1979 Miller & Peck: 98 (fossils) >> does not occur in California
- 1979 Silfverberg: 12 (checklist, distribution)
- 1980 Easton: 121-123 (morphology: sexual dimorphism)
- 1980 Franssen: 46 (morphology: female genitalia in French) >> female genitalia figured
- 1980 Iablokoff-Khnzorian: 268 (morphology: male genitalia in French) >> figured
- 1980 Madge: 356 (catalog)
- 1980 Stork: 200 (morphology: tarsal setae) >> details of tarsal morphology
- 1981 Rozner: 104 (checklist in Hungarian)
- 1981 Spriggs: 115 (descriptions, ecology)
- 1981 Šustek: 40 (key, descriptions, regional in Czech)
- 1982c Korn: 207 (biology, symbionts: mites in German (English summary)) >> mite host
- 1982 Wisiniewski (biology, symbionts: mites in German)
- 1983 Korn: 251 (biology, symbionts: mites in German (English summary))
- 1983 Putman: 35, 38-42 (biology, ecology)
- 1983 Sleeman (biology, symbionts: mites)
- 1984a Bredohl: 11-25 (morphology: stridulatory files in German (English summary))
- 1984 Denman: 201 (biology, behavior)
- 1984 Harde: 124 (field guide, brief descriptions, ecology) >> brief description
- 1984 Heinzl & Böhm: 173-176 (biology, physiology)
- 1985 Zahradník: 123, 372 (catalog, annotated & figured in German) >> incorrect auth. attrib. Goeze; figured
- 1986 Böhm et al.: 199 (biology, physiology in German)
- 1986 Erbeling & Erbeling: 234 (biology, ecology in German)

- 1986 Nishikawa: 99 (catalog in Japanese (English summary))
- 1987 Böhm & Wendler: 304-305 (biology, physiology in German)
- 1987 Jensen: 116 (biology, ecology in Danish (English summary))
- 1987 Lucht: 67 (catalog in German)
- 1987 Müller & Eggert: 297-304 (biology, behavior) >> focal species
- 1987 Müller & Cordes: 321 (biology, behavior in German)
- 1987 Peschke et al.: 246 (biology, ecology)
- 1988 Böhm & Wendler (biology, behavior, physiology in German (English summary))
- 1988 Müller & Eggert: 38 (biology, behavior in German)
- 1989 Heinzel & Böhm: 775-786 (biology, physiology) >> focal species; antenna figured with SEM
- 1989 Koch: 164 (biology, ecology in German)
- 1989 Núñez et al.: 438 (checklist in Spanish (English summary))
- 1989 Rassi & Rutanen: 212 (distribution note in Finnish)
- 1989 Stresemann et al. (key in German)
- 1990 Erbeling: 116 (biology, ecology in German (English summary))
- 1990 Hyatt: 136 (biology, symbionts: mites)
- 1990 Jones: 590 (comment: ecology) >> as prey item of greater horsehoe bat in England
- 1990 Kentner & Streit: 26 (biology, ecology in English (German summary))
- 1990 Otronen: 980-982 (biology, behavior) >> focal species
- 1990 Rohner: 453-464 (biology, ecology in German (English summary)) >> focal species
- 1990 Zahradník: 123 (key in Spanish)
- 1991 Böhm et al.: 671-683 (biology, physiology) >> focal species
- 1991 Lewis (distribution note)
- 1992 Huerta: 13-21 (morphology: sternal glands in Spanish (English summary)) >> focal species; incorrect author. attrib. to Goeze
- 1992 Kozminykh: 64 (checklist in Russian)
- 1992 Kozminykh & Esjunin: 68 (checklist in Russian)
- 1992 Růžička: 127 (key, descriptions, morphology, larval stages, phylogenetics) >> description of larval instars
- 1992 Schmitt: 272 (morphology: stridulatory files)
- 1992 Silfverberg: 14 (checklist, distribution in English (Finnish & Swedish summaries))
- 1993 Athias-Binche et al.: 76 (biology, symbionts: mites)
- 1993b Kozminykh: 63 (key, descriptions, regional in Russian)
- 1993 Růžička: 34 (checklist, distribution in English & Czech)
- 1994 Bertin & Fallaci: 218 (checklist in Italian (English summary))
- 1994 Brackenbury: 278, 281-282 (morphology: wing folding)
- 1994 Carnier: 124-124 (biology, ecology in German)
- 1994 Kozminykh & Esjunin: 78 (biology, ecology in English (Russian summary))
- 1994 Masan: 9 (biology, symbionts: mites in English (French & German summary))
- 1994 Růžička: 69 (biology, ecology)
- 1995 Angelini et al.: 10 (checklist, distribution in Italian)
- 1995 Bocáková: 24 (biology, ecology in Czech (English summary))
- 1995 Böhm: 1995-2005 (biology, behavior, physiology)

- 1995 Dapsio: 120 (checklist in Lithuanian)
 1995 Kozminykh: 108 (key in Russian)
 1995 Kozminykh & Nemkov: 111 (catalog in Russian)
 1996 Alexandrovich et al.: 17 (checklist, distribution in Russian & English)
 1996 Bertin & Lebboroni: 150 (checklist in Italian (English summary)) >> auth. attrib. incorrectly to Oliv.
 1996 Hansen: 93 (checklist, distribution in Danish & English)
 1996 Hava: 167 (description of variation in English (Czech summary)) >> auth. attrib. incorrectly to Oliv.
 1996 Schwarz: 137 (biology, symbionts: mites)
 1997 Anderson et al.: 14 (checklist)
 1997 Eggert & Müller: 219 (biology, review of: ecology, behavior)
 1997 Hansen: 17 (phylogenetics)
 1997 Klausnitzer: 40 (morphology, larval stages in German)
 1997 Kozminykh: 64 (checklist in Russian)
 1997 Pushkin: 24 (biology, ecology in Russian)
 1997 Pushkin & Charthenko: 62 (biology, ecology in Russian)
 1997 Telnov et al. (checklist)
 1998 Háva et al.: 179 (distribution note in English (Czech summary)) >> auth. attrib. correctly to Gleditsch
 1998 Kocárek: 387 (biology, ecology)
 1998 Pushkin & Sigida: 84 (biology, ecology in Russian)
 1998 Schwarz et al.: 164 (biology, symbionts: mites)
 1998 Schwarz & Koulianos: 623 (biology, symbionts: mites)
 1998b Scott: 598+ (biology, review of: ecology, behavior)
 1999 Bertin & Lebboroni: 55 (checklist in Italian)
 1999 Masán: 517 (biology, symbionts: mites)
 1999 Růžička: 318 (biology, ecology) >> auth. attrib. incorrectly to Oliv.
 2000 Bahillo de la Puebla & López-Colón: 224 (biology, descriptions, distribution in Spanish)
 2000 Bertin et al.: 130 (biology, ecology in Italian (English summary))
 2000 Gwiazdowicz: 44 (biology, symbionts: mites) >> mite host
 2000 Koulianos & Schwarz: 839 (biology, ecology, behavior) >> auth. attrib. incorrectly to Oliv.
 2000b Parkhomenko: 164 (morphology, larval stages in Ukrainian (English summary)) >> auth. attrib. incorrectly to F.
 2001 Kocárek: 431-438 (biology, ecology)
 2002 Nikolajev & Kozminykh: 109 (catalog, distribution, descriptions, keys, figures in Russian (English summary))

= *atricornis* Meier, 1899 NEW STATUS as absolute syn. of *N. humator* (Gleditsch)

Type locality: not mentioned?

Type depository: ZMUH: Hamburg

1899 Meier: 98 (description of variation in German) >> Orig. comb.: *Necrophorus humator* var. *atricornis* [!N, S]

1906 Heyden et al.: 247 (checklist) >> as *N. humator* var. *atricornis*

- 1909 Bickhardt: 75 (description of variation in German) >> as *N. humator* var. *atricornis*
 1910 Jakobson: 611 (checklist in Russian) >> as *N. humator* var. *atricornis*
 1913 Kuhnt: 303 (in German)
 1916 Schaufuss: 273 (checklist in German)
 1922 Everts: 182
 1923 Portevin: 303 (key, descriptions in French) >> as *N. humator* var. *atricornis*
 1925 Winkler: 263 (catalog) >> as *N. humator* ab. *atricornis*
 1926a Portevin: 202 (revision: key, descriptions & catalog in French) >> as *N. humator* var. *atricornis*
 1928 Hatch: 132 (catalog) >> as *N. humator* var. *atricornis*
 1933a Shchegoleva-Barovskaya: 172 (revision: key, descriptions & catalog in Russian) >> as *N. humator* ab. *atricornis*
 1944 Arnett: 4 (morphology: female genitalia) >> as *N. humator* var. *atricornis*
 1965 Báguena: 52 (checklist in Spanish) >> as *N. humator* ab. *atricornis*

= *maculosus* Meier, 1899 NEW STATUS as absolute syn. of *N. humator* (Gleditsch)

Type locality: not mentioned

Type depository: ZMUH: Hamburg

- 1899 Meier: 99 (description of variation in German) >> Orig. comb.: *Necrophorus humator* var. *maculosus* [!N, S]
 1906 Heyden et al.: 247 (checklist) >> as *N. humator* var. *maculosus*
 1909 Bickhardt: 75 (description of variation in German) >> as *N. humator* var. *maculosus*
 1910 Jakobson: 612 (checklist in Russian) >> as *N. humator* var. *maculosus*
 1913 Kuhnt: 335 (in German)
 1916 Schaufuss: 273 (checklist in German)
 1922 Everts: 182
 1923 Portevin: 303 (key, descriptions in French) >> as *N. humator* var. *maculosus*
 1925 Winkler: 263 (catalog) >> as *N. humator* ab. *maculosus*
 1926a Portevin: 202 (revision: key, descriptions & catalog in French) >> as *N. humator* ab. *maculosus*
 1928 Hatch: 132 (catalog) >> as *N. humator* ab. *maculosus*
 1933a Shchegoleva-Barovskaya: 172 (revision: key, descriptions & catalog in Russian) >> as *N. humator* ab. *maculosus*
 1944 Arnett: 4 (morphology: female genitalia) >> as *N. humator* var. *maculosus*
 1965 Báguena: 52 (checklist in Spanish) >> as *N. humator* ab. *maculosus*

= *nigerrimus* Kraatz, 1884

Type locality: "Margellan" [Margilan, eastern Uzbekistan; descrip.]

Type depository: DEIC: Eberswalde, holotype

- 1884 Kraatz: 230 (descriptions in German) >> Orig. comb.: *Necrophorus nigerrimus* [!M, S]
 1884 Marseul: 186 (key, descriptions in French) >> as valid species
 1885 Marseul: 169 (catalog in French) >> as valid species
 1893 Heyden: 51 (checklist in German) >> as valid species

- 1893 Reitter: 147 (key, descriptions in German) >> as valid species
 1895b Reitter: 324 (description of variation in German) >> as valid species
 1896 Heyden: 38 (checklist in German) >> as valid species
 1910 Jakobson: 611 (checklist in Russian) >> as valid species
 1923 Portevin: 230 (key, descriptions in French) >> as valid species
 1925 Winkler: 263 (catalog) >> as valid species
 1926a Portevin: 198 (revision: key, descriptions & catalog in French) >> as valid species
 1927b Hatch: 355 (revision: key, descriptions & catalog) >> as valid species; specimens not seen by Hatch
 1928 Hatch: 136 (catalog) >> as valid species
 1932 Hlisnikovskiy: 25 (key, descriptions in German) >> as valid species
 1933 Semenov-Tian-Shanskij: 150 (catalog in Russian & Latin) >> as valid species
 1933a Shchegoleva-Barovskaya: 172 (revision: key, descriptions & catalog in Russian) >> as syn. of *N. humator*
 1986 Nishikawa: 99 (catalog in Japanese (English summary)) >> as valid species
 1993b Kozminykh: 63 (key, descriptions, regional in Russian) >> as syn. of *N. humator*
 1995 Kozminykh & Nemkov: 111 (catalog in Russian) >> as syn. of *N. humator*
 2002 Nikolajev & Kozminykh: 109 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as syn. of *N. humator*

= *sulcatus* Fischer von Waldheim, 1844

Type locality: "Anatolia" [Turkey; descrip.]

Type depository: : Moscow, Leningrad, or Dresden?

- 1844 Fischer von Waldheim: 140 (descriptions) >> Orig. comb.: *Necrophorus sulcatus* [!M, N, S]
 1854 Lacordaire: 200 (biology, catalog in French) >> as valid species
 1863 Marseul: 88 (catalog in French) >> as valid species
 1866 Marseul: 38 (catalog in French) >> as valid species
 1868 Gemminger & Harold: 719 (catalog) >> as valid species
 1895b Reitter: 323 (description of variation in German) >> as valid species; but unknown to author
 1910 Jakobson: 612 (checklist in Russian) >> as valid species
 1926a Portevin: 252 (revision: key, descriptions & catalog in French) >> as syn. of *N. humator*
 1928 Hatch: 131 (catalog) >> as syn. of *N. humator*
 1933a Shchegoleva-Barovskaya: 172 (revision: key, descriptions & catalog in Russian) >> as syn. of *N. humator*
 1944 Arnett: 4 (morphology: female genitalia) >> as syn. of *N. humator*
 1965 Báguena: 52 (checklist in Spanish) >> as syn. of *N. humator*
 1993b Kozminykh: 63 (key, descriptions, regional in Russian) >> as syn. of *N. humator*
 1995 Kozminykh & Nemkov: 111 (catalog in Russian) >> as syn. of *N. humator*
 2002 Nikolajev & Kozminykh: 109 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as syn. of *N. humator*

Nicrophorus hybridus Hatch & Angell, 1925

Type locality: "Aweme, Man." [Canada: Manitoba, ca. east of Brandon; label]

Type depository: NMNH (USNM): Washington, D. C. [!] holotype female

Distribution: Nearctic: north-western mountainous North America

- 1925 Hatch & Angell: 216 (descriptions) >> Orig. comb.: *Nicrophorus hybridus* [!N, S]
- 1926a Portevin: 264 (revision: key, descriptions & catalog in French) >> listed in addenda
- 1927a Hatch: 5, 7, 19 (key, descriptions, description of variation)
- 1927b Hatch: 359 (revision: key, descriptions & catalog)
- 1928 Hatch: 145 (catalog)
- 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin)
- 1934 Hatch & Rueter: 159 (key, distribution, variation, descriptions)
- 1944 Arnett: 5, 24 (morphology: female genitalia) >> female genitalia figured, pl. 4, fig. 8
- 1945 Hatch: 14 (distribution note)
- 1946a Arnett: 133 (biology) >> purported specimens from New York, prob. erroneous
- 1958 Madge: 34 (revision: key, descriptions, ecology, distributions)
- 1973 Blackwelder: 5 (checklist, synonymy)
- 1982a Anderson: 262 (key, descriptions, morphology, larval stages)
- 1985 Anderson & Peck: 60 (revision: key, descriptions & catalog)
- 1985 Peck & Anderson: 287 (key, descriptions, phylogenetics)
- 1986 Nishikawa: 98 (catalog in Japanese (English summary))
- 1987 Peck & Kaulbars: 53 (checklist)
- 1990 Peck: 1123 (key)
- 1991 Campbell: 85 (catalog, distribution)
- 1993 Peck & Miller: 7 (species-group catalog)
- 1996 Palestirini et al.: 435 (larval descriptions, phylogenetics)
- 1996 Ratcliffe: 69 (revision: key, descriptions & catalog)
- 1997 Backlund & Marrone: 56 (biology, conservation)
- 1998 Coyle & Larsen: 163 (biology, ecology)
- 2000 Szalanski et al.: 590 (biology, conservation, phylogenetics, genetics)

= *minnesotianus* Hatch, 1927 NEW STATUS as absolute syn. of *N. hybridus* Hatch & Angell

Type locality: "Ramsey County" [USA: Minnesota; descrip.]

Type depository: unknown

- 1927a Hatch: 5, 7 (key, descriptions, description of variation) >> Orig. comb.: *Nicrophorus hybridus* var. *minnesotianus* [!N, S]
- 1927b Hatch: 360 (revision: key, descriptions & catalog) >> as *N. hybridus* var. *minnesotianus*
- 1928 Hatch: 146 (catalog) >> as *N. hybridus* var. *minnesotianus*
- 1944 Arnett: 5 (morphology: female genitalia) >> as *N. hybridus* var. *minnesotianus*

Nicrophorus insularis Grouvelle, 1893 desig. lectotype

Type locality: "Sumatra"[Indonesia; label]

Type depository: MNHN: Paris [!] lectotype male, 1 paralectotype female

Distribution: Oriental, Australian: Islands of Malay Archipelago: Bali, sBorneo, Java, Sulawesi, Sumatra

- 1893 Grouvelle: 161 (descriptions in French) >> Orig. comb.: *Nicrophorus insularis* [!M, S]
- 1903 Portevin: 331 (descriptions in French) >> as valid species
- 1920 Portevin: 399 (descriptions in French) >> as valid species
- 1922 Portevin: 55 (descriptions in French) >> as *N. nepalensis* var. *insularis*
- 1923 Bernet Kempers: 78-79 (morphology: wing venation in German) >> as valid species
- 1923 Portevin: 307 (key, descriptions in French) >> as *N. nepalensis* var. *insularis*
- 1926a Portevin: 208 (revision: key, descriptions & catalog in French) >> as *N. nepalensis* var. *insularis*
- 1928 Hatch: 129 (catalog) >> as *N. nepalensis* var. *insularis*
- 1964b Hlisnikovsky: 244 (descriptions in German) >> as *N. nepalensis* form *insularis* [ab. intended?]
- 1975 Emetz & Schawaller: 230 (checklist in German (English summary)) >> as *N. nepalensis* ab. *insularis*
- 1990 Hanski & Niemelä: 149 (biology: ecology) >> as valid species
- 1991 Hanski & Krikken: 195 (biology: ecology) >> as valid species
- 2001 Peck: 94 (keys, descriptions and distributions) >> as valid species

= *humeralis* Pic, 1917 REVISED SYNONYM of *N. insularis* Grouvelle

Type locality: "Java" [Indonesia; label]

Type depository: MNHN: Paris [!] holotype male

- 1917a Pic: 2 (description of variation in French) >> Orig. comb.: *Nicrophorus insularis* var. *humeralis* [!N, S]
- 1920 Portevin: 399 (descriptions in French) >> description of variation: 1 unavailable name
- 1926a Portevin: 253 (revision: key, descriptions & catalog in French) >> as syn. of *N. nepalensis* var. *insularis*
- 1928 Hatch: 129 (catalog) >> as syn. of *N. nepalensis* var. *insularis*
- 1993b Kozminykh: 67 (key, descriptions, regional in Russian) >> as syn. of *N. nepalensis*

Comments: Lectotype data for *Nicrophorus insularis* Grouvelle, 1893: 161 "*Nicrophorus insularis* Grouv. Type" (male symbol)/ "MUSEUM PARIS COLL. A. GROUVELL 1917" / red label: "TYPE" "Exp. Yermann"?/ SUMATRA: (coll. Dr. J. Bemmsul (..?)) red rectangular label with double black border "LECTOTYPE *Nicrophorus insularis* (Grouvelle 1893) det. Sikes 1997"- male (Paris [MNHN]); pronotal width: 5.08 mm.

Paralectotype data "*Nicrophorus insularis* Grouv. Type (female symbol) / "MUSEUM PARIS COLL. A. GROUVELL 1917" / red label:"TYPE" "Exp. Yermann"? / SUMATRA: (coll. Dr. J. Bemmsul (..?)) red rectangular label with double black border

“PARALECTOTYPE *Nicrophorus insularis* (Grouvelle 1893) det. Sikes 1997”- female (Paris [MNHN]).

DSS examined the holotype of *N. insularis* var. *humeralis* Pic in the Paris museum. It was a broken specimen, glued onto a card in pieces, the body was on a separate pin from the pieces. The maculations are those of *N. insularis*, not *N. nepalensis*, therefore we disagree with Kozminykh (1993) who treated this name as a synonym of *N. nepalensis* and return the name to synonymy under *N. insularis*.

Nicrophorus interruptus Stephens, 1830 desig. lectotype

Type locality: “Norfolk, the New Forest” [England; descrip., no data on label]

Type depository: BMNH: London [!] lectotype male, 6 paralectotypes

Distribution: Palearctic: Europe; nAfrica: Morocco, Algeria; Turkey; Iran, Transcaucasia; Kazakhstan

- 1830 Stephens: 18 (biology, descriptions) >> Orig. comb.: *Nicrophorus interruptus* [!N, S]
- 1833 Dejean: 117 (catalog in French) >> auth. incorrectly attrib. Dejean
- 1839 Stephens: 114 (descriptions) >> as valid species
- 1840 Laporte: 2 (descriptions in French) >> as valid species
- 1849 Gaubil: 55 (catalog in French) >> as valid species
- 1854 Lacordaire: 200 (biology, catalog in French) >> as valid species
- 1862 Schaum: 38 (catalog in German) >> as valid species & senior syn. of *N. fossor*
- 1863 Grenier: 13 (checklist in French) >> as valid species
- 1865 Power: 198 (revision: key, descriptions & catalog) >> as valid species
- 1868 Gemminger & Harold: 718 (catalog) >> as valid species
- 1868 Stein: 42 (catalog in Latin) >> as *N. vestigator* var. *interruptus*
- 1874 Cox: 407 (key, descriptions (brief))
- 1876b Kraatz: 395 (morphology: clypeus in German) >> as valid species
- 1877 Stein & Weise: 61 (catalog in Latin)
- 1882 Gradl: 331 (description of variation in German) >> as valid species
- 1883 Heyden et al.: 73 (checklist) >> as valid species & senior syn. of *N. fossor*
- 1884 Marseul: 188 (key, descriptions in French) >> as syn. of *N. fossor*
- 1884 Reitter: 87 (descriptions in German) >> as *Silpha interrupta*; as valid species
- 1885 Marseul: 169 (catalog in French) >> as *Nicrophorus interruptus*; as syn. of *N. fossor*
- 1885 Reitter: 320 (in German)
- 1887 Reitter: 217 (descriptions in German) >> as *Silpha interrupta*, as valid species; compared to *N. praedator*
- 1888 Matthews: 91 (description) >> as *Nicrophorus interruptus*; as valid species, compared to *N. mexicanus*
- 1888 Seidlitz: 313 (key in German) >> as valid species; misspelled as *Nicrophagus interruptus*
- 1889 Fowler: 44 (descriptions, catalog)
- 1889 Seidlitz: 329 (key in German) >> as valid species; misspelled as *Nicrophagus interruptus*
- 1890 Fauvel: 348 (descriptions in French) >> as valid species; as senior syn. of *N. fossor*

- 1891 Heyden et al.: 138 (checklist) >> as valid species; as senior syn. of *N. fossor*
- 1893 Heyden: 51 (checklist in German) >> as valid species; as senior syn. of *N. fossor*
- 1895b Reitter: 326 (description of variation in German) >> as valid species; as senior syn. of *N. fossor*
- 1896 Heyden: 38 (checklist in German) >> as valid species
- 1898 Everts: 413
- 1899 Ganglbauer: 163 (key, descriptions, morphology, in German) >> as valid species
- 1901 Carret: 331 (description of variation in French) >> as syn. of *N. fossor*
- 1902 Schneider: 44-47 (description of variation in German) >> description of variation: 5 unavailable names
- 1905a Portevin: 51 (nomenclature in French) >> as valid species
- 1906 Heyden et al.: 247 (checklist) >> as valid species; as senior syn. of *N. fossor*
- 1909 Reitter: 240 (in German) >> as valid species
- 1910 Jakobson: 612 (checklist in Russian) >> as valid species
- 1911 Reitter: 106 (description of variation in German) >> as valid species
- 1913 Fowler & Donisthorpe: 247
- 1913 Kuhnt: 335 (in German)
- 1914b Portevin: 225 (description of variation in French) >> as valid species
- 1914 Sainte-Claire-Deville: 162 (checklist, discussion of variation in French) >> as valid species
- 1916 Pasquet: 149 (description of variation in French)
- 1916 Schaufuss: 273 (checklist in German)
- 1917 Strand: 83 (descriptions in German) >> as valid species
- 1922 Everts: 183
- 1922 Hansen: 114 (key, descriptions, morphology, larval stages in Danish)
- 1922 Portevin: 56 (descriptions in French) >> as valid species; compared to *N. basalis*
- 1922 Sherborn: 3229 (catalog - index)
- 1924 Roubal: 81 (description of variation in German) >> description of variation: 2 unavailable names
- 1925 Fuente y Morales: 119 (checklist in Spanish) >> as valid species
- 1925 Winkler: 264 (catalog) >> as valid species; as senior syn. of *N. fossor*
- 1926 Porta: 333 (key, checklist in Italian) >> as valid species
- 1926a Portevin: 229 (revision: key, descriptions & catalog in French) >> as syn. of *N. fossor*
- 1929 Portevin: 539 (key, intraspecific variation in French) >> as valid species
- 1930 Kieseritzky: 64 (descriptions in Russian (German summary)) >> as valid species; as senior syn. of *N. fossor*
- 1930 Roubal: 241 (catalog in Czech) >> as valid species
- 1932 Hlisnikovsky: 29 (key, descriptions in German) >> as valid species
- 1932 Joy: 466 (key) >> as valid species
- 1933 Rapp: 536 (biology, ecology, distribution in German) >> as valid species
- 1933a Shchegoleva-Barovskaya: 185 (revision: key, descriptions & catalog in Russian) >> as syn. of *N. fossor*
- 1934 Peyerimhoff: 333 (distribution note in French) >> as syn. of *N. fossor*
- 1936 Thiel: 413 (morphology: proventriculus in German) >> as valid species
- 1943 Portevin: 48 (description of variation in French) >> as valid species: 1 new unavailable name

- 1944 Arnett: 7 (morphology: female genitalia) >> as valid species
 1945 Kloet & Hincks: 155 (checklist) >> as valid species
 1947 Cantonnet & Lecordier: 134 (biology, ecology in French) >> as valid species
 1949 Horion: 77 (biology, ecology, distribution in German) >> as valid species
 1949 Mroczkowski: 196 (biology, ecology in Polish (English summary)) >> as valid species
 1949 Riha (description in Czech) >> description of variation: 1 unavailable name
 1949 Roehrich: 44 (biology, ecology in French) >> as valid species
 1950b Théodoridès: 5 (biology, ecology, morphology in French) >> as valid species
 1952 Benick: 33 (biology, ecology in German) >> as valid species
 1952 Novak: 62 (checklist in Croatian) >> as valid species
 1959 Linssen: 162 (catalog) >> as valid species
 1960 Hansen et al.: 18 (checklist in Danish) >> as valid species
 1964 Petruška: 162 (biology, ecology in Czech (German summary)) >> as valid species
 1965 Báguena: 51 (checklist in Spanish) >> as syn. of *N. fossor*
 1967 Starzyk (biology, symbionts: mites)
 1968 Hansen: 18 (key, descriptions in Danish) >> as valid species
 1968 Petruška: 168 (biology, ecology in Czech (English summary)) >> as valid species
 1969 Hinton: 186 (morphology: diffraction gratings) >> as valid species; has iridescent morphology
 1970 Franz: 214 (checklist, distribution in German) >> as valid species
 1970 Gersdorf: 367 (morphology: female genitalia in German) >> as valid species
 1971 Freude: 194 (key in German) >> as syn. of *N. fossor*
 1975b Emetz: 104 (checklist in Russian) >> as syn. of *N. fossor*
 1975 Pardo-Alcaide & Yus: 96 (morphology, larval stages in Spanish) >> figured
 1976 Petruška: 167 (biology, ecology in Czech (English summary))
 1977 Pope: 20 (checklist) >> as valid species
 1978 Blas: 51 (key, descriptions in Spanish) >> as valid species
 1978 Burakowski et al.: 200 (catalog, distribution, synonymy in Polish) >> as valid species
 1978 Schneider: 199 (morphology: wing folding in German) >> as valid species
 1979 Salgado & Régil: 86 (catalog, annotated & figured in Spanish) >> as valid species
 1980 Franssen: 46 (morphology: female genitalia in French) >> as valid species; female genitalia figured
 1981 Spriggs: 116 (descriptions, ecology) >> as valid species
 1981 Šustek: 40 (key, descriptions, regional in Czech) >> as valid species
 1983 Putman: 38-42 (biology, ecology) >> as valid species
 1989 Núñez et al.: 439 (checklist in Spanish (English summary)) >> as valid species
 1989 Stresemann et al. (key in German)
 1990 Hyatt: 136 (biology, symbionts: mites) >> as valid species
 1993b Kozminykh: 65 (key, descriptions, regional in Russian) >> as syn. of *N. fossor*
 1994 Bertin & Fallaci: 218 (checklist in Italian (English summary)) >> as valid species
 1995 Kozminykh & Nemkov: 112 (catalog in Russian) >> as syn. of *N. fossor*
 1996 Bertin & Lebboroni: 151 (checklist in Italian (English summary)) >> as valid species

- 1996 Pushkin: 33 (biology, ecology in Russian) >> as valid specie
 1997 Pushkin: 24 (biology, ecology in Russian) >> as valid species
 1997 Pushkin & Charthenko: 62 (biology, ecology in Russian) >> as valid species
 1999 Bertin & Lebboroni: 57 (checklist in Italian) >> as *N. interruptus* subsp. *interruptus*
 2000 Bahillo de la Puebla & López-Colón: 248 (biology, descriptions, distribution in Spanish) >> as *N. interruptus* subsp. *interruptus*
 2000 Bertin et al.: 130 (biology, ecology in Italian (English summary)) >> as *N. interruptus* subsp. *interruptus*
 2000 Gwiazdowicz: 44 (biology, symbionts: mites) >> mite host
 2002 Nikolajev & Kozminykh: 117 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as syn. of *N. fossor*

= *algiricus* Pasquet, 1916 NEW STATUS as absolute syn. of *N. interruptus* Stephens;
 desig. lectotype

Type locality: “Kabylie: Tizi-Ouzou” [Algeria; label

Type depository: MNHN: Paris [!] lectotype male, 2 paralectotypes

- 1916 Pasquet: 154 (description of variation in French) >> Orig. comb.: *Necrophorus interruptus* var. *algiricus* [!M]
 1924 Portevin: 290 (key, descriptions in French) >> as *N. fossor* var. *algiricus*
 1925 Winkler: 264 (catalog) >> as *N. interruptus* ab. *algiricus*
 1926a Portevin: 229 (revision: key, descriptions & catalog in French) >> as *N. fossor* var. *algiricus*
 1928 Hatch: 143 (catalog) >> as *N. fossor* var. *algiricus*
 1933a Shchegoleva-Barovskaya: 185 (revision: key, descriptions & catalog in Russian) >> as *N. fossor* ab. *algiricus*
 1934 Peyerimhoff: 333 (distribution note in French) >> as *N. fossor* var. *algiricus*
 1965 Báguena: 52 (checklist in Spanish) >> as *N. fossor* ab. *algiricus*
 1989 Núñez et al.: 439 (checklist in Spanish (English summary)) >> as *N. interruptus* var. *algiricus*

= *basalis* Gistel, 1848 (junior primary homonym, not Faldermann 1835) NEW SYNONYM of *N. interruptus* Stephens

Type locality: “Frankreich” [France; descrip.]

Type depository: ZSMC: München?

- 1848 Gistel: 190 (descriptions in German) >> Orig. comb.: *Necrophorus basalis* (attrib. Dejean, nomen nudum 1821); New junior primary homonym, not Faldermann 1835
 1857b Gistel: 565 (in German) >> as valid species; implied as new species
 1917 Strand: 83 (descriptions in German) >> as doubtfully valid species
 1928 Hatch: 153 (catalog) >> *Incertae sedis*

= *brunnipes* Gradl, 1882 NEW STATUS as absolute syn. of *N. interruptus* Stephens

Type locality: not mentioned

Type depository: NMPC: Praha? [not found]

- 1882 Gradl: 331 (description of variation in German) >> Orig. comb.: *Necrophorus interruptus* var. *brunnipes* [!S]
 1898 Everts: 413
 1910 Jakobson: 612 (checklist in Russian) >> as *N. interruptus* var. *brunnipes*
 1916 Pasquet: 153 (description of variation in French)
 1924 Portevin: 290 (key, descriptions in French) >> as *N. fossor* var. *brunnipes*
 1925 Winkler: 264 (catalog) >> as *N. interruptus* ab. *brunnipes*
 1926a Portevin: 229 (revision: key, descriptions & catalog in French) >> as *N. fossor* var. *brunnipes*
 1928 Hatch: 143 (catalog) >> as *N. fossor* var. *brunnipes*
 1933a Shchegoleva-Barovskaya: 185 (revision: key, descriptions & catalog in Russian) >> as *N. fossor* ab. *brunnipes*
 1965 Báguena: 52 (checklist in Spanish) >> as *N. fossor* ab. *brunnipes*
 1989 Núñez et al.: 439 (checklist in Spanish (English summary)) >> as *N. interruptus* var. *brunnipes*

= *centrimaculatus* Reitter, 1895 NEW STATUS as absolute syn. of *N. interruptus* Stephens

Type locality: "Göttingen" [Germany; descrip.]

Type depository: HNHM: Budapest? [not found]

- 1895a Reitter: 200 (description of variation in German) >> Orig. comb.: *Necrophorus interruptus* var. *centrimaculatus* [!S]
 1895b Reitter: 326 (description of variation in German) >> as *N. interruptus* var. *centrimaculatus*
 1898 Everts: 413
 1899 Ganglbauer: 164 (descriptions, in German) >> as *N. interruptus* var. *centrimaculatus*
 1906 Heyden et al.: 247 (checklist) >> as *N. interruptus* var. *centrimaculatus*
 1909 Reitter: 240 (in German) >> as *N. interruptus* var. *centrimaculatus*
 1910 Jakobson: 612 (checklist in Russian) >> as *N. interruptus* var. *centrimaculatus*
 1913 Kuhnt: 335 (in German)
 1916 Pasquet: 153 (description of variation in French)
 1916 Schaufuss: 273 (checklist in German)
 1924 Portevin: 289 (key, descriptions in French) >> as *N. fossor* ab. *centrimaculatus*
 1925 Winkler: 264 (catalog) >> as *N. interruptus* ab. *centrimaculatus*
 1926a Portevin: 229 (revision: key, descriptions & catalog in French) >> as *N. fossor* ab. *centrimaculatus*
 1928 Hatch: 143 (catalog) >> as *N. fossor* ab. *centrimaculatus*
 1930 Roubal: 241 (catalog in Czech) >> as *N. interruptus* var. *centrimaculatus*
 1933a Shchegoleva-Barovskaya: 185 (revision: key, descriptions & catalog in Russian) >> as *N. fossor* ab. *centrimaculatus*
 1965 Báguena: 51 (checklist in Spanish) >> as *N. fossor* ab. *centrimaculatus*
 1989 Núñez et al.: 439 (checklist in Spanish (English summary)) >> as *N. interruptus* var. *centrimaculatus*

= *corsicus* Laporte, 1832 NEW STATUS as absolute syn. of *N. interruptus* Stephens

Type locality: “de Corse” [France: Island of Corsica; descrip.]

Type depository: unknown

- 1832 Laporte: 399 (descriptions in French) >> Orig. comb.: *Necrophorus Corsicus* [!N, S]
- 1833 Dejean: 117 (catalog in French) >> as valid species; auth. incorrectly attrib. Dejean
- 1840 Laporte: 2 (descriptions in French) >> as valid species
- 1849 Gaubil: 55 (catalog in French) >> as valid species
- 1854 Lacordaire: 199 (biology, catalog in French) >> as valid species
- 1859 Schaum: 36 (catalog in German) >> as valid species
- 1861 Strauch: 37 (catalog in French) >> as valid species
- 1862 Schaum: 38 (catalog in German) >> as valid species
- 1863 Marseul: 88 (catalog in French) >> as valid species
- 1866 Marseul: 38 (catalog in French) >> as valid species
- 1868 Gemminger & Harold: 718 (catalog) >> as valid species
- 1868 Stein: 42 (catalog in Latin) >> as valid species
- 1874 Seidlitz: 216 (key in German) >> as valid species
- 1877 Stein & Weise: 61 (catalog in Latin) >> as valid species
- 1883 Heyden et al.: 73 (checklist) >> as valid species
- 1884 Marseul: 189 (key, descriptions in French) >> as valid species
- 1884 Reitter: 86 (descriptions in German) >> as *Silpha corsica*; as valid species
- 1885 Marseul: 169 (catalog in French) >> as *N. corsica*; as valid species
- 1888 Seidlitz: 312 (key in German) >> as valid species, misspelled as *Necrophagus corsicus*
- 1889 Seidlitz: 328 (key in German) >> as valid species; misspelled as *Necrophagus corsicus*
- 1891 Heyden et al.: 138 (checklist) >> as valid species
- 1895b Reitter: 325 (description of variation in German) >> as valid species
- 1896 Acloque: 241 (key in French) >> as valid species
- 1900 Meier: 218 (description of variation in German) >> as valid species
- 1902 Schneider: 40 (description of variation in German)
- 1906 Heyden et al.: 247 (checklist) >> as valid species
- 1907 Schulz: 44 (description of variation in German) >> as valid species; description of variation: 16 unavailable names
- 1910 Jakobson: 612 (checklist in Russian) >> as *N. interruptus* subsp. *corsicus*
- 1914 Sainte-Claire-Deville: 162 (checklist, discussion of variation in French) >> as *N. interruptus* subsp. *corsicus*
- 1916 Pasquet: 159 (description of variation in French)
- 1925 Winkler: 264 (catalog) >> as *N. interruptus* subsp. *corsicus*
- 1926 Porta: 332 (key, checklist in Italian) >> as *N. interruptus* subsp. *corsicus*
- 1926a Portevin: 229 (revision: key, descriptions & catalog in French) >> as *N. interruptus* subsp. *corsicus*
- 1928 Hatch: 144 (catalog) >> as *N. interruptus* subsp. *corsicus*
- 1929 Portevin: 539 (key, intraspecific variation in French) >> as *N. interruptus* subsp. *corsicus*

- 1993b Kozminykh: 65 (key, descriptions, regional in Russian) >> as syn. of *N. fossor*
 1994 Bertin & Fallaci: 219 (checklist in Italian (English summary)) >> as *N. interruptus* subsp. *corsicus*
 1995 Kozminykh & Nemkov: 112 (catalog in Russian) >> as syn. of *N. fossor*
 2002 Nikolajev & Kozminykh: 117 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as syn. of *N. fossor*

= *fossor* Erichson, 1837 NEW SYNONYM of *N. interruptus* Stephens

Type locality: not mentioned

Type depository: ZMHB: Berlin?

- 1837 Erichson: 224 (species-group catalog in German) >> Orig. comb.: *Necrophorus fossor* [!N, S]
 1838 Sturm: 66 (in German) >> as valid species
 1839 Stephens: 114 (descriptions) >> as syn. of *N. interruptus*
 1841a Heer: 387 (descriptions in German) >> as *N. ruspator* var. *fossor*
 1841b Heer: 9 (checklist in German) >> as *N. ruspator* var. *fossor*
 1846b Küster: nr. 37 (catalog in German (English summary)) >> as valid species
 1847 Rosenhauer: 105 (checklist in German) >> as valid species
 1849 Bach: 153 (checklist, brief descriptions in German) >> as valid species
 1849 Gaubil: 55 (catalog in French) >> as valid species
 1849 Redtenbacher: 140 (catalog in German)
 1854 Lacordaire: 199 (biology, catalog in French) >> as valid species
 1855 Fairmaire & : 292
 1858 Redtenbacher: 289 (catalog in German) >> as valid species
 1859 Gutfleisch & Bose: 202 (key, descriptions in German) >> as valid species
 1859 Schaum: 36 (catalog in German) >> as valid species
 1862 Schaum: 38 (catalog in German) >> as syn. of *N. interruptus*
 1862 Thomson: 10 (descriptions) >> as valid species
 1863 Grenier: 13 (checklist in French) >> as syn. of *N. interruptus*
 1863 Marseul: 88 (catalog in French) >> as valid species
 1864 Scriba: 377 (descriptions in German)
 1865 Power: 198 (revision: key, descriptions & catalog) >> as syn. of *N. interruptus*
 1866 Marseul: 38 (catalog in French) >> as valid species
 1866 Michow: 411 (description of variation in German)
 1868 Gemminger & Harold: 718 (catalog) >> as syn. of *N. interruptus*
 1868 Stein: 42 (catalog in Latin) >> as syn. of *N. interruptus*
 1869 Stierlin & Gautard: 116 (checklist in German) >> as valid species
 1870 Rye: 182 (comment [translation of Michow 1866]) >> suggested as a form of *Gallicus* following Michow (1866)
 1870 Vollenhoven et al.: 54 (checklist in Dutch) >> as valid species
 1873 Klika: 127 (checklist in Czech) >> as valid species
 1874 Seidlitz: 216 (key in German) >> as valid species
 1876b Kraatz: 395 (morphology: clypeus in German) >> as syn. of *N. interruptus*
 1877 Hickel & Dragicsevics: 27 (checklist in French)
 1877 Stein & Weise: 61 (catalog in Latin) >> as syn. of *N. interruptus*
 1882 Gradl: 331 (description of variation in German) >> as syn. of *N. interruptus*

- 1883 Heyden et al.: 73 (checklist) >> as syn. of *N. interruptus*
- 1884 Marseul: 188 (key, descriptions in French) >> as valid species
- 1884 Reitter: 87 (descriptions in German) >> as *Silpha fossor*; as syn. of *N. interruptus*
- 1885 Marseul: 169 (catalog in French) >> as *Necrophorus fossor*; as valid species
- 1885 Thomson: 66 (key, checklist in Swedish) >> as valid species
- 1888 Fairmaire: 115 (checklist, annotated in French) >> as valid species
- 1888 Seidlitz: 313 (key in German) >> as syn. of *N. interruptus*; misspelled as *Necrophagus fossor*
- 1889 Seidlitz: 329 (key in German) >> as syn. of *N. interruptus*; misspelled as *Necrophagus fossor*
- 1890 Fauvel: 348 (descriptions in French) >> as syn. of *N. interruptus*
- 1891 Heyden et al.: 138 (checklist) >> as syn. of *N. interruptus*
- 1892 Xambeu: 147 (biology in French) >> “Larva” - Hatch 1928
- 1893 Heyden: 51 (checklist in German) >> as syn. of *N. interruptus*
- 1896 Acloque: 241 (key in French) >> as valid species
- 1898 Xambeu: 48 (morphology, larval stages in French) >> “Larva; egg” - Hatch 1928
- 1899 Ganglbauer: 163 (key, descriptions, morphology, larval stages in German) >> as syn. of *N. interruptus*
- 1901 Carret: 331 (description of variation in French) >> as valid species & senior syn. of *N. interruptus*
- 1905a Portevin: 51 (nomenclature in French) >> as syn. of *N. interruptus*
- 1906 Heyden et al.: 247 (checklist) >> as syn. of *N. interruptus*
- 1910 Jakobson: 612 (checklist in Russian) >> as syn. of *N. interruptus*
- 1924 Portevin: 289 (key, descriptions in French) >> as valid species
- 1925 Weber: 124
- 1925 Winkler: 264 (catalog) >> as syn. of *N. interruptus*
- 1926a Portevin: 256 (revision: key, descriptions & catalog in French) >> as valid species & senior syn. of *N. interruptus*
- 1927b Hatch: 357 (revision: key, descriptions & catalog) >> as valid species
- 1928 Hatch: 142 (catalog) >> as valid species & senior syn. of *N. interruptus*
- 1930 Kieseritzky: 64 (descriptions in Russian (German summary)) >> as syn. of *N. interruptus*
- 1933 Pukowski: 518-586 (biology, ecology in German) >> as valid species
- 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin) >> as valid species
- 1933a Shchegoleva-Barovskaya: 185 (revision: key, descriptions & catalog in Russian) >> as valid species & senior syn. of *N. interruptus*
- 1934 Peyerimhoff: 333 (distribution note in French) >> as valid species & senior syn. of *N. interruptus*
- 1934b Pukowski: 53-60 (morphology, larval stages in German) >> as valid species; description of larva
- 1935 Balduf: 70 (biology, ecology, behavior) >> as valid species
- 1955 Mroczkowski: 22 (key, descriptions in Polish) >> as valid species
- 1964b Roussel: 111 (morphology, larval stages in French) >> as valid species; focal species
- 1965 Báguena: 51 (checklist in Spanish) >> as valid species
- 1965 Lane & Rothschild: 156 (biology, behavior) >> as valid species
- 1965a Roussel: 67 (morphology, larval stages in French (English summary)) >> as valid species; focal species

- 1965b Roussel: 6452 (morphology, larval stages in French) >> as valid species; focal species
- 1966a Mroczkowski: 334 (checklist) >> as valid species
- 1970 Gersdorf: 367 (morphology: female genitalia in German) >> as syn. of *N. interruptus*
- 1971 Freude: 194 (key in German) >> as valid species
- 1971 Mroczkowski: 214 (biology, ecology in Polish (Russian & English summary)) >> as valid species
- 1975a Emetz: 59 (checklist in German) >> as valid species
- 1975b Emetz: 104 (checklist in Russian) >> as valid species and senior syn. of *N. interruptus*
- 1978 Mroczkowski: 239 (biology, ecology in Polish (Russian & German summary)) >> as valid species
- 1979 Silfverberg: 12 (checklist, distribution) >> as valid species
- 1981 Rozner: 104 (checklist in Hungarian) >> as valid species
- 1984a Bredohl: 11-25 (morphology: stridulatory files in German (English summary)) >> as valid species; focal species
- 1985 Zahradník: 123 (catalog, annotated & figured in German) >> as valid species
- 1986 Nishikawa: 98 (catalog in Japanese (English summary)) >> as valid species
- 1987 Lucht: 67 (catalog in German) >> as valid species
- 1989 Koch: 164 (biology, ecology in German) >> as valid species
- 1989 Lafer: 340 (key, descriptions, description of variation in Russian) >> as valid species
- 1990 Erbeling: 116 (biology, ecology in German (English summary)) >> as valid species
- 1990 Kentner & Streit: 26 (biology, ecology in English (German summary)) >> as valid species
- 1990 Zahradník: 123 (key in Spanish) >> as valid species
- 1992 Kozminykh: 64 (checklist in Russian) >> as valid species
- 1992 Kozminykh & Esjunin: 68 (checklist in Russian) >> as valid species
- 1992 Růžička: 130 (key, descriptions, morphology, larval stages, phylogenetics) >> as valid species; description of larval instars
- 1992 Silfverberg: 14 (checklist, distribution in English (Finnish & Swedish summaries)) >> as valid species
- 1993b Kozminykh: 65 (key, descriptions, regional in Russian) >> as valid species
- 1993 Růžička: 34 (checklist, distribution in English & Czech) >> as valid species; as *N. fossor* subsp. *fossor*
- 1994 Kozminykh & Esjunin: 78 (biology, ecology in English (Russian summary)) >> as valid species
- 1994 Růžička: 69 (biology, ecology) >> as valid species
- 1995 Angelini et al.: 10 (checklist, distribution in Italian) >> as valid species
- 1995 Bocáková: 24 (biology, ecology in Czech (English summary)) >> as valid species; as *N. fossor* subsp. *fossor*
- 1995 Dapsio: 120 (checklist in Lithuanian) >> as valid species
- 1995 Kozminykh: 109 (key in Russian) >> as valid species
- 1995 Kozminykh & Nemkov: 112 (catalog in Russian) >> as valid species
- 1996 Alexandrovich et al.: 17 (checklist, distribution in Russian & English) >> as valid species

- 1996 Hansen: 93 (checklist, distribution in Danish & English) >> as valid species
 1996 Palestini et al.: 435 (larval descriptions, phylogenetics) >> as valid species
 1997 Eggert & Müller: 218 (biology, review of: ecology, behavior) >> as valid species
 1997 Klausnitzer: 47 (morphology, larval stages in German) >> as valid species
 1997 Kozminykh: 64 (checklist in Russian) >> as valid species
 1997 Telnov et al. (checklist) >> as valid species
 1998 Háva et al.: 179 (distribution note in English (Czech summary)) >> as valid species
 1998 Kocárek: 387 (biology, ecology) >> as valid species
 1998 Pushkin & Sigida: 84 (biology, ecology in Russian) >> as valid species
 1999 Růžička: 318 (biology, ecology) >> as valid species
 2000a Parkhomenko: 92 (morphology, larval stages in Ukrainian (English summary))
 >> as valid species
 2000b Parkhomenko: 164 (morphology, larval stages in Ukrainian (English summary))
 >> as valid species
 2001 Kocárek: 431-438 (biology, ecology) >> as valid species
 2001 Nishikawa: 81 (larval descriptions, phylogenetics in English (Japanese summary)) >> as valid species; larva compared to *N. maculifrons*
 2002 Nikolajev & Kozminykh: 117 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as valid species

= *funereus* Gén \acute{e} , 1839 NEW STATUS as absolute syn. of *N. interruptus* Stephens

Type locality: unknown

Type depository: unknown

- 1839 Gén \acute{e} : 58 (descriptions in Latin) >> Orig. comb.: *Necrophorus funereus* [!N]
 1849 Gaubil: 55 (catalog in French) >> as valid species
 1854 Lacordaire: 199 (biology, catalog in French) >> as valid species
 1859 Schaum: 36 (catalog in German) >> as syn. of *N. corsicus*
 1862 Schaum: 38 (catalog in German) >> as syn. of *N. corsicus*
 1863 Marseul: 88 (catalog in French) >> as syn. of *N. corsicus*
 1868 Gemminger & Harold: 718 (catalog) >> as syn. of *N. corsicus*
 1868 Stein: 42 (catalog in Latin) >> as syn. of *N. corsicus*
 1877 Stein & Weise: 61 (catalog in Latin) >> as syn. of *N. corsicus*
 1883 Heyden et al.: 73 (checklist) >> as syn. of *N. corsicus*
 1885 Marseul: 169 (catalog in French) >> as syn. of *N. corsicus*
 1891 Heyden et al.: 138 (checklist) >> as syn. of *N. corsicus*
 1906 Heyden et al.: 247 (checklist) >> as *N. corsicus* var. *funereus*
 1907 Schulz: 44 (description of variation in German) >> as *N. corsicus* ab. *funereus*
 1910 Jakobson: 612 (checklist in Russian) >> as absolute syn. of *N. interruptus* subsp. *corsicus*
 1914 Sainte-Claire-Deville: 162 (checklist, discussion of variation in French) >> as *N. interruptus* subsp. *corsicus* ab. *funereus*
 1922 Sherborn: 2568 (catalog - index)
 1924 Portevin: 290 (key, descriptions in French) >> as *N. fossor* subsp. *funereus*; valid subspecies
 1925 Winkler: 264 (catalog) >> as *N. interruptus* ab. *funereus*

- 1926a Portevin: 257 (revision: key, descriptions & catalog in French) >> as syn. of *N. interruptus* subsp. *corsicus*
 1928 Hatch: 144 (catalog) >> as syn. of *N. interruptus* subsp. *corsicus*

= *gallicus* Jacquelin du Val, 1860 REVISSED SYNONYM of *N. interruptus* Stephens

Type locality: unknown

Type depository: MNHN: Paris [not found]

- 1860 Jacquelin du Val: 139 (descriptions in French) >> Orig. comb.: *Necrophorus Gallicus* [!N]
 1862 Schaum: 38 (catalog in German) >> as valid species
 1863 Grenier: 13 (checklist in French) >> as valid species
 1863 Marseul: 88 (catalog in French) >> as valid species
 1864 Scriba: 377 (descriptions in German)
 1865 Power: 198-201 (revision: key, descriptions & catalog) >> as valid species
 1866 Marseul: 38 (catalog in French) >> as valid species
 1866 Michow: 412 (description of variation in German)
 1867 Grenier: x
 1868 Gemminger & Harold: 718 (catalog) >> as *N. interruptus* var. *gallicus*
 1868 Stein: 42 (catalog in Latin) >> as valid species
 1870 Rye: 182 (comment [translation of Michow 1866]) >> suggested as the senior syn. of *N. fossor* following Michow (1866)
 1873 Michow: 11, 21
 1874 Cox: 407 (key, descriptions (brief)) >> as *N. interruptus* var. *gallicus*
 1874 Seidlitz: 216 (key in German) >> as syn. of *N. fossor*
 1877 Stein & Weise: 61 (catalog in Latin) >> as *N. interruptus* var. *gallicus*
 1883 Heyden et al.: 73 (checklist) >> as *N. interruptus* var. *gallicus*
 1884 Marseul: 188 (key, descriptions in French) >> as syn. of *N. fossor*
 1885 Marseul: 169 (catalog in French) >> as syn. of *N. fossor*
 1885 Reitter: 320 (in German)
 1888 Seidlitz: 313 (key in German) >> as *N. interruptus* var. *gallicus*; misspelled as *Necrophagus gallicus*
 1889 Fowler: 45 (descriptions, catalog)
 1889 Seidlitz: 329 (key in German) >> as *N. interruptus* var. *gallicus*; misspelled as *Necrophagus gallicus*
 1891 Heyden et al.: 138 (checklist) >> as syn. of *N. interruptus*
 1899 Ganglbauer: 164 (in German) >> as syn. of *N. interruptus*
 1901 Carret: 331 (description of variation in French) >> as syn. of *N. fossor*
 1906 Heyden et al.: 247 (checklist) >> as syn. of *N. interruptus*
 1910 Jakobson: 612 (checklist in Russian) >> as syn. of *N. interruptus*
 1913 Fowler & Donisthorpe: 247
 1916 Schaufuss: 273 (checklist in German)
 1926a Portevin: 256 (revision: key, descriptions & catalog in French) >> as syn. of *N. fossor*
 1928 Hatch: 142 (catalog) >> as syn. of *N. fossor*
 1933a Shchegoleva-Barovskaya: 185 (revision: key, descriptions & catalog in Russian) >> as syn. of *N. fossor*

- 1965 Báuena: 51 (checklist in Spanish) >> as syn. of *N. fossor*
 1993b Kozminykh: 65 (key, descriptions, regional in Russian) >> as syn. of *N. fossor*
 1995 Kozminykh & Nemkov: 112 (catalog in Russian) >> as syn. of *N. fossor*
 2002 Nikolajev & Kozminykh: 117 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as syn. of *N. fossor*

= *infusaticornis* Portevin, 1924 NEW STATUS as absolute syn. of *N. interruptus* Stephens

Type locality: unknown

Type depository: MNHN: Paris [not found]

- 1924 Portevin: 289 (key, descriptions in French) >> Orig. comb.: *Necrophorus fossor infusaticornis* [!N, S]
 1925 Winkler: 264 (catalog) >> as *N. interruptus* ab. *infusaticornis*
 1926a Portevin: 229 (revision: key, descriptions & catalog in French) >> as *N. fossor* var. *infusaticornis*
 1928 Hatch: 143 (catalog) >> as *N. fossor* var. *infusaticornis*
 1933a Shchegoleva-Barovskaya: 185 (revision: key, descriptions & catalog in Russian) >> as *N. fossor* ab. *infusaticornis*
 1965 Báuena: 52 (checklist in Spanish) >> as *N. fossor* ab. *infusaticornis*
 1989 Núñez et al.: 439 (checklist in Spanish (English summary)) >> as *N. interruptus* var. *infusaticornis*

= *laportei* Meier, 1900 NEW STATUS as absolute syn. of *N. interruptus* Stephens

Type locality: Mte. d'Oro, Corsica" [France; descrip.]

Type depository: ZMUH: Hamburg

- 1900 Meier: 219 (description of variation in German) >> Orig. comb.: *N. corsicus* var. *laportei* [!N, S]
 1902 Schneider: 46 (description of variation in German) >> as *N. corsicus* ab. *laportei*
 1906 Heyden et al.: 247 (checklist) >> as *N. corsicus* var. *laportei*
 1914 Sainte-Claire-Deville: 162 (checklist, discussion of variation in French) >> as *N. interruptus* subsp. *corsicus* ab. *laportei*
 1928 Hatch: 144 (catalog) >> as *N. fossor* subsp. *corsicus* ab. *laportei*

= *nigricans* Pasquet, 1916 NEW STATUS as absolute syn. of *N. interruptus* Stephens

Type locality: Evreux" [France: Eure: 49.05°N, 1.18°E; label]

Type depository: MNHN: Paris [!] holotype female

- 1916 Pasquet: 153 (description of variation in French) >> Orig. comb.: *Necrophorus interruptus* var. *nigricans* [!M]
 1924 Portevin: 289 (key, descriptions in French) >> Revised syn./status as *N. fossor* ab. *nigricans*
 1925 Winkler: 264 (catalog) >> Revised syn. as *N. interruptus* ab. *nigricans*
 1926a Portevin: 229 (revision: key, descriptions & catalog in French) >> Revised syn. as *N. fossor* ab. *nigricans*
 1928 Hatch: 143 (catalog) >> as *N. fossor* ab. *nigricans*
 1933a Shchegoleva-Barovskaya: 185 (revision: key, descriptions & catalog in Russian) >> as *N. fossor* ab. *nigricans*
 1965 Báuena: 51 (checklist in Spanish) >> as *N. fossor* ab. *nigricans*

= *pasqueti* Pic, 1917 NEW STATUS as absolute syn. of *N. interruptus* Stephens

Type locality: unknown

Type depository: MNHN: Paris [not found]

- 1917b Pic: 21 (description of variation in French) >> Orig. comb.: *Necrophorus interruptus* var. *pasqueti*
 1924 Portevin: 289 (key, descriptions in French) >> as *N. fossor* ab. *Pasqueti*
 1925 Winkler: 264 (catalog) >> as *N. interruptus* ab. *pasqueti*
 1926a Portevin: 264 (revision: key, descriptions & catalog in French) >> as *N. fossor* ab. *Pasqueti*
 1928 Hatch: 143 (catalog) >> as *N. fossor* ab. *Pasqueti*
 1933a Shchegoleva-Barovskaya: 185 (revision: key, descriptions & catalog in Russian) >> as *N. fossor* ab. *pasqueti*
 1965 Báguena: 51 (checklist in Spanish) >> as *N. fossor* ab. *pasqueti*

= *suturalis* Motschulsky, 1860 REVISED SYNONYM of *N. interruptus* Stephens

Type locality: “de la Géorgie” [descrip.]

Type depository: ZMUM: Moscow

- 1860 Motschulsky: 126 (descriptions in French) >> Orig. comb.: *Necrophorus suturalis* [!N, S]
 1868 Gemminger & Harold: 719 (catalog) >> as valid species
 1884 Marseul: 191 (key, descriptions in French) >> as *N. sepultor* var. *suturalis*
 1885 Marseul: 169 (catalog in French) >> as *N. sepultor* var. *suturalis*
 1895b Reitter: 326 (description of variation in German) >> as *N. interruptus* var. *suturalis*
 1899 Ganglbauer: 163 (descriptions in German) >> as *N. interruptus* var. *suturalis*
 1906 Heyden et al.: 247 (checklist) >> as *N. interruptus* var. *suturalis*
 1910 Jakobson: 612 (checklist in Russian) >> as syn. of *N. interruptus*
 1916 Pasquet: 164 (description of variation in French)
 1922 Everts: 183
 1925 Winkler: 264 (catalog) >> as *N. interruptus* ab. *suturalis*
 1926a Portevin: 255 (revision: key, descriptions & catalog in French) >> as *N. investigator* ab. *suturalis*
 1928 Hatch: 140 (catalog) >> as *N. investigator* ab. *suturalis*
 1944 Arnett: 5 (morphology: female genitalia) >> as *N. investigator* subsp. *investigator* ab. *suturalis*

= *trimaculatus* Gradl, 1882 NEW STATUS as absolute syn. of *N. interruptus* Stephens

Type locality: not mentioned

Type depository: NMPC: Praha? [not found]

- 1882 Gradl: 331 (description of variation in German) >> Orig. comb.: *Necrophorus interruptus* Steph. var. *trimaculatus* [!S]
 1883 Heyden et al.: 73 (checklist) >> as *N. vestigator* var. *trimaculatus*
 1884 Marseul: 187 (key, descriptions in French) >> as *N. vestigator* var. *trimaculatus*
 1885 Marseul: 169 (catalog in French) >> as *N. vestigator* var. *trimaculatus*

- 1891 Heyden et al.: 139 (checklist) >> as syn. of *N. vestigator* var. *interruptus*
 1898 Everts: 413
 1906 Heyden et al.: 247 (checklist) >> as *N. vestigator* var. *trimaculatus*
 1910 Jakobson: 612 (checklist in Russian) >> as syn. of *N. interruptus*
 1916 Pasquet: 152 (description of variation in French)
 1924 Portevin: 290 (key, descriptions in French) >> as *N. fossor* ab. *trimaculatus*
 1925 Winkler: 264 (catalog) >> as *N. interruptus* ab. *trimaculatus*
 1926 Porta: 333 (key, checklist in Italian) >> as *N. vestigator* var. *trimaculatus*
 1926a Portevin: 229 (revision: key, descriptions & catalog in French) >> as *N. fossor* ab. *trimaculatus*
 1928 Hatch: 143 (catalog) >> as *N. fossor* ab. *trimaculatus*
 1933a Shchegoleva-Barovskaya: 185 (revision: key, descriptions & catalog in Russian) >> as *N. fossor* ab. *trimaculatus*
 1965 Báguena: 51 (checklist in Spanish) >> as *N. fossor* ab. *trimaculatus*
 1989 Núñez et al.: 439 (checklist in Spanish (English summary)) >> as *N. interruptus* var. *trimaculatus*

= *trinotatus* Reitter, 1911 NEW STATUS as absolute syn. of *N. interruptus* Stephens

Type locality: “Croatien” [Croatia: 45.16°N, 15.5°E; syntype label] and “Quell. d. Jrbut” [syntype label]

Type depository: HNHM: Budapest [!] 2 syntypes

- 1911 Reitter: 106 (description of variation in German) >> Orig. comb.: *Necrophorus interruptus* var./ab. *trinotatus* [!N, S]
 1925 Winkler: 264 (catalog) >> as *N. interruptus* ab. *trinotatus*
 1926a Portevin: 256 (revision: key, descriptions & catalog in French) >> as syn. of *N. fossor* ab. *trimaculatus*
 1928 Hatch: 143 (catalog) >> as syn. of *N. fossor* ab. *trimaculatus*
 1933a Shchegoleva-Barovskaya: 185 (revision: key, descriptions & catalog in Russian) >> as *N. fossor* ab. *trinotatus*

= *vodozi* Meier, 1900 NEW STATUS as absolute syn. of *N. interruptus* Stephens

Type locality: “Mte. d’Oro, Corsica” [France; descrip.]

Type depository: ZMUH: Hamburg

- 1900 Meier: 218 (description of variation in German) >> Orig. comb.: *Necrophorus corsicus* var. *vodozi* [!N, S]
 1902 Schneider: 46 (description of variation in German) >> as *N. corsicus* ab. *vodozi*
 1906 Heyden et al.: 247 (checklist) >> as *N. corsicus* var. *vodozi*
 1928 Hatch: 144 (catalog) >> as *N. fossor* subsp. *corsicus* ab. *vodozi*

Comments: Lectotype data for *Necrophorus interruptus* Stephens, 1830: 18 “gallicus” (male symbol)/ [ENGLAND]: no locality data, red rectangular label with double black border “LECTOTYPE *Necrophorus interruptus* (Stephens 1830) det. Sikes 1997” - male (London [BMNH]).

Paralectotype data “gallicus (female symbol)” / [ENGLAND]: no locality data, red rectangular label with double black border “PARALECTOTYPE *Necrophorus interruptus* (Stephens 1830) det. Sikes 1997” - 6 females (London [BMNH]).

Lectotype data for *Nicrophorus interruptus* var. *algericus* Pasquet, 1916: 154 "M. algericus Pasquet"/ red label: "TYPE" / Edough., (coll. A. Lamay) / red rectangular label with double black border "LECTOTYPE *Nicrophorus algericus* (Pasquet 1916) det. Sikes 1997" - male (Paris [MNHN]); pronotal width: 5.62 mm.

Paralectotype data "v. algericus co-type / red label: "TYPE" Edough., (coll. L. Bedel.) - female; v. algericus Pasq. Type algericus Pasq. [Madge's handwriting] red label: "TYPE" / [ALGERIA]: Kabylie Tizi-Ouzou, elev. 182 m, [36.72° ' N, 4.05° ' E,] - / red rectangular label with double black border "PARALECTOTYPE *Nicrophorus algericus* (Pasquet 1916) det. Sikes 1997" male (Paris [MNHN]).

As discussed above (see *N. germanicus*) regarding the names proposed by Gistel (1848, 1857), usually treated as *nomina dubia*, we herein synonymyze *N. basalis* Gistel, 1848 [not Faldermann 1835] under *N. interruptus* Stephens.

As can be seen above, the species *N. interruptus* has been consistently referred to by two names throughout its taxonomic history: *N. fossor* Erichson, 1837 and *N. interruptus* Stephens, 1830, with *N. fossor* being considered the valid name more often than the reverse. Part of the confusion was certainly due to Portevin (1926a) erroneously listing *N. interruptus* Brullé (= *N. vestigator* Herschel) with the wrong date (1822 rather than 1832) which, if he had been correct, would have made *N. interruptus* Stephens 1830 a primary junior homonym. It is clear that Portevin (1926a) had not thought the year 1822 correct for *N. interruptus* Brullé because in the same work he treated *N. interruptus* Brullé as a synonym of its replacement name *N. Brullei* Jakobson (1910). Furthering the confusion, Hatch (1928) missed Portevin's error and copied it in his world catalog reversing the *N. interruptus* Brullé / *N. Brullei* Jakobson synonymy of Portevin (indicating he thought that the replacement name of Jakobson's was unnecessary because Brullé's name would not be a junior primary homonym based on the erroneous date of 1822). However, Portevin was incorrect (we have seen the original Brullé [1832] and confirmed the date) and despite the use of *N. fossor* as valid in dozens of publications, even as recently as Nishikawa (2001) and Nikolajev & Kozminykh (2002), *N. interruptus* Stephens is neither a forgotten name, nor a junior homonym, and is the older, and therefore the valid, name of this species.

The name *N. gallicus* Jacquelin du Val has been considered subordinate to *N. fossor* for most of its history. Because we are herein making *N. fossor* a junior synonym of *N. interruptus*, the name *N. gallicus* must now be considered a synonym of *N. interruptus*.

The name *N. corsicus* Laporte has been considered a subspecies of *N. interruptus* (*N. fossor*) for most of its recent history and was applied to a population of *N. interruptus* with greatly reduced elytral maculations on the islands of Corsica and Sardinia. Although allopatric and apparently diagnosable from the mainland population, and thus perhaps deserving of subspecific status, DSS has seen specimens from mainland Europe (e.g. labelled from Austria in the Vienna collection) with the same elytral pattern. We recommend that it be considered the allopatric island populations of *N. interruptus* because the elytral pattern is apparently not restricted to only those islands.

The name *N. algericus* was given by Pasquet to a population of *N. interruptus* from Northern Africa. This population seems to consistently have the pubescence of the seventh abdominal tergum darker and shorter than that normally seen in European *N. interruptus*. However, *N. interruptus* is a widespread species and shows variation in the pubescence length and darkness on the seventh abdominal tergum with some European individuals showing the same states as seen in the African population. Nevertheless, this allopatric population could represent a distinct species or subspecies, albeit closely related to *N. interruptus*.

Throughout most of the history of the name *N. suturalis* Motschulsky it has been treated as a junior synonym of either *N. investigator* or *N. interruptus*. We transfer this name from synonymy under *N. investigator* to synonymy under *N. interruptus*.

Nicrophorus investigator Zetterstedt, 1824

Type locality: unknown

Type depository: MZLU: Lund

Distribution: Holarctic: Europe, n India, (Kashmir), northern & western (mountainous) North America, Korea, Japan, Mongolia, China, Russia: Siberia, Sakhalin, Kuriles, Ussuri reg., Turkey, Uzbekistan, Tajikistan, Kazakhstan, Pakistan, Kyrgyzstan, Afghanistan, Iran, Turkmenistan, Transcaucasia

1824 Zetterstedt: 151 (descriptions) >> Orig. comb.: *Nicrophorus investigator* [!S]

1827 Gyllenhal: 308 (descriptions) >> Misidentification of *N. investigator* as *N. vestigator*

1829b Stephens: 75 (catalog) >> as valid species

1830 Stephens: 118 (biology, descriptions) >> citation of Gyll. 1827 misid

1833 Dejean: 117 (catalog in French) >> auth. attrib. MacLeay

1838 Zetterstedt: 109 (descriptions)

1842 Fischer von Waldheim: 9 (checklist) >> as valid species

1849 Gaubil: 55 (catalog in French) >> as syn. of *N. ruspator*

1858 Calwer: 106 (checklist, brief descriptions in German) >> as syn. of *N. ruspator*

1868 Gemminger & Harold: 718 (catalog) >> as valid species

1873 Michow: 7 (in German)

1877 Stein & Weise: 61 (catalog in Latin) >> as valid species

1880 Heyden: 86 (checklist in German) >> as valid species

1883 Heyden et al.: 73 (checklist) >> as valid species

1884 Marseul: 190 (key, descriptions in French) >> as syn. of *N. ruspator* var. *microcephalus*

1884 Reitter: 87 (descriptions in German) >> as valid species; as *Silpha investigator*

1885 Marseul: 169 (catalog in French) >> as syn. of *N. ruspator* var. *microcephalus*

1885 Reitter: 320 (in German)

1887 Reitter: 217 (descriptions in German) >> as *Silpha investigator*; compared to *N. praedator*

1888 Seidlitz: 313 (key in German) >> as *N. investigator*; misspelled as *Nicrophagus*

1889 Sahlberg: 19 (checklist in Swedish) >> as valid species

1889 Seidlitz: 329 (key in German) >> misspelled as *Nicrophagus investigator*

- 1891 Heyden et al.: 138 (checklist) >> as valid species
 1893 Heyden: 51 (checklist in German)
 1895b Reitter: 326 (description of variation in German)
 1896 Acloque: 241 (key in French)
 1896 Heyden: 38 (checklist in German)
 1898 Everts: 413
 1899 Ganglbauer: 164 (key, descriptions, morphology, in German)
 1899 Poppius: 58 (checklist in Swedish)
 1901 Carret: 328 (description of variation in French)
 1906 Heyden et al.: 247 (checklist)
 1909 Reitter: 240 (in German)
 1910 Jakobson: 612 (checklist in Russian)
 1911 Selous (biology)
 1913 Kniephof: 187 (in German)
 1913 Kuhnt: 335 (in German)
 1915 Jaques: 83 (biology, ecology) >> as *N. pustulatus* var. *investigator*
 1916 Pasquet: 143 (description of variation in French) >> as *N. investigator*
 1916 Schaufuss: 273 (checklist in German)
 1920 Portevin: 400 (descriptions in French)
 1922 Everts: 183
 1922 Hansen: 114,115 (key, descriptions, morphology, larval stages in Danish)
 1922 Henriksen: 256 (key) >> "Larva" - Hatch 1928
 1924 Portevin: 149 (key, descriptions in French)
 1925 Winkler: 264 (catalog)
 1926 Porta: 333 (key, checklist in Italian)
 1926a Portevin: 222 (revision: key, descriptions & catalog in French)
 1927a Hatch: 5 (key, descriptions, description of variation)
 1927b Hatch: 357 (revision: key, descriptions & catalog)
 1927 Marié: 70, 72 (biology, ecology in French) >> "Biology" - Hatch 1928
 1928 Hatch: 139 (catalog)
 1929 Kôno: 164 (checklist, annotated) >> as *N. investigator* subsp. *maritimus* Guer.
 1929 Portevin: 539 (key, intraspecific variation in French)
 1930 Kieseritzky: 63 (descriptions in Russian (German summary))
 1930 Roubal: 240 (catalog in Czech)
 1932 Hlisnikovsky: 28 (key, descriptions in German)
 1932 Joy: 466 (key)
 1933 Kano: 100 (checklist in Japanese (English summary)) >> misidentified as *N. maculifrons*
 1933 Pukowski: 518-586 (biology, ecology in German)
 1933 Rapp: 536 (biology, ecology, distribution in German)
 1933 Semenov-Tian-Shanskij: 153 (catalog in Russian & Latin) >> as type sp. of new subgenus *Necropter*
 1933a Shchegoleva-Barovskaya: 186 (revision: key, descriptions & catalog in Russian)
 1933 Walsh: 29 (biology, ecology)
 1934 Brundin: 257 (biology, ecology in German)
 1934 Hatch & Rueter: 159 (key, distribution, variation, descriptions) >> as *N. investigator* subsp. *investigator*

- 1934b Pukowski: 53-60 (morphology, larval stages in German) >> description of larva
 1935 Balduf: 70 (biology, ecology, behavior)
 1935 Kôno: 1 (checklist, distribution in Japanese (English summary))
 1936 Cho: 155 (checklist in Korean)
 1937 Kaufmann: 232 (biology, ecology)
 1937 Mochizuki & Tsunekawa (checklist)
 1937 Wu (catalog)
 1938 Mori & Cho (checklist)
 1939 Masui (checklist)
 1940 Hatch: 235 (description of variation)
 1940 Šulc: 162 (morphology in Czech (German summary))
 1942 Roubal: 17 (description of variation in Czech) >> description of variation: 1
 unavailable name
 1943 Cooreman (biology, symbionts: mites in French)
 1944 Arnett: 5, 22 (morphology: female genitalia) >> female genitalia figured, pl. 3,
 fig. 8
 1944 Kôno: 84 (checklist in Japanese (German title))
 1945 Kloet & Hincks: 155 (checklist)
 1947 Arnett: 110 (catalog) >> as senior syn. of *N. melsheimeri*
 1949 Bliss: 201 (morphology: sexual dimorphism)
 1949 Horion: 77 (biology, ecology, distribution in German)
 1949 Mroczkowski: 196 (biology, ecology in Polish (English summary))
 1949 Pierce: 67 (fossils, descriptions)
 1951 Jaques: 83 (key, descriptions) >> as *N. pustulatus* var. *investigator*
 1952 Novak: 62 (checklist in Croatian) >> as valid species
 1955 Mroczkowski: 22 (key, descriptions in Polish)
 1955b Nakane: 54 (key, descriptions in Japanese)
 1955 Wachek (biology, parasites in German)
 1956 Osborne (biology, ecology)
 1957 Cho (catalog in Korean)
 1957 Hatch: 13 (description of variation)
 1958 Madge: 52 (revision: key, descriptions, ecology, distributions) >> as *N. investiga-*
tor subsp. *investigator*
 1959 Linssen: 162 (catalog)
 1960 Hansen et al.: 72 (checklist in Danish)
 1962 Boeckh: 214 (morphology: antennal in German)
 1963 Nakane: 75 (checklist, brief descriptions in Japanese)
 1964 Kamimura et al.: A20 (biology, ecology) >> incl. populations often desig. as *N.*
praedator
 1964 Petruška: 162 (biology, ecology in Czech (German summary))
 1965 Lane & Rothschild: 156 (biology, behavior)
 1966c Mroczkowski: 437 (checklist)
 1968 Hansen: 18 (key, descriptions in Danish)
 1968 Springett: 417-424 (biology, symbionts: mites) >> focal species
 1969 Evans (biology, ecology)
 1970 Franz: 214 (checklist, distribution in German)
 1970 Gersdorf: 366 (morphology: female genitalia in German)

- 1971 Freude: 194 (key in German)
- 1971 Mroczkowski: 213 (biology, ecology in Polish (Russian & English summary))
- 1972 Swan & Papp: 356 (description) >> brief description
- 1973 Blackwelder: 5 (checklist, synonymy)
- 1973 Schumacher: 65-75 (morphology: stridulatory files in German (English summary)) >> focal species
- 1974 Medvedev & Sosnina: 525 (biology, ecology) >> found in vole nest (Muridae: *Microtus arvalis* Pall.)
- 1975 Baldwin: 25 (key, description, distribution, ecology)
- 1975a Emetz: 60 (checklist in German)
- 1975b Emetz: 105 (checklist in Russian)
- 1975 Katakura & Fukuda: 78 (biology, ecology)
- 1975 Schneider: 223 (morphology, behavior: wing motion in German)
- 1976 Tischler: 100 (biology, ecology in German)
- 1977 Pope: 20 (checklist)
- 1978 Andre (biology, ecology in French)
- 1978 Burakowski et al.: 201 (catalog, distribution, synonymy in Polish)
- 1978 Kim: 65 (catalog, distribution)
- 1978 Mroczkowski: 239 (biology, ecology in Polish (Russian & German summary))
- 1979 Miller & Peck: 96 (fossils)
- 1979 Silfverberg: 12 (checklist, distribution)
- 1980 Arnett et al.: 129 (key, descriptions)
- 1980 Davis: 247 (biology, conservation)
- 1980 Easton: 121-123 (morphology: sexual dimorphism)
- 1980 Franssen: 46 (morphology: female genitalia in French) >> female genitalia figured
- 1980 Madge: 356 (catalog)
- 1980 Schawaller: 153 (checklist in German (English summary))
- 1981 Arnett & Jacques: plate 91 (field guide) >> brief description, photo
- 1981 Matis: 10 (distributional atlas in Russian) >> dot map of distribution in Russia
- 1981 Spriggs: 116 (descriptions, ecology)
- 1981 Šustek: 40 (key, descriptions, regional in Czech)
- 1982a Anderson: 261 (key, descriptions, morphology, larval stages)
- 1982c Korn: 207 (biology, symbionts: mites in German (English summary)) >> mite host
- 1982 Peck & Miller: 152 (nomenclature)
- 1982 Schawaller: 256 (checklist in German (English summary))
- 1983 Korn: 251 (biology, symbionts: mites in German (English summary)) >> mite host
- 1983 Putman: 17, 38-42 (biology, ecology)
- 1983 Sleeman (biology, symbionts: mites)
- 1984a Bredohl: 11-25 (morphology: stridulatory files in German (English summary))
- 1984 Papp: 70 (descriptions) >> brief description
- 1985 Anderson & Peck: 61 (revision: key, descriptions & catalog)
- 1985 Katakura & Ueno: 463 (biology, ecology)
- 1985a Kurosawa: 248 (checklist) >> color habitus figure pl. 44
- 1985 Peck & Anderson: 275 (key, descriptions, phylogenetics)

- 1985 Zahradník: 123 (catalog, annotated & figured in German)
- 1986 Anderson & Peck: 283-297 (morphology: color variation) >> focal species
- 1986 Erbeling & Erbeling: 234 (biology, ecology in German)
- 1986 Fisher & Tuckerman: 22 (morphology: mimicry)
- 1986 Katakura et al.: 43-55 (biology, ecology)
- 1986 Nishikawa: 98 (catalog in Japanese (English summary))
- 1986 Peck: 44 (biology, behavior)
- 1987 Hunter et al.: 589 (comment: ecology)
- 1987 Jensen: 116 (biology, ecology in Danish (English summary))
- 1987 Lucht: 67 (catalog in German)
- 1987 Müller & Eggert: 297-304 (biology, behavior) >> focal species
- 1987 Peck & Kaulbars: 53 (checklist)
- 1987 Ryabukhin & Matis: 7 (key, descriptions, distributions in Russian)
- 1987 Staines: 16 (key, descriptions) >> brief descrip., not recorded from Maryland
- 1988 Blackith et al.: 30
- 1988 Müller & Eggert: 38 (biology, behavior in German)
- 1988 Otronen: 191-201 (biology, behavior) >> focal species
- 1989 Koch: 164 (biology, ecology in German)
- 1989 Lafer: 339 (key, descriptions, description of variation in Russian)
- 1990 Erbeling: 116 (biology, ecology in German (English summary))
- 1990 Hyatt: 136 (biology, symbionts: mites)
- 1990 Kentner & Streit: 26 (biology, ecology in English (German summary))
- 1990 Peck: 1123 (key)
- 1990 Zahradník: 123 (key in Spanish)
- 1991 Campbell: 85 (catalog, distribution)
- 1991 Laplante et al.: 29 (checklist in French)
- 1991 Ohkawara: 463-467 (biology, ecology in Japanese (English summary)) >> focal species
- 1992 Cho & Lee: 25 (revision: key, descriptions & catalog)
- 1992 Kozminykh: 64 (checklist in Russian)
- 1992 Kozminykh & Esjunin: 68 (checklist in Russian)
- 1992 Růžička: 128 (key, descriptions, morphology, larval stages, phylogenetics) >> description of larval instars
- 1992 Silfverberg: 14 (checklist, distribution in English (Finnish & Swedish summaries))
- 1993b Kozminykh: 65 (key, descriptions, regional in Russian)
- 1993 Peck & Miller: 7 (species-group catalog)
- 1993 Richter: 353 (biology, symbionts: mites in English (German summary))
- 1993 Růžička: 34 (checklist, distribution in English & Czech)
- 1994 Bertin & Fallaci: 218 (checklist in Italian (English summary))
- 1994 Blackman & Evans: 223 (biology, symbionts: mites)
- 1994 Kozminykh & Esjunin: 78 (biology, ecology in English (Russian summary))
- 1994 Růžička: 69 (biology, ecology)
- 1995 Angelini et al.: 10 (checklist, distribution in Italian)
- 1995 Cho & Lee (revision: key, descriptions & catalog in English (Korean summary))
- 1995 Dapsio: 120 (checklist in Lithuanian)
- 1995 Hines & Smith: 71 (biology, ecology) >> focal species

- 1995 Kozminykh: 110 (key in Russian)
- 1995 Kozminykh & Nemkov: 113 (catalog in Russian)
- 1995 Ôhara et al.: 68 (checklist in Japanese (English summary))
- 1995 Smith & Heese: 50-55 (biology, ecology, behavior) >> focal species
- 1996 Alexandrovich et al.: 17 (checklist, distribution in Russian & English)
- 1996 Bertin & Lebboroni: 151 (checklist in Italian (English summary))
- 1996 Downie & Arnett: 356 (key, descriptions, regional)
- 1996 Hansen: 93 (checklist, distribution in Danish & English)
- 1996 Palestirini et al.: 435 (larval descriptions, phylogenetics)
- 1996 Ratcliffe: 70 (revision: key, descriptions & catalog)
- 1996 Růžička: 74 (checklist) >> first reliable record from Iran
- 1996 Schwarz: 137 (biology, symbionts: mites)
- 1997 Anderson et al.: 14 (checklist)
- 1997 Eggert & Müller: 218 (biology, review of: ecology, behavior)
- 1997 Hansen: 292, 334 (phylogenetics) >> dorsal habitus figured; larva figured
- 1997 Klausnitzer: 47 (morphology, larval stages in German)
- 1997 Kozminykh: 64 (checklist in Russian)
- 1997 Pushkin: 24 (biology, ecology in Russian)
- 1997 Pushkin & Charthenko: 62 (biology, ecology in Russian)
- 1997 Telnov et al. (checklist)
- 1998 Coyle & Larsen: 163 (biology, ecology)
- 1998 Harusawa: 35 (key in Japanese)
- 1998 Háva et al.: 179 (distribution note in English (Czech summary)) >> first confirmed record for Turkey
- 1998 Kocárek: 387 (biology, ecology)
- 1998 Ohkawara et al.: 553 (biology, ecology)
- 1998 Perreau: 85 (biology, ecology in French (English summary))
- 1998 Pushkin & Sigida: 84 (biology, ecology in Russian)
- 1998 Schwarz et al.: 164 (biology, symbionts: mites)
- 1998 Schwarz & Koulianos: 623 (biology, symbionts: mites)
- 1998b Scott: 602+ (biology, review of: ecology, behavior)
- 1999 Bertin & Lebboroni: 56 (checklist in Italian)
- 1999 De Jong & Chadwick: 843 (biology, ecology)
- 1999 Suzuki: 205 (biology, ecology, behavior)
- 2000 Bertin et al.: 130 (biology, ecology in Italian (English summary))
- 2000 Dobler & Müller: 392 (phylogenetics) >> CO1 based phylogeny
- 2000 Gwiazdowicz: 43 (biology, symbionts: mites) >> mite host
- 2000 Koulianos & Schwarz: 836-840 (biology, ecology, behavior)
- 2000 Nishikawa: 116 (checklist in English (Japanese summary))
- 2000a Parkhomenko: 92 (morphology, larval stages in Ukrainian (English summary))
- 2000b Parkhomenko: 164 (morphology, larval stages in Ukrainian (English summary))
- 2000 Sikes & Peck: 396 (descriptions, phylogenetics)
- 2000 Smith et al.: 290-298 (biology, ecology) >> focal species
- 2001 Kocárek: 431-438 (biology, ecology)
- 2001 Nishikawa: 81 (larval descriptions, phylogenetics in English (Japanese summary)) >> larva compared to *N. maculifrons*

- 2001 Smith et al.: 148-154 (biology, ecology, behavior) >> focal species; use of pre-existing burrows for burial
 2001 Smith & Merrick: 173-180 (biology, ecology, behavior) >> focal species
 2001 Wilhelm et al.: 435-442 (biology, ecology) >> focal species
 2002 Nikolajev & Kozminykh: 119 (catalog, distribution, descriptions, keys, figures in Russian (English summary))

= aleuticus Gistel, 1848

Type locality: "Alaska, Sitka" [USA; descrip.]

Type depository: ZSMC: München?

- 1848 Gistel: 190 (descriptions in German) >> Orig. comb.: *Necrophorus aleuticus*
 1857b Gistel: 565 (in German) >> as syn. of *N. maritimus*
 1917 Strand: 83 (descriptions in German) >> as syn. of *N. maritimus*
 1928 Hatch: 141 (catalog) >> as syn. of *N. investigator*
 1944 Arnett: 5 (morphology: female genitalia) >> as syn. of *N. investigator* subsp. *maritimus*
 1985 Anderson & Peck: 61 (revision: key, descriptions & catalog) >> as syn. of *N. investigator*
 1993b Kozminykh: 66 (key, descriptions, regional in Russian) >> as syn. of *N. investigator*, auth. incorrectly attrib. Guér.
 1993 Peck & Miller: 8 (species-group catalog) >> as syn. of *N. investigator*
 1996 Ratcliffe: 70 (revision: key, descriptions & catalog) >> as syn. of *N. investigator*
 2002 Nikolajev & Kozminykh: 119 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as syn. of *N. investigator*

= baeckmanni Kieseritzky, 1930 CONFIRMED as SYNONYM of *N. investigator*
 Zetterstedt

Type locality: "Sibiria occid.: distr. Semipalatinsk, Buchtarma" [?=Bukhtarma river, ne Kazakhstan; label]

Type depository: ZMAS: St. Petersburg [!] holotype male

- 1930 Kieseritzky: 64 (descriptions in Russian (German summary)) >> Orig. comb.: *Necrophorus baeckmanni* [!N, S]
 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin) >> as valid species
 1933a Shchegoleva-Barovskaya: 186 (revision: key, descriptions & catalog in Russian) >> as valid species
 1986 Nishikawa: 98 (catalog in Japanese (English summary)) >> as valid species
 1992 Kozminykh: 64 (checklist in Russian) >> as syn. of *N. investigator*
 1993b Kozminykh: 66 (key, descriptions, regional in Russian) >> as syn. of *N. investigator*
 1995 Kozminykh & Nemkov: 113 (catalog in Russian) >> as syn. of *N. investigator*
 2002 Nikolajev & Kozminykh: 119 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as syn. of *N. investigator*

= confossor LeConte, 1854 CONFIRMED as SYNONYM of *N. investigator*
 Zetterstedt

Type locality: "Prairie Paso" [USA: Washington state; descrip., no data on label]

Type depository: MCZC: Cambridge [!] holotype female

- 1854 LeConte: 20 (descriptions) >> Orig. comb.: *Necrophorus confossor* [!S]
 1866a LeConte: 367 (nomenclature) >> as *N. maritimus* var. *confossor*
 1868 Gemminger & Harold: 718 (catalog) >> as *N. maritimus* var. *confossor*
 1873 Crotch: 37 (checklist) >> as *Silpha confossor*, as syn. of *Silpha melsheimeri*
 1880 Horn: 314 (revision: key, descriptions & catalog) >> as syn. of *N. pustulatus*
 sensu Horn 1880
 1920 Leng: 86 (catalog) >> as syn. of *N. pustulatus* subsp. *melsheimeri*
 1926a Portevin: 255 (revision: key, descriptions & catalog in French) >> as syn. of *N.*
investigator
 1928 Hatch: 140 (catalog) >> as syn. of *N. investigator*; auth. attrib. incorrectly to
 Mots.
 1933a Shchegoleva-Barovskaya: 186 (revision: key, descriptions & catalog in Russian)
 >> as syn. of *N. investigator*
 1944 Arnett: 5 (morphology: female genitalia) >> as syn. of *N. investigator*; auth.
 attrib. incorrectly to Mots.
 1982 Peck & Miller: 152 (nomenclature) >> as syn. of *N. investigator*
 1985 Anderson & Peck: 61 (revision: key, descriptions & catalog) >> as syn. of *N.*
investigator
 1993b Kozminykh: 66 (key, descriptions, regional in Russian) >> as syn. of *N. investi-*
gator
 1993 Peck & Miller: 8 (species-group catalog) >> as syn. of *N. investigator*
 1996 Ratcliffe: 70 (revision: key, descriptions & catalog) >> as syn. of *N. investigator*
 2002 Nikolajev & Kozminykh: 119 (catalog, distribution, descriptions, keys, figures in
 Russian (English summary)) >> as syn. of *N. investigator*

= *funerator* Fauvel, 1890 [unjust. emendation of *N. funeror* Reitter] NEW STATUS
 as absolute syn. of *N. investigator* Zetterstedt

Type locality: see *N. funeror* Reitter

Type depository: see *N. funeror* Reitter

- 1890 Fauvel: 348 (descriptions in French) >> Orig. comb.: *Necrophorus funerator*;
 Unjustified emendation of *Silpha funeror*. [!S]
 1926a Portevin: 255 (revision: key, descriptions & catalog in French) >> as objective
 syn. of *N. investigator* ab. *funeror*
 1928 Hatch: 141 (catalog) >> as syn. of *N. investigator* ab. *funeror*
 1933a Shchegoleva-Barovskaya: 187 (revision: key, descriptions & catalog in Russian)
 >> as *N. investigator* ab. *funeror*
 1944 Arnett: 5 (morphology: female genitalia) >> as *N. investigator* subsp. *investiga-*
tor ab. *funerator*

= *funeror* (Reitter, 1884) NEW STATUS as absolute syn. of *N. investigator* Zetter-
 stedt

Type locality: "Im westlichen Caucasus-Gebirgsstocke: Swanetien" [Georgia; descrip
 & label]

Type depository: HNHM: Budapest [!] 3 syntypes

- 1884 Reitter: 87 (descriptions in German) >> Orig. comb.: *Silpha funeror* [!N, S]
 1885 Reitter: 321 (in German)
 1891 Heyden et al.: 138 (checklist) >> as valid species: *Necrophorus funeror*
 1895b Reitter: 326 (description of variation in German) >> as N. investigator var. *funeror*
 1899 Ganglbauer: 164 (descriptions, in German) >> as N. investigator var. *funeror*
 1901 Carret: 331 (description of variation in French) >> as doubtfully valid
 1906 Heyden et al.: 247 (checklist) >> as N. investigator var. *funeror*
 191 Jakobson: 612 (checklist in Russian) >> as N. investigator var. *funeror*
 1916 Pasquet: 158 (description of variation in French)
 1916 Schaufuss: 273 (checklist in German)
 1922 Everts: 183
 1924 Portevin: 149 (key, descriptions in French) >> as N. investigator ab. *funeror*
 1925 Winkler: 264 (catalog) >> as N. investigator ab. *funeror*
 1926a Portevin: 222 (revision: key, descriptions & catalog in French) >> as N. investigator ab. *funeror*
 1927b Hatch: 358 (revision: key, descriptions & catalog) >> as N. investigator ab. *funeror*; specimens not seen by Hatch
 1928 Hatch: 141 (catalog) >> as N. investigator ab. *funeror*
 1933a Shchegoleva-Barovskaya: 187 (revision: key, descriptions & catalog in Russian) >> as N. investigator ab. *funeror*
 1944 Arnett: 5 (morphology: female genitalia) >> as N. investigator subsp. *investigator* ab. *funeror*
 1992 Kozminykh: 64 (checklist in Russian) >> as N. investigator subsp. *funeror*
 1993b Kozminykh: 66 (key, descriptions, regional in Russian) >> as N. investigator subsp. *funeror*
 2002 Nikolajev & Kozminykh: 119 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as N. investigator subsp. *funeror*

= *grahami* Swan & Papp, 1972 NEW SYNONYM of *N. investigator* Zetterstedt

Type locality: not mentioned [Swan & Papp 1972]; “Masset, B. C.” [Hatch 1927b]

Type depository: NMNH: Washington D. C. [!] holotype

- 1927b Hatch: 358 (revision: key, descriptions & catalog) >> described in key; as *N. investigator maritimus* ab. *grahami*; unavailable name
 1957 Hatch: 13 (description of variation) >> as *N. investigator maritimus* ab. *grahami*; unavailable name
 1972 Swan & Papp: 357 (description) >> as *N. investigator* subsp. *grahami*, no attribution, not indicated as new; *Nicrophorus* [!N]
 1984 Papp: 71 (descriptions) >> as valid species

= *infodiens* Mannerheim, 1853

Type locality: “insula Unalashka” [USA: Alaska; descrip.]; “Kadjak” [USA: Alaska; syntype (Silfverberg 1987)]

Type depository: MZHF: Helsinki 1 syntype (holotype?)

- 1853 Mannerheim: 170 (descriptions in German) >> Orig. comb.: *Necrophorus infodiens* [!N, S]

- 1868 Gemminger & Harold: 718 (catalog) >> as *N. maritimus* var. *infodiens*
 1873 LeConte: 326 (nomenclature) >> as *N. maritimus* var. *infodiens*
 1880 Horn: 314 (revision: key, descriptions & catalog) >> as syn. of *N. pustulatus* sensu Horn
 1908 Heyne & Taschenberg: 38 (descriptions in German) >> as *N. maritimus* Guérin-Méneville var. *infodiens*
 1920 Leng: 86 (catalog) >> as syn of *N. pustulatus* subsp. *melsheimeri*
 1926a Portevin: 255 (revision: key, descriptions & catalog in French) >> as syn. of *N. investigator*
 1928 Hatch: 149 (catalog) >> as syn. of *N. investigator*
 1933a Shchegoleva-Barovskaya: 186 (revision: key, descriptions & catalog in Russian) >> as syn. of *N. investigator*
 1944 Arnett: 5 (morphology: female genitalia) >> as syn. of *N. investigator*
 1944 Arnett: 5 (morphology: female genitalia) >> as syn. of *N. investigator* subsp. *maritimus*
 1985 Anderson & Peck: 61 (revision: key, descriptions & catalog) >> as syn. of *N. investigator*
 1987 Silfverberg: 49 (nomenclature) >> as syn. of *N. investigator* (following Hatch 1928); 1 syntype in the MZHF
 1993b Kozminykh: 66 (key, descriptions, regional in Russian) >> as syn. of *N. investigator*
 1993 Peck & Miller: 8 (species-group catalog) >> as syn. of *N. investigator*
 1996 Ratcliffe: 70 (revision: key, descriptions & catalog) >> as syn. of *N. investigator*

= *insularis* Lafer, 1989 (junior primary homonym, not Grouvelle) NEW STATUS as absolute syn. of *N. investigator* Zetterstedt

Type locality: "Sakh. [Sachalin], o-v Moneron, Kur. [Kuriles] (ostrova Kunamir, Shikotai, Anuchina).--Japonia (o-v Khokkaido)" [e Russia, ?Japan; descrip.]

Type depository: IBPV: Vladivostok

- 1989 Lafer: 339 (key, descriptions, description of variation in Russian) >> Orig. comb.: *Necrophorus praedator insularis*; New junior primary homonym, not Grouvelle 1893 [!M, N, S]
 1993b Kozminykh: 66 (key, descriptions, regional in Russian) >> as *N. praedator* subsp. *insularis*
 2002 Nikolajev & Kozminykh: 125 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as *N. investigator* subsp. *insularis*

= *intermedius* Reitter, 1895 NEW STATUS as absolute syn. of *N. investigator* Zetterstedt

Type locality: "Deutschland; Oesterreich; Kaukasus" [descrip.] "Caucasus, Swanetien" [Georgia; syntype label], and "Schwarzwald" [Germany?; syntype label]

Type depository: HNHM: Budapest [!] 9 syntypes

- 1895b Reitter: 327 (description of variation in German) >> Orig. comb.: *Necrophorus investigator* var. *intermedius* [!N, S]
 1899 Ganglbauer: 164 (descriptions, in German) >> as *N. investigator* var. *intermedius*

- 1906 Heyden et al.: 247 (checklist) >> as *N. investigator* var. *intermedius*
 1909 Reitter: 240 (in German) >> as *N. investigator* var. *intermedius*
 1910 Jakobson: 612 (checklist in Russian) >> as *N. investigator* var. *intermedius*
 1913 Kniephof: 187 (in German) >> as *N. investigator* ab. *intermedius*
 1913 Kuhnt: 335 (in German)
 1916 Pasquet: 164 (description of variation in French)
 1916 Schaufuss: 273 (checklist in German)
 1922 Everts: 183
 1924 Portevin: 149 (key, descriptions in French) >> as *N. investigator* ab. *intermedius*
 1925 Winkler: 264 (catalog) >> as *N. investigator* ab. *intermedius*
 1926a Portevin: 222 (revision: key, descriptions & catalog in French) >> as *N. investigator* ab. *intermedius*
 1927b Hatch: 358 (revision: key, descriptions & catalog) >> as *N. investigator* ab. *intermedius*
 1928 Hatch: 140 (catalog) >> as *N. investigator* ab. *intermedius*
 1930 Roubal: 241 (catalog in Czech) >> as *N. investigator* f. *intermedia*
 1933a Shchegoleva-Barovskaya: 187 (revision: key, descriptions & catalog in Russian) >> as *N. investigator* ab. *intermedius*
 1944 Arnett: 5 (morphology: female genitalia) >> as *N. investigator* subsp. *investigator* ab. *intermedius*

= *labiatus* Motschulsky, 1860

Type locality: not mentioned

Type depository: ZMUM: Moscow

- 1860 Motschulsky: 126 (descriptions in French) >> Orig. comb.: *Necrophorus labiatus* [!N, S]
 1868 Gemminger & Harold: 718 (catalog) >> as valid species
 1920 Leng: 86 (catalog) >> as syn. of *N. pustulatus* subsp. *melsheimeri*
 1933a Shchegoleva-Barovskaya: 186 (revision: key, descriptions & catalog in Russian) >> as syn. of *N. investigator*
 1993b Kozminykh: 66 (key, descriptions, regional in Russian) >> as syn. of *N. investigator*

= *latifasciatus* Lewis, 1887 NEW STATUS as absolute syn. of *N. investigator* Zetterstedt

Type locality: “Sapporo” [Japan: Hokkaido; descrip.] and “Mount Niohozan” [Japan: Honshu; descrip.] “Niko” [Japan; syntype label], and “Yojo” [Japan; syntype label]

Type depository: BMNH: London [!] 4 syntypes

- 1887 Lewis: 340 (description) >> Orig. comb.: *Necrophorus latifasciatus* [!N, S]
 1909 Arrow: 191 (redescriptions) >> as syn. of *N. investigator*
 1910 Jakobson: 612 (checklist in Russian) >> as valid species
 1914b Portevin: 224 (description of variation in French) >> as valid species
 1924 Portevin: 185 (key, descriptions in French) >> as valid species; footnote comparison to *N. praedator* p. 288; claims Arrow’s (1919) syn. of *N. latifasciatus* under *N. investigator* was incorrect

- 1925 Winkler: 264 (catalog) >> as valid species
 1926a Portevin: 223 (revision: key, descriptions & catalog in French) >> as valid species
 1927b Hatch: 357 (revision: key, descriptions & catalog) >> as valid species; specimens not seen by Hatch
 1928 Hatch: 141 (catalog) >> as valid species
 1929 Kôno: 162, 164 (checklist, annotated) >> as valid species
 1930 Kieseritzky: 63 (descriptions in Russian (German summary)) >> as valid species
 1932 Hlisnikovsky: 28 (key, descriptions in German) >> as valid species, misspelled as *N. latifasciatus*
 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin) >> as valid species
 1955a Nakane: 48 (checklist, brief descriptions) >> as valid species
 1955b Nakane: 54 (key, descriptions in Japanese) >> as valid species
 1956 Esaki et al.: 1028 (checklist, descriptions in Japanese) >> as valid species
 1973 Krivolutskaya: 71 (checklist in Russian (with electronic english translation)) >> as valid species
 1979 Nakane & Baba: 10 (checklist, distribution in Japanese) >> as *N. investigator* subsp. *latifasciatus*
 1985a Kurosawa: 248 (checklist) >> as *N. investigator* subsp. *latifasciatus*; color habitus figure pl. 44
 1987 Cho et al.: 55 (morphology: SEM, external adult) >> as valid species
 1988 Cho et al.: 9 (phylogenetics) >> as valid species
 1989 Martin: 879 (biology, ecology) >> as syn. of *N. praedator*
 1992 Cho & Lee: 25 (revision: key, descriptions & catalog) >> as valid species
 1992 Kozminykh: 64 (checklist in Russian) >> as syn. of *N. investigator*
 1993b Kozminykh: 66 (key, descriptions, regional in Russian) >> as *N. investigator* subsp. *latifasciatus*
 1997 Krivolutskaya: 3 (checklist) >> as valid species following Krivolutskaya (1973)
 2002 Nikolajev & Kozminykh: 121 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> possible synonym of Lafer's (1989) concept of *N. pustulatus*

= *maritimus* Guérin-Méneville, 1835

Type locality: "Sitcha Island, Alaska" [USA; descrip.]

Type depository: ISNB: Brussels

- 1835 Guérin-Méneville: p117:8 (60) (descriptions in French) >> Orig. comb.: *Necrophorus maritimus*; first pub. as figure (1835) text pub, p. 60 (1844)
 1836 Dejean: 131 (catalog in French) >> as valid species, auth. attrib. Eschscholtz
 1840 Laporte: 2 (descriptions in French) >> as valid species; auth. attrib. Esch. but ex. coll. Guerin.
 1842 Fischer von Waldheim: 9 (checklist) >> as valid sp.; auth. attrib to Eschscholtz
 1845a Motschulsky: 53 (descriptions in French) >> compared to *N. lunatus*; auth. attrib to Eschscholtz
 1845b Motschulsky: 364 (descriptions in French) >> suggests poss. syn. of unavailable Dejean/Esch. name *N. auripilosus*
 1853 LeConte: 278 (descriptions) >> as valid species but unknown to author; *N. maritimus* Mann. as valid but Guérin also cited

- 1857b Gistel: 565 (in German) >> as valid species
- 1860 Motschulsky: 126 (descriptions in French) >> as valid species; compared with *N. dauricus*
- 1868 Gemminger & Harold: 718 (catalog) >> as valid species
- 1873 Crotch: 37 (checklist) >> as syn. of *Silpha melsheimeri*
- 1873 LeConte: 326 (nomenclature) >> as senior syn. of *N. Melsheimeri*
- 1877 Kraatz: 102 (descriptions in German) >> as valid species; *N. maritimus* Guérin as valid but Mann. also cited
- 1896 Heller: 24 (in German) >> as valid species
- 1903 Portevin: 330 (descriptions in French) >> as syn. of *N. pustulatus* var. *Melsheimeri*
- 1908 Heyne & Taschenberg: 38 (descriptions in German) >> as valid species; brief description
- 1910 Jakobson: 612 (checklist in Russian) >> as syn. of *N. pustulatus*
- 1914b Portevin: 225 (description of variation in French) >> as valid species
- 1917 Strand: 83 (descriptions in German) >> as valid species & senior syn. of *N. aleuticus*
- 1926a Portevin: 222 (revision: key, descriptions & catalog in French) >> as syn. of *N. investigator*
- 1927b Hatch: 357 (revision: key, descriptions & catalog) >> as *N. investigator* subsp. *maritimus*
- 1928 Hatch: 141 (catalog) >> as *N. investigator* subsp. *maritimus*
- 1929 Kôno: 164 (checklist, annotated) >> as *N. investigator* subsp. *maritimus* Guer.
- 1933a Shchegoleva-Barovskaya: 186 (revision: key, descriptions & catalog in Russian) >> as syn. of *N. investigator*
- 1938 Hatch: 147 (checklist) >> as *N. investigator* subsp. *maritimus*
- 1944 Arnett: 5 (morphology: female genitalia) >> as *N. investigator* subsp. *maritimus*
- 1957 Hatch: 14 (description of variation) >> as *N. investigator* subsp. *maritimus*
- 1982 Peck & Miller: 153 (nomenclature) >> as syn. of *N. investigator*; auth. attrib. Esch. in Guérin
- 1985 Anderson & Peck: 61 (revision: key, descriptions & catalog) >> as syn. of *N. investigator*; auth. attrib. Esch. in Guérin
- 1985a Kurosawa: 248 (checklist) >> as *N. investigator* subsp. *maritimus*; color habitus figure pl. 44; auth. attrib. Guérin
- 1993b Kozminykh: 65 (key, descriptions, regional in Russian) >> as absolute syn. of *N. investigator*; auth. attrib. Guérin
- 1993 Peck & Miller: 7 (species-group catalog) >> as syn. of *N. investigator*; auth. attrib. Guérin
- 1996 Ratcliffe: 70 (revision: key, descriptions & catalog) >> as syn. of *N. investigator*; auth. attrib. Guérin
- 2002 Nikolajev & Kozminykh: 119 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as syn. of *N. investigator*

= *maritimus* Mannerheim, 1843 (attrib. Eschscholtz; junior primary homonym, not Guérin-Méneville 1835) NEW STATUS as absolute syn. of *N. investigator* Zetterstedt
Type locality: “insula Sitkha” [USA: Alaska; descrip.]

Type depository: MZHF: Helsinki 2 syntypes

- 1833 Dejean: 117 (catalog in French) >> as valid species; auth. attrib. Eschscholtz [predescription reference of *N. maritimus* Mann. 1843]
- 1836 Dejean: 131 (catalog in French) >> as valid species, auth. attrib. Eschscholtz [predescription reference of *N. maritimus* Mann. 1843]
- 1843 Mannerheim: 251 (descriptions in German) >> Orig. comb.: *Necrophorus maritimus*; New junior primary homonym, not Guérin-Ménéville 1835, [!S]
- 1853 LeConte: 278 (descriptions) >> as valid species but unknown to author; *N. maritimus* Mann. as valid but Guérin also cited
- 1853 Mannerheim: 169 (descriptions in German) >> as valid species; auth. attrib. to Eschsch & validated by Mann. 1843
- 1853 Melsheimer: 39 (catalog) >> as valid species; Guerin-M. also cited
- 1854 Lacordaire: 200 (biology, catalog in French) >> as valid species
- 1868 Gemminger & Harold: 718 (catalog) >> not as available name, but as citation of *N. maritimus* Guérin by Mann. 1843
- 1870 LeConte: 398 (nomenclature) >> as syn. of *N. hebes*
- 1877 Kraatz: 102 (descriptions in German) >> as valid species; as *N. maritimus* Guérin, Mann.
- 1880 Horn: 314 (revision: key, descriptions & catalog) >> as syn. of *N. pustulatus* (sensu Horn 1880)
- 1920 Leng: 86 (catalog) >> as syn. of *N. pustulatus* subsp. *melsheimeri*
- 1927b Hatch: 357 (revision: key, descriptions & catalog) >> as *N. investigator* subsp. *maritimus*
- 1987 Silfverberg: 49 (nomenclature) >> as syn. of *N. investigator* (following Hatch 1928); 2 syntypes in MZHF

= *maritimus* Gistel, 1857 (junior primary homonym, not *N. maritimus* Guérin-Ménéville)
NEW SYNONYM of *N. investigator* Zetterstedt

Type locality: "Sittcha, Amer. bor. ross." [USA: Alaska; descrip.]

Type depository: unknown

- 1857b Gistel: 565 (in German) >> Orig. comb.: *Necrophorus maritimus*, with *N. aleuticus* Gistel 1848 as syn. [!N]

= *melsheimeri* Kirby, 1837 CONFIRMED as SYNONYM of *N. investigator* Zetterstedt

Type locality: "n. amer" [label] "from New York to Cumberland-House" [descrip.]

Type depository: BMNH: London [!] holotype male

- 1837 Kirby: 97 (descriptions) >> Orig. comb.: *Necrophorus Melsheimeri* [!N, S]
- 1853 LeConte: 275 (descriptions) >> Missid of *N. obscurus* as *N. Melsheimeri*, as valid species
- 1853 Melsheimer: 39 (catalog) >> as valid species
- 1854 Lacordaire: 200 (biology, catalog in French) >> as valid species
- 1859c LeConte: 37 (checklist) >> as valid species
- 1866a LeConte: 367 (nomenclature) >> as valid species
- 1870 LeConte: 398 (nomenclature) >> as syn of *N. sayi*

- 1873 Crotch: 37 (checklist) >> as *Silpha melsheimeri*, as valid species
 1873 LeConte: 326 (nomenclature) >> as syn. of *N. maritimus* Guérin var. *infodiens*
 1880 Austin: 16 (checklist) >> as *N. pustulatus* var. *melsheimeri*
 1880 Horn: 314 (revision: key, descriptions & catalog) >> as *N. pustulatus* var. *Melsheimeri*
 1885 Henshaw: 26 (checklist) >> as valid species
 1894 Hamilton: 15 (checklist) >> as *N. pustulatus* var. *melsheimeri*
 1895 Keen: 168 (checklist) >> as valid species
 1903 Portevin: 330 (descriptions in French) >> as *N. pustulatus* var. *Melsheimeri*
 1907 Fall & Cockerell: 164 (checklist) >> as *N. pustulatus* subsp. *melsheimeri*
 1911 Wickham: 11 (checklist) >> as *N. pustulatus* var. *melsheimeri*
 1920 Leng: 86 (catalog) >> as *N. pustulatus* subsp. *melsheimeri*
 1926 Fall: 143 (description) >> as valid species; brief description
 1926a Portevin: 255 (revision: key, descriptions & catalog in French) >> as syn. of *N. investigator*
 1928 Hatch: 140 (catalog) >> as syn. of *N. investigator*
 1933a Shchegoleva-Barovskaya: 186 (revision: key, descriptions & catalog in Russian) >> as syn. of *N. investigator*
 1944 Arnett: 5, 15, 24 (morphology: female genitalia) >> as valid species; female genitalia figured, pl. 4, fig. 1; listed as syn. of *N. obscurus* on p.6
 1946 Hatch: 100 (descriptions) >> “status... is not clear”
 1947 Arnett: 110 (catalog) >> as syn. of *N. investigator*; notes missidentification using this name in Arnett 1944
 1972 Swan & Papp: 356 (description) >> brief description; Revised syn. as *N. pustulatus* subsp. *melsheimeri*
 1973 Blackwelder: 5 (checklist, synonymy) >> status questioned
 1975 Kirk & Balsbaugh: 52 (checklist) >> as valid species
 1984 Papp: 70 (descriptions) >> brief description; as *N. pustulatus* subsp. *melsheimeri*
 1985 Anderson & Peck: 61 (revision: key, descriptions & catalog) >> as syn. of *N. investigator*
 1993b Kozminykh: 66 (key, descriptions, regional in Russian) >> as syn. of *N. investigator*
 1993 Peck & Miller: 7 (species-group catalog) >> as syn. of *N. investigator*
 1995 Kozminykh & Nemkov: 113 (catalog in Russian) >> as syn. of *N. investigator*
 1996 Ratcliffe: 70 (revision: key, descriptions & catalog) >> as syn. of *N. investigator*
 2002 Nikolajev & Kozminykh: 119 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as syn. of *N. investigator*

= *microcephalus* Thomson, 1862

Type locality: “Ej sällsynt i Skåne” [descrip.]

Type depository: unknown

- 1862 Thomson: 9 (descriptions) >> Orig. comb.: *Necrophorus microcephalus* [!N, S]
 1863 Marseul: 88 (catalog in French) >> as valid species
 1864 Kraatz: 47 (in German)
 1864 Scriba: 378 (descriptions in German)
 1865 Power: 198-201 (revision: key, descriptions & catalog) >> as valid species

- 1866 Marseul: 38 (catalog in French) >> as valid species
 1866 Michow: 411-412 (description of variation in German) >> as valid species
 1867 Grenier: x
 1868 Gemminger & Harold: 718 (catalog) >> as syn. of *N. investigator*
 1868 Stein: 42 (catalog in Latin) >> as *N. ruspator* var. *microcephalus*
 1869 Stierlin & Gautard: 116 (checklist in German) >> as valid species
 1870 Rye: 182 (comment [translation of Michow 1866]) >> (as valid species following Michow [1866])
 1874 Cox: 407 (key, descriptions (brief)) >> as *N. ruspator* var. *microcephalus*
 1874 Seidlitz: 216 (key in German) >> as syn. of *N. ruspator*
 1876b Kraatz: 396 (morphology: clypeus in German) >> as valid species
 1877 Stein & Weise: 61 (catalog in Latin) >> as *N. investigator* var. *microcephalus*
 1883 Heyden et al.: 73 (checklist) >> as *N. investigator* var. *microcephalus*
 1884 Marseul: 190 (key, descriptions in French) >> as *N. ruspator* var. *microcephalus*
 1885 Marseul: 169 (catalog in French) >> as *N. ruspator* var. *microcephalus*
 1885 Reitter: 320 (in German)
 1885 Thomson: 66 (key, checklist in Swedish) >> as valid species
 1888 Seidlitz: 313 (key in German) >> as syn. of *N. investigator*; misspelled as *Necrophagus microcephalus*
 1889 Fowler: 44 (descriptions, catalog)
 1889 Seidlitz: 329 (key in German) >> as syn. of *N. investigator*; misspelled as *Necrophagus microcephalus*
 1891 Heyden et al.: 138 (checklist) >> as syn. of *N. investigator*
 1895b Reitter: 326 (description of variation in German) >> as syn. of *N. investigator*
 1898 Everts: 413
 1899 Ganglbauer: 164 (in German) >> as syn. of *N. investigator*
 1901 Carret: 330 (description of variation in French) >> as syn. of *N. investigator*
 1906 Heyden et al.: 247 (checklist) >> as syn. of *N. investigator*
 1910 Jakobson: 612 (checklist in Russian) >> as syn. of *N. investigator*
 1913 Fowler & Donisthorpe: 247
 1913 Kuhnt: 335 (in German)
 1926a Portevin: 255 (revision: key, descriptions & catalog in French) >> as syn. of *N. investigator*
 1928 Hatch: 140 (catalog) >> as syn. of *N. investigator*
 1933a Shchegoleva-Barovskaya: 186 (revision: key, descriptions & catalog in Russian) >> as syn. of *N. investigator*
 1944 Arnett: 5 (morphology: female genitalia) >> as syn. of *N. investigator*
 1993b Kozminykh: 66 (key, descriptions, regional in Russian) >> as syn. of *N. investigator*

= *particeps* Fischer von Waldheim, 1844

Type locality: "Turcomania" [Peck & Miller (1993) cite Heller (1896) who states this locality is in error- repeated by Port. 1926a; descrip.]

Type depository: unknown

- 1844 Fischer von Waldheim: 139 (descriptions) >> Orig. comb.: *Necrophorus particeps* [!M, N, S]

- 1845a Motschulsky: 54 (descriptions in French) >> compared to *N. lunatus*
 1854 Lacordaire: 200 (biology, catalog in French) >> as valid species
 1866 Marseul: 38 (catalog in French) >> as valid species
 1868 Gemminger & Harold: 719 (catalog) >> as valid species
 1880 Heyden: 87 (checklist in German) >> as syn. of *N. lunatus*
 1884 Marseul: 187 (key, descriptions in French) >> as *N. lunatus* var. *particeps*
 1885 Marseul: 169 (catalog in French) >> as *N. lunatus* var. *particeps*
 1895b Reitter: 325 (description of variation in German) >> as valid species (in footnote)
 1896 Heller: 23 (in German) >> as syn. of *N. maritimus* Guér.; “type locality prob. in error”
 1896 Heyden: 38 (checklist in German) >> as *N. lunatus* var. *particeps*
 1910 Jakobson: 612 (checklist in Russian) >> as syn. of *N. pustulatus*
 1924 Portevin: 150 (key, descriptions in French) >> as *N. investigator* ab. *particeps*
 1925 Winkler: 263 (catalog) >> as syn. of *N. pustulatus*
 1925 Winkler: 264 (catalog) >> as *N. investigator* ab. *particeps*
 1926a Portevin: 222 (revision: key, descriptions & catalog in French) >> states incorrectly that Fisch. 1844 described *particeps* as a var. of *N. lunatus*
 1927b Hatch: 359 (revision: key, descriptions & catalog) >> as *N. investigator* ab. *particeps*
 1928 Hatch: 141 (catalog) >> as *N. investigator* ab. *particeps*
 1933a Shchegoleva-Barovskaya: 187 (revision: key, descriptions & catalog in Russian) >> as *N. investigator* ab. *particeps*
 1944 Arnett: 5 (morphology: female genitalia) >> as *N. investigator* subsp. *maritimus* ab. *particeps*
 1947 Arnett: 110 (catalog) >> as valid species
 1972 Swan & Papp: 356 (description) >> as *N. investigator* subsp. *particeps*
 1984 Papp: 70 (descriptions) >> as valid species
 1985 Anderson & Peck: 61 (revision: key, descriptions & catalog) >> as syn. *investigator*
 1993 Peck & Miller: 8 (species-group catalog) >> as syn. of *N. investigator*
 1996 Ratcliffe: 70 (revision: key, descriptions & catalog) >> as syn. of *N. investigator*
 2002 Nikolajev & Kozminykh: 119 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as syn. of *N. investigator*

= pollinator Mannerheim, 1853 CONFIRMED as SYNONYM of *N. investigator*
 Zetterstedt

Type locality: “insula Atkha” [USA: Alaska; descrip.], “Alaska” [USA; label]

Type depository: MCZC: Cambridge [!] syntype female

- 1853 Mannerheim: 169 (descriptions in German) >> Orig. comb.: *Necrophorus pollinator* [!N, S]
 1868 Gemminger & Harold: 718 (catalog) >> as *N. maritimus* var. *pollinator*
 1870 LeConte: 400 (nomenclature) >> as valid species
 1880 Horn: 314 (revision: key, descriptions & catalog) >> as syn. of *N. pustulatus* (sensu Horn 1880)
 1920 Leng: 86 (catalog) >> as syn of *N. pustulatus* subsp. *melsheimeri*
 1924 Portevin: 150 (key, descriptions in French) >> as *N. investigator* ab. *pollinator* Mann.

- 1926a Portevin: 222 (revision: key, descriptions & catalog in French) >> as N. investigator ab. pollinator Mann.
- 1928 Hatch: 141 (catalog) >> as syn. of N. investigator
- 1933a Shchegoleva-Barovskaya: 187 (revision: key, descriptions & catalog in Russian) >> as N. investigator ab. pollinator
- 1944 Arnett: 5 (morphology: female genitalia) >> as syn. of N. investigator subsp. maritimus; misspelled as N. pollinator
- 1982 Peck & Miller: 152 (nomenclature) >> as syn. of N. investigator; as senior homonym of N. pollinator LeC.
- 1985 Anderson & Peck: 61 (revision: key, descriptions & catalog) >> as syn. of N. investigator
- 1993b Kozminykh: 66 (key, descriptions, regional in Russian) >> as syn. of N. investigator; misspelled as N. pollinator Mann.
- 1993 Peck & Miller: 8 (species-group catalog) >> as syn. of N. investigator
- 1996 Ratcliffe: 70 (revision: key, descriptions & catalog) >> as syn. of N. investigator
- 2002 Nikolajev & Kozminykh: 119 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as syn. of N. investigator; misspelled as N. pollinator

= praedator (Reitter, 1887) NEW SYNONYM of N. investigator Zetterstedt

Type locality: "Siberia or.: Chabarowka" [Russia; label]

Type depository: HNHM: Budapest [!] holotype

- 1887 Reitter: 217 (descriptions in German) >> Orig. comb.: *Silpha* (*Necrophorus*) praedator [!N, S]
- 1893 Heyden: 51 (checklist in German) >> as *Necrophorus praedator*; as valid species
- 1895b Reitter: 326 (description of variation in German) >> as valid species
- 1896 Heyden: 38 (checklist in German) >> as valid species
- 1910 Jakobson: 612 (checklist in Russian) >> as valid species
- 1924 Portevin: 288 (key, descriptions in French) >> as valid species
- 1925 Winkler: 264 (catalog) >> as valid species
- 1926a Portevin: 228 (revision: key, descriptions & catalog in French) >> as valid species
- 1927b Hatch: 357 (revision: key, descriptions & catalog) >> as valid species; specimens not seen by Hatch
- 1928 Hatch: 142 (catalog) >> as valid species
- 1929 Kôno: 164 (checklist, annotated) >> as valid species
- 1930 Kieseritzky: 64 (descriptions in Russian (German summary)) >> as valid species
- 1932 Hlisenkovsky: 29 (key, descriptions in German) >> as valid species
- 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin) >> as valid species
- 1933a Shchegoleva-Barovskaya: 185 (revision: key, descriptions & catalog in Russian) >> as valid species
- 1944 Arnett: 7 (morphology: female genitalia) >> as valid species
- 1953 Mazokhin-Porshnyakov: 236 (descriptions, catalog in Russian) >> as valid species
- 1955b Nakane: 54 (key, descriptions in Japanese) >> as valid species
- 1956 Esaki et al.: 1028 (checklist, descriptions in Japanese) >> as valid species

- 1966c Mroczkowski: 437 (checklist) >> as valid species
 1975a Emetz: 61 (checklist in German) >> as valid species
 1975b Emetz: 105 (checklist in Russian) >> as valid species
 1980 Schawaller: 153 (checklist in German (English summary)) >> as valid species
 1986 Nishikawa: 98 (catalog in Japanese (English summary)) >> as valid species
 1987 Cho et al.: 55 (morphology: SEM, external adult) >> as valid species
 1988 Cho et al.: 9 (phylogenetics) >> as valid species
 1989 Lafer: 339 (key, descriptions, description of variation in Russian) >> as valid species
 1989 Martin: 876-879 (biology, ecology) >> as valid species
 1992 Cho & Lee: 25 (revision: key, descriptions & catalog) >> as valid species
 1992 Kozminykh: 64 (checklist in Russian) >> as valid species
 1993b Kozminykh: 66 (key, descriptions, regional in Russian) >> as valid species
 2002 Nikolajev & Kozminykh: 125 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as valid species; as *N. praedator* subsp. *praedator*

= *ruspator* Erichson, 1837 (unecc. nomen novum for *N. investigator* Zetterstedt)

Type locality: see *N. investigator* Zetterstedt

Type depository: see *N. investigator* Zetterstedt

- 1837 Erichson: 225 (species-group catalog in German) >> Orig. comb.: *Necrophorus ruspator*; unecc. replacement name for *N. investigator* [!N, S]
 1838 Sturm: 68 (in German)
 1841a Heer: 387 (descriptions in German) >> as valid species
 1841b Heer: 9 (checklist in German) >> as valid species
 1843 Mannerheim: 252 (descriptions in German) >> as valid species; compared to *N. maritimus*
 1846b Küster: nr. 38 (catalog in German (English summary)) >> as valid species
 1849 Bach: 153 (checklist, brief descriptions in German) >> as valid species
 1849 Gaubil: 55 (catalog in French) >> as valid species
 1849 Redtenbacher: 140 (catalog in German)
 1854 Lacordaire: 199 (biology, catalog in French) >> as valid species
 1858 Calwer: 106 (checklist, brief descriptions in German) >> as valid species
 1858 Redtenbacher: 289 (catalog in German) >> as valid species
 1859 Gutfleisch & Bose: 202 (key, descriptions in German) >> as valid species
 1859 Schaum: 36 (catalog in German) >> as valid species
 1860 Motschulsky: 125 (descriptions in French) >> as valid species; compared with *N. dauricus*
 1862 Schaum: 38 (catalog in German) >> as valid species
 1862 Schiødte: 226 (morphology, larval stages in Danish) >> as valid species
 1862 Thomson: 9 (descriptions) >> as valid species
 1863 Grenier: 13 (checklist in French) >> as valid species
 1863 Marseul: 88 (catalog in French) >> as valid species
 1864 Scriba: 378 (descriptions in German)
 1865 Power: 198-201 (revision: key, descriptions & catalog) >> as valid species
 1866 Marseul: 38 (catalog in French) >> as valid species

- 1866 Michow: 411 (description of variation in German)
- 1868 Gemminger & Harold: 718 (catalog) >> as syn. of *N. investigator*
- 1868 Stein: 42 (catalog in Latin) >> as valid species
- 1869 Stierlin & Gautard: 116 (checklist in German) >> as valid species
- 1870 Rye: 182 (comment [translation of Michow 1866]) >> (as valid species following Michow [1866])
- 1870 Vollenhoven et al.: 54 (checklist in Dutch) >> as valid species
- 1873 Michow: 10 (in German)
- 1874 Cox: 407 (key, descriptions (brief)) >> as valid species
- 1874 Seidlitz: 217 (key in German) >> as valid species
- 1875 Siebke: 163 (checklist in Norwegian) >> as valid species
- 1876b Kraatz: 396 (morphology: clypeus in German) >> as valid species
- 1877 Hickel & Dragicsevics: 27 (checklist in French)
- 1877 Kraatz: 101 (descriptions in German) >> as valid species; compared to *N. maculifrons*
- 1877 Stein & Weise: 61 (catalog in Latin) >> as syn. of *N. investigator*
- 1878 Deyrolle & Fairmaire: 91 (descriptions in French) >> as valid species; compared to *N. ocellatus*
- 1880 Heyden: 86 (checklist in German) >> as syn. of *N. investigator*
- 1883 Heyden et al.: 73 (checklist) >> as syn. of *N. investigator*
- 1884 Marseul: 190 (key, descriptions in French) >> as valid species
- 1884 Reitter: 87 (descriptions in German) >> as syn. of *Silpha investigator*
- 1885 Marseul: 169 (catalog in French) >> as valid species; as *N. ruspator*
- 1885 Thomson: 66 (key, checklist in Swedish) >> as valid species
- 1888 Fairmaire: 115 (checklist, annotated in French) >> as valid species
- 1888 Matthews: 91 (description) >> as valid species; compared to *N. mexicanus*
- 1888 Seidlitz: 313 (key in German) >> as syn. of *N. investigator*; misspelled as *Necrophagus investigator*
- 1888 Sparre Schneider: 176 (checklist in Norwegian (German summary)) >> as valid species
- 1889 Fowler: 44 (descriptions, catalog)
- 1889 Seidlitz: 329 (key in German) >> as syn. of *N. investigator*; misspelled as *Necrophagus ruspator*
- 1891 Heyden et al.: 138 (checklist) >> as syn. of *N. investigator*
- 1895b Reitter: 326 (description of variation in German) >> as syn. of *N. investigator*
- 1901 Carret: 330 (description of variation in French) >> as syn. of *N. investigator*
- 1902 Johnson & Halbert: 690 (checklist) >> as valid species
- 1906 Heyden et al.: 247 (checklist) >> as syn. of *N. investigator*
- 1910 Jakobson: 612 (checklist in Russian) >> as syn. of *N. investigator*
- 1914 Gorka: 235 (morphology: malpighian tubules in German) >> as valid species
- 1926a Portevin: 255 (revision: key, descriptions & catalog in French) >> as syn. of *N. investigator*
- 1928 Hatch: 139 (catalog) >> as syn. of *N. investigator*
- 1930 Kieseritzky: 63 (descriptions in Russian (German summary)) >> as syn. of *N. investigator*
- 1932 Joy: 466 (key) >> as syn. of *N. investigator*
- 1933a Shchegoleva-Barovskaya: 186 (revision: key, descriptions & catalog in Russian) >> as syn. of *N. investigator*

- 1934b Pukowski: 54 (morphology, larval stages in German) >> as syn. of *N. investigator*
 1944 Arnett: 5 (morphology: female genitalia) >> as syn. of *N. investigator*
 1945 Kloet & Hincks: 155 (checklist) >> as syn. of *N. investigator*
 1959 Linssen: 162 (catalog) >> as syn. of *N. investigator*
 1988 Blackith et al.: 30 >> cites Johnson & Halbert 1902 usage
 1993b Kozminykh: 66 (key, descriptions, regional in Russian) >> as syn. of *N. investigator*
 1995 Kozminykh & Nemkov: 113 (catalog in Russian) >> as syn. of *N. investigator*
 2002 Nikolajev & Kozminykh: 119 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as syn. of *N. investigator*

= *sibiricus* Motschulsky, 1860

Type locality: "Sibérie orientale" [descrip.]

Type depository: ZMUM: Moscow

- 1860 Motschulsky: 126 (descriptions in French) >> Orig. comb.: *Necrophorus sibiricus* [!N, S]
 1880 Heyden: 87 (checklist in German) >> as valid species
 1883 Heyden et al.: 73 (checklist) >> as *N. sepultor* var. *sibiricus*
 1884 Marseul: 191 (key, descriptions in French) >> as *N. sepultor* var. *sibiricus*
 1884 Reitter: 87 (descriptions in German) >> as syn. of *Silpha investigator*
 1885 Marseul: 169 (catalog in French) >> as *N. sepultor* Charpentier var. *sibiricus*
 1887 Reitter: 217 (descriptions in German) >> as *Necrophorus sibiricus*; of unknown status/validity
 1891 Heyden et al.: 138 (checklist) >> as syn. of *N. investigator*
 1893 Heyden: 51 (checklist in German) >> as syn. of *N. investigator*
 1895b Reitter: 326 (description of variation in German) >> as syn. of *N. investigator*
 1896 Heyden: 38 (checklist in German) >> as syn. of *N. investigator*
 1906 Heyden et al.: 247 (checklist) >> as syn. of *N. investigator*
 1910 Jakobson: 612 (checklist in Russian) >> as syn. of *N. investigator*
 1916 Pasquet: 164 (description of variation in French)
 1928 Hatch: 141 (catalog) >> as syn. of *N. investigator* subsp. *maritimus*
 1933a Shchegoleva-Barovskaya: 187 (revision: key, descriptions & catalog in Russian) >> as *N. investigator* ab. *sibiricus*
 1944 Arnett: 5 (morphology: female genitalia) >> as syn. of *N. investigator* subsp. *maritimus*
 1993b Kozminykh: 66 (key, descriptions, regional in Russian) >> as syn. of *N. investigator*
 1995 Kozminykh & Nemkov: 113 (catalog in Russian) >> as syn. of *N. investigator*
 2002 Nikolajev & Kozminykh: 119 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as syn. of *N. investigator*

= *submaculatus* Reitter, 1895 REVISED SYNONYM of *N. investigator* Zetterstedt

Type locality: "Carpathen" [descrip.] "Carpenphia" [label]

Type depository: HNHM: Budapest [!] holotype male

- 1895b Reitter: 326 (description of variation in German) >> Orig. comb.: *Necrophorus interruptus* var. *submaculatus* [!N, S]

- 1899 Ganglbauer: 164 (descriptions, in German) >> as *N. interruptus* var. *submaculatus*
 1906 Heyden et al.: 247 (checklist) >> as *N. interruptus* var. *submaculatus*
 1910 Jakobson: 612 (checklist in Russian) >> as *N. interruptus* var. *submaculatus*
 1916 Pasquet: 153 (description of variation in French)
 1916 Schaufuss: 273 (checklist in German)
 1922 Everts: 183
 1924 Portevin: 290 (key, descriptions in French) >> as *N. fossor* ab. *submaculatus*
 1925 Winkler: 264 (catalog) >> as *N. interruptus* ab. *submaculatus*
 1926a Portevin: 229 (revision: key, descriptions & catalog in French) >> as *N. fossor* ab. *submaculatus*
 1928 Hatch: 143 (catalog) >> as *N. fossor* ab. *submaculatus*
 1989 Núñez et al.: 439 (checklist in Spanish (English summary)) >> as *N. interruptus* var. *submaculatus*

= *variolosus* Portevin, 1924 NEW STATUS as absolute syn. of *N. investigator* Zetterstedt

Type locality: "Baberie?" [handwritten illegible label on type; not mentioned in orig. descrip.]

Type depository: MNHN: Paris [!] holotype female

- 1924 Portevin: 149 (key, descriptions in French) >> Orig. comb.: *Necrophorus investigator* var. *variolosus* [!N, S]
 1925 Winkler: 264 (catalog) >> as *N. investigator* ab. *variolosus*
 1926a Portevin: 222 (revision: key, descriptions & catalog in French) >> as *N. investigator* var. *variolosus*
 1927b Hatch: 358 (revision: key, descriptions & catalog) >> as *N. investigator* var. *variolosus*; specimens not seen by Hatch
 1928 Hatch: 141 (catalog) >> as *N. investigator* var. *variolosus*
 1933a Shchegoleva-Barovskaya: 187 (revision: key, descriptions & catalog in Russian) >> as *N. investigator* ab. *variolosus*
 1944 Arnett: 5 (morphology: female genitalia) >> as *N. investigator* subsp. *investigator* var. *variolosus* ['ab.' intended]

Comments: *N. interruptus* var. *submaculatus* Reitter, 1895b has been considered a name subordinate to *N. interruptus*/*N. fossor* since its original description. DSS studied the only type found of this name in the HNHM and it is a specimen of *N. investigator*, not *N. interruptus*. The metepimeral lobe is glabrous, the epipleuron is orange, there is no erect row of setae on the humerus, among other traits, all of which differentiate *N. investigator* from *N. interruptus*. There remains the possibility that the type specimen examined was not the original, but given no additional evidence either way, we make this name a new synonym of *N. investigator*.

With the sole exception of *N. praedator* all the names we synonymize herein were treated as synonyms or otherwise considered possibly invalid by silphid taxonomists. We herein synonymize *N. praedator* under *N. investigator* with minor reservation for the following reasons: Reitter's (1887) original description of this name included the statement

"in east Siberia there is a species very close to investigator but it can be distinguished from investigator and all other species in that the abdominal setae are yellow." [translated from German]; other authors who have produced keys to *Nicrophorus* species have relied on this abdominal setal color trait (e.g. Portevin 1926, Hlisnikovsky 1932, Lafer 1989, Nikolajev & Kozminykh 2002), or traits that simply do not agree with the type specimen; Hatch (1927), who admitted not having examined specimens of *N. praedator*, and later Cho & Lee (1992), who presumably based their key on that of Hatch, used 'metapimeron pubescent' as a key distinguishing trait of *N. praedator* – a trait that does not agree with the type specimen which has, like *N. investigator*, glabrous metapimera. Shchegoleva-Barovskaya (1933a) used both abdominal setal color and presence (*N. praedator*) or absence (*N. investigator*) of setae on the anterior corners of the pronotum. However, both of these 'species' display short setae on the anterior corners of the pronotum, leaving only abdominal setal color as a possible diagnostic trait. Cho *et al.* (1987) compared two species of *Nicrophorus*, *N. latifasciatus* and *N. praedator*, with SEM to find differentiating characters. They concluded these names belonged to different species. However, their identifications are suspect considering they had not examined the types of either name and no reliable keys to these species exist. In addition, their conclusions were based on the comparison of a female '*N. latifasciatus*' with a male '*N. praedator*'. They remarked on the differences in shape of the postocular region which is well known to differ between the sexes of *Nicrophorus* species. It is thus likely that their two "species" were, in fact, conspecifics of opposite sex. In the *Nicrophorus* key by Nikolajev & Kozminykh (2002) the choice of "abdominal segments with pale setation" sends one to *N. praedator*, *N. investigator funeator*, and *N. chryseus*, supporting the statement that the color of the abdominal pubescence cannot be used to differentiate "*N. praedator*" from *N. investigator*.

DSS has studied long series from the region of *N. praedator* (Japan, Korea, northeast China, eastern Russia [Ussuri]) and has been unsuccessful in sorting specimens according to prior author's concepts of *N. praedator*/*N. investigator*. The abdominal setal color trait is too variable and does not work, with undeniable *N. investigator* (e.g. from Finland; SMFD) showing gradations of yellow, yellow-brown, to all brown, or black. These setae are also often abraded (and thus absent entirely) or dirty (and thus appear darker) which makes confident categorizations difficult. With very few exceptions, genitalia of either sex is not useful to differentiate closely related *Nicrophorus* species, as is true in this case.

RM treats *N. praedator* as a valid species, differentiating it from *N. investigator* not by abdominal setal color, but by the shape of the pronotum. RM concluded that in the large males of both species the pronotum is less transverse in *N. praedator* than *N. investigator*. This trait may prove useful in a morphometric analysis to sort specimens, but presumably only large males of each 'species' will separate.

There is an elytral variant of *N. investigator* that is more common in series of specimens collected from the '*N. praedator*' regions, and these are often identified as *N. praedator* in collections. This variant has the black region of the elytral sutural apex varying

from reduced to absent, but this pattern doesn't correlate 100% with the setal color traits mentioned above and, although rare, we have seen this pattern in North American *N. investigator* (New Mexico; MCZC). Although no prior authors have treated *N. praedator* as a synonym, many have reported *N. investigator* from regions of *N. praedator*, including many Japanese authors, which speaks to the difficulty in distinguishing these 'species'. Because DSS has not found traits that reliably differentiate Reitter's *N. praedator* from *N. investigator* we herein synonymize it with reservations. This problem remains ripe for additional research, particularly behavioral, ecological, morphometric, and molecular investigations which could discover if there is another species near *N. investigator* which can be associated with the name *N. praedator*.

Lafer (1989) described *N. insularis* as a subspecies of *N. praedator* using an epithet preoccupied by *N. insularis* Grouvelle, 1893 thus creating a junior primary homonym. Given our synonymization of *N. praedator* under *N. investigator*, Lafer's name must be made subordinate to *N. investigator*.

Nicrophorus japonicus Harold, 1877 desig. lectotype

Type locality: "Hakone" [Honshu, Japan 35.183°N, 139°E; label]

Type depository: ZMHB: Berlin [!] lectotype male, 3 paralectotypes

Distribution: Palearctic: Japan, Korea, Mongolia, northern and central China, Russia: Ussuri reg., Siberia

- 1877 Harold: 345 (descriptions in German) >> Orig. comb.: *Nicrophorus japonicus* [!N, S]
- 1878 Deyrolle & Fairmaire: 89 (descriptions in French) >> misspelled as *N. japanus*
- 1887 Lewis: 339 (description)
- 1903 Portevin: 331 (descriptions in French)
- 1905a Portevin: 51 (nomenclature in French) >> compared to *N. basalis*
- 1908 Heyne & Taschenberg: 38 (descriptions in German) >> brief description
- 1910 Jakobson: 612 (checklist in Russian)
- 1914b Portevin: 224 (description of variation in French)
- 1922 Portevin: 57 (descriptions in French) >> compared to *N. basalis*
- 1924 Okamoto (checklist)
- 1924 Portevin: 192 (key, descriptions in French) >> description of variation: 1 unavailable name
- 1925 Winkler: 264 (catalog)
- 1926a Portevin: 227 (revision: key, descriptions & catalog in French)
- 1927b Hatch: 360 (revision: key, descriptions & catalog)
- 1928 Hatch: 146 (catalog)
- 1929 Kôno: 164 (checklist, annotated)
- 1931 Miwa: 47 (catalog)
- 1931 Yokoyama: 115 (description in Japanese)
- 1932 Hlisnikovsky: 29 (key, descriptions in German)
- 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin)
- 1933a Shchegoleva-Barovskaya: 183 (revision: key, descriptions & catalog in Russian) >> description of variation: 1 unavailable name

- 1936 Cho: 155 (checklist in Korean)
 1936 Mochizuki (checklist)
 1936 Morita (checklist in Japanese)
 1937 Mochizuki & Tsunekawa (checklist)
 1937 Wu (catalog)
 1938 Mori & Cho (checklist)
 1939 Masui (checklist)
 1955a Nakane: 48 (checklist, brief descriptions)
 1955b Nakane: 54 (key, descriptions in Japanese)
 1956 Esaki et al.: 1028 (checklist, descriptions in Japanese)
 1957 Cho (catalog in Korean)
 1963 Cho (catalog in Korean)
 1963 Nakane: 75 (checklist, brief descriptions in Japanese)
 1964 Kamimura et al.: A20 (biology, ecology)
 1966c Mroczkowski: 436 (checklist)
 1970 Gersdorf: 368 (morphology: female genitalia in German)
 1970 Seok (checklist)
 1975b Emetz: 105 (checklist in Russian)
 1978 Kim: 64 (catalog, distribution)
 1979 Nakane & Baba: 10 (checklist, distribution in Japanese)
 1980 Schawaller: 153 (checklist in German (English summary))
 1985a Kurosawa: 248 (checklist) >> color habitus figure pl. 44
 1985 Lee et al. (checklist in Korean)
 1985 Paik: 2-12
 1986 Cho & Lee: 21 (phylogenetics)
 1986 Nishikawa: 98 (catalog in Japanese (English summary))
 1988 Cho et al.: 9 (phylogenetics)
 1989 Lafer: 338 (key, descriptions, description of variation in Russian)
 1992 Cho & Lee: 28 (revision: key, descriptions & catalog) >> misspelled as *N. japonicus*
 1992 Kozminykh: 64 (checklist in Russian)
 1992 Nomura & Lee: 81 (catalog)
 1993b Kozminykh: 67 (key, descriptions, regional in Russian) >> ungrouped; incertae sedis
 1997 Gu & Bai: 249 (biology, symbionts: mites in Chinese (English summary))
 1998 Harusawa: 35 (key in Japanese)
 2002 Nikolajev & Kozminykh: 116 (catalog, distribution, descriptions, keys, figures in Russian (English summary))

Comments: Lectotype data for *Nicrophorus japonicus* Harold, 1877: 345 "Hakone" / "59040" / Large yellow label "japonicus Harold * Japonica" / Hiat. coll. (Coleoptera) Nr. 59040 (1 ex.) *Nicrophorus japonicus* Harold; Hakone; Zool. Mus. Berlin"/ red rectangular label with double black border "LECTOTYPE *Nicrophorus japonicus* Harold 1877:345 Det. D. S. Sikes 2001 ZMHB007629Nic"- male (Berlin [ZMHB]); pronotal width: 7.46 mm.

Paralectotype data “17/673” illegible handwritten word / small red label “Type” / "Hiat. coll. (Coleoptera) Nr. 59040 (2 ex.) Necrophorus japonicus Harold Zool. Mus. Berlin" / red rectangular label with double black border “PARALECTOTYPE Necrophorus japonicus Harold 1877:345 Det. D. S. Sikes 2001 ZMHB007630Nic” - male (Berlin [ZMHB]); "Hakone Dönitz" [?] / small red label “Type” / "Hiat. coll. (Coleoptera) Nr. 59040 (3 ex.) Necrophorus japonicus Harold Zool. Mus. Berlin" / Hakone Dönitz, [35.18° ' N, 139.03° ' E,] / red rectangular label with double black border “PARALECTOTYPE Necrophorus japonicus Harold 1877:345 Det. D. S. Sikes 2001 ZMHB007631Nic”- 1 male (Berlin [ZMHB]); "Hiat. coll. (Coleoptera) Nr. 59040 (4 ex.) Necrophorus japonicus Harold Zool. Mus. Berlin" / Hakone Dönitz, [35.18° ' N, 139.03° ' E,] / red rectangular label with double black border “PARALECTOTYPE Necrophorus japonicus Harold 1877:345 Det. D. S. Sikes 2001 ZMHB007633Nic”- 1 male (Berlin [ZMHB]).

Necrophorus kieticus Mroczkowski, 1959

Type locality: “Kieta, Bougainville” [Papua New Guinea: Solomon Islands, 6.22°N 155.63°E; label]

Type depository: ZMPA: Warsaw [!] holotype female

Distribution: Australian: Papua New Guinea: Solomon Islands: Bougainville: Kieta

- 1959 Mroczkowski: 66 (description) >> Orig. comb.: *Necrophorus kieticus* [!N, S]
- 1969 Hinton: 186 (morphology: diffraction gratings) >> has iridescent morphology
- 1985 Peck & Anderson: 274 (key, descriptions, phylogenetics)
- 1986 Nishikawa: 98 (catalog in Japanese (English summary))
- 1990 Hanski & Niemelä: 149 (biology: ecology)
- 1991 Hanski & Krikken: 195 (biology: ecology)
- 2001 Peck: 94 (keys, descriptions and distributions)

Necrophorus lunatus Fischer von Waldheim, 1842

Type locality: “Songoria” [Dzungaria, Sinkiang (Xinjiang), nw China; label]

Type depository: SMTD: Dresden [!] holotype male

Distribution: Palearctic: nw China: Xinjiang, Kazakhstan, Kyrgyzstan, Uzbekistan

- 1842 Fischer von Waldheim: 9 (checklist) >> Orig. comb.: *Necrophorus lunatus* [9 word description] [!N, S]
- 1844 Fischer von Waldheim: 40 (descriptions) >> extended description
- 1845a Motschulsky: 53 (descriptions in French)
- 1854 Lacordaire: 200 (biology, catalog in French)
- 1868 Gemminger & Harold: 718 (catalog)
- 1880 Heyden: 87 (checklist in German)
- 1884 Marseul: 187 (key, descriptions in French)
- 1885 Marseul: 169 (catalog in French)
- 1895b Reitter: 325 (description of variation in German)
- 1896 Heller: 23 (in German) >> as senior syn. of *N. stenophthalmus*
- 1896 Heyden: 38 (checklist in German)
- 1910 Jakobson: 612 (checklist in Russian)
- 1922 Sherborn: 3707 (catalog - index)

- 1923 Portevin: 309 (key, descriptions in French)
 1925 Winkler: 263 (catalog)
 1926a Portevin: 210 (revision: key, descriptions & catalog in French)
 1927b Hatch: 349 (revision: key, descriptions & catalog) >> specimens not seen by Hatch
 1928 Hatch: 130 (catalog)
 1930 Kieseritzky: 61 (descriptions in Russian (German summary)) >> in footnote
 1932 Hlisnikovsky: 27 (key, descriptions in German)
 1933 Semenov-Tian-Shanskij: 152 (catalog in Russian & Latin) >> as type sp. of new subgenus *Necrophorus*
 1933a Shchegoleva-Barovskaya: 171 (revision: key, descriptions & catalog in Russian)
 1964a Hlisnikovsky: 224 (key, descriptions in German) >> compared to *N. unifasciatus*
 1980 Madge: 356 (catalog)
 1982 Peck & Miller: 152 (nomenclature) >> as senior homonym of *N. lunatus* LeC.
 1986 Nishikawa: 99 (catalog in Japanese (English summary))
 1992 Kozminykh: 64 (checklist in Russian)
 1993b Kozminykh: 63 (key, descriptions, regional in Russian)
 1996 Hava: 167-170 (description of variation in English (Czech summary)) >> description of variation; focal species
 2002 Nikolajev & Kozminykh: 110 (catalog, distribution, descriptions, keys, figures in Russian (English summary))

= *stenophthalmus* (Jakovlev, 1887)

Type locality: "Tourkestan: Constantinowka" [Georgiyevka, se Kazakhstan; 10 mi n of Bishkek, Kyrgyzstan; descrip.]

Type depository: unknown, not ZMAS? (Gusarov in litt.)

- 1887 Jakovlev: 154 (descriptions) >> Orig. comb.: *Silpha* (*Necrophorus*) *stenophthalmus* [!N, S]
 1889 Reitter: 276 (in German)
 1893 Heyden: 51 (checklist in German) >> as valid species
 1894 Semenov-Tian-Shanskij: 530 (description in Latin) >> as *Necrophorus stenophthalmus*; as valid species; compared to *N. przewalskii*
 1895b Reitter: 325 (description of variation in German) >> as valid species
 1896 Heller: 23 (in German) >> as syn. of *N. lunatus* Fisch.
 1896 Heyden: 38 (checklist in German) >> as syn. of *N. lunatus* Fisch.
 1910 Jakobson: 612 (checklist in Russian) >> as syn. of *N. lunatus* Fisch.
 1925 Winkler: 263 (catalog) >> as syn. of *N. lunatus* Fisch.
 1926a Portevin: 252 (revision: key, descriptions & catalog in French) >> as syn. of *N. lunatus* Fisch.
 1928 Hatch: 130 (catalog) >> as syn. of *N. lunatus* Fisch.
 1933a Shchegoleva-Barovskaya: 171 (revision: key, descriptions & catalog in Russian) >> as syn. of *N. lunatus* Fisch.
 1993b Kozminykh: 63 (key, descriptions, regional in Russian) >> as syn. of *N. lunatus* Fisch.
 2002 Nikolajev & Kozminykh: 110 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as syn. of *N. lunatus* Fisch.

Nicrophorus maculifrons Kraatz, 1877

Type locality: "Japan" [descrip.]

Type depository: unknown; not DEIC: Eberswalde [L. Zerche, in litt.] 2 syntype males

Distribution: Palearctic: Russia: easternSiberia, Amur, Ussuri reg., Kuriles, Sakhalin; northeastern China, Japan, Korea

- 1877 Kraatz: 101 (descriptions in German) >> Orig. comb.: *Nicrophorus maculifrons* [!N, S]
- 1877 Harold: 346 (descriptions in German) >> as syn. of *N. nepalensis*
- 1878 Deyrolle & Fairmaire: 91 (descriptions in French) >> as valid species; compared to *N. ocellatus*
- 1887 Lewis: 339 (description) >> as valid species; disagrees with Harold 1877 syn. under *N. nepalensis*
- 1891 Fairmaire: 191 (checklist in French) >> as valid species; as *N. maculifrons* var. *quadripunctatus*
- 1895b Reitter: 325 (description of variation in German) >> as valid species
- 1897 Reitter: 48 (description of variation in German) >> comments on (agrees with) status as valid species
- 1908 Heyne & Taschenberg: 38 (descriptions in German) >> as *N. nepalensis* var. *maculifrons*
- 1910 Jakobson: 612 (checklist in Russian) >> as valid species
- 1914b Portevin: 224 (description of variation in French) >> as valid species
- 1915 Roubal: 169 (description of variation in German)
- 1921 Lucas: 185 >> as valid species
- 1923 Portevin: 306 (key, descriptions in French) >> as valid species
- 1925 Winkler: 263 (catalog) >> as valid species
- 1926a Portevin: 206 (revision: key, descriptions & catalog in French) >> as valid species
- 1927b Hatch: 354 (revision: key, descriptions & catalog)
- 1928 Hatch: 130 (catalog)
- 1929 Kôno: 161, 164 (checklist, annotated) >> description of variation: 1 unavailable name
- 1930 Yokoyama: 123 (descriptions in Japanese)
- 1932 Hlisnikovsky: 27 (key, descriptions in German)
- 1933 Kano: 100 (checklist in Japanese (English summary)) >> misidentification of *N.* investigator as *N. maculifrons*
- 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin)
- 1933a Shchegoleva-Barovskaya: 177 (revision: key, descriptions & catalog in Russian)
- 1936 Cho: 156 (checklist in Korean) >> new record for Korea
- 1937 Mochizuki & Tsunekawa (checklist)
- 1937 Wu (catalog)
- 1939 Masui (checklist)
- 1953 Mazokhin-Porshnyakov: 236 (descriptions, catalog in Russian)
- 1955a Nakane: 48 (checklist, brief descriptions)
- 1955b Nakane: 53 (key, descriptions in Japanese)
- 1956 Esaki et al.: 1029 (checklist, descriptions in Japanese)
- 1957 Cho (catalog in Korean)

- 1963 Nakane: 75 (checklist, brief descriptions in Japanese)
 1964b Hlisenkovsky: 244 (descriptions in German)
 1964 Kamimura et al.: A20 (biology, ecology)
 1969 Gersdorf: 304 (fossils, descriptions in German)
 1969 Hinton: 186 (morphology: diffraction gratings) >> has iridescent morphology
 1970 Gersdorf: 367 (morphology: female genitalia in German)
 1973 Krivolutskaya: 71 (checklist in Russian (with electronic english translation))
 1975 Katakura & Fukuda: 78 (biology, ecology)
 1978 Kim: 66 (catalog, distribution)
 1979 Nakane & Baba: 10 (checklist, distribution in Japanese)
 1985 Katakura & Ueno: 463 (biology, ecology)
 1985a Kurosawa: 247 (checklist) >> color habitus figure pl. 44
 1986 Katakura et al.: 43-55 (biology, ecology)
 1986 Nishikawa: 98 (catalog in Japanese (English summary))
 1987 Ryabukhin & Matis: 9 (key, descriptions, distributions in Russian)
 1988 Cho et al.: 9 (phylogenetics)
 1989 Lafer: 337 (key, descriptions, description of variation in Russian)
 1989 Martin: 876-879 (biology, ecology)
 1991 Ohkawara: 463-467 (biology, ecology in Japanese (English summary)) >> focal species
 1992 Cho & Lee: 22 (revision: key, descriptions & catalog)
 1992 Kozminykh: 64 (checklist in Russian)
 1992b Ôhara: 9 (checklist in Japanese (English summary))
 1993b Kozminykh: 67 (key, descriptions, regional in Russian) >> ungrouped; incertae sedis
 1994 Takaku et al.: 306 (biology, symbionts: mites) >> mite host
 1995a Ôhara: 25 (checklist in Japanese (English summary))
 1995 Ôhara et al.: 68 (checklist in Japanese (English summary))
 1997 Krivolutskaya: 3 (checklist) >> (translation of Krivolutskaya 1973)
 1998 Harusawa: 35 (key in Japanese)
 1998 Ohkawara et al.: 551-559 (biology, ecology) >> focal species
 1999 Suzuki: 207 (biology, ecology, behavior)
 2000 Růžička et al.: 381 (descriptions)
 2000c Suzuki: 38 (biology, ecology, behavior in Japanese with English abstract)
 2001 Nishikawa: 79-81 (larval descriptions, phylogenetics in English (Japanese summary)) >> focal species, larva described & illustrated
 2001 Trumbo et al.: 552-553 (biology, ecology, behavior) >> least common sp. in field samples
 2002 Nikolajev & Kozminykh: 129 (catalog, distribution, descriptions, keys, figures in Russian (English summary))

= karafutonis Kôno, 1929 NEW SYNONYM of *N. maculifrons* Kraatz

Type locality: "Otomari, Sachalin", "Hokkaido,: Moiwa, Jozankei, der Berg Mashû"
 [Russia, Japan; descrip.]

Type depository: NSMT: Tokyo [!] 5 syntypes

1929 Kôno: 161 (checklist, annotated) >> Orig. comb.: *N. maculifrons* form karafutonis [subspecies implied; available name ICZN 45.6.4] [!N, S]

- 1955b Nakane: 54 (key, descriptions in Japanese) >> as *N. maculifrons* subsp. *karafutonis*
 1963 Nakane: 75 (checklist, brief descriptions in Japanese) >> as valid species

= *maculiceps* (Jakovlev, 1887) CONFIRMED as SYNONYM of *N. maculifrons* Kraatz

Type locality: "Wladiwostok" [southern Ussuri, e Siberia, Russia; label]

Type depository: ZMAS: St. Petersburg [!] holotype female, allotype male, paratype female

- 1887 Jakovlev: 154 (descriptions) >> Orig. comb.: *Silpha* (*Necrophorus*) *maculiceps* [!N, S]
 1893 Heyden: 51 (checklist in German) >> as valid species
 1895b Reitter: 325 (description of variation in German) >> as valid species; New comb. as *Necrophorus maculiceps*
 1923 Portevin: 305 (key, descriptions in French) >> as valid species
 1925 Winkler: 263 (catalog) >> as valid species
 1926a Portevin: 205 (revision: key, descriptions & catalog in French) >> as valid species
 1927b Hatch: 354 (revision: key, descriptions & catalog) >> as valid species; specimens not seen by Hatch
 1928 Hatch: 130 (catalog) >> as valid species
 1932 Hlisnikovsky: 27 (key, descriptions in German) >> as valid species
 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin) >> as valid species
 1933a Shchegoleva-Barovskaya: 178 (revision: key, descriptions & catalog in Russian) >> as valid species
 1964b Hlisnikovsky: 244 (descriptions in German) >> as valid species
 1975b Emetz: 105 (checklist in Russian) >> as valid species
 1985a Kurosawa: 247 (checklist) >> as valid species; color habitus figure pl. 44
 1986 Nishikawa: 98 (catalog in Japanese (English summary)) >> as valid species
 1989 Lafer: 337 (key, descriptions, description of variation in Russian) >> as valid species
 1992 Kozminykh: 64 (checklist in Russian) >> as syn. of *N. maculifrons*
 1993b Kozminykh: 67 (key, descriptions, regional in Russian) >> as syn. of *N. maculifrons*
 2002 Nikolajev & Kozminykh: 129 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as syn. of *N. maculifrons*

= *parvulus* Hlisnikovsky, 1964 NEW STATUS as absolute synonym of *N. maculifrons* Kraatz

Type locality: "Kami Kochiki-schima Insel, Japan Nördliche Berge" [Kami Koshiki Shima, small island off southwest coast of Kyushu, Japan; label & descrip.]

Type depository: NMPC: Praha [!] holotype female

- 1964b Hlisnikovsky: 243 (descriptions in German) >> Orig. comb.: *Necrophorus* (*Necropter*) *maculifrons parvulus*; also misspelled as *parvus* [!N, S]
 1993b Kozminykh: 67 (key, descriptions, regional in Russian) >> as *N. maculifrons* subsp. *parvulus*

Nicrophorus marginatus Fabricius, 1801

Type locality: "North America" [descrip.]

Type depository: ZMUC: Kiel

Distribution: Nearctic: North America (southern Canada through northern Mexico, except southeast United States)

- 1792 Frölich: 125 (descriptions in German) >> description of variation: 1 unavailable name
- 1801 Fabricius: 334 (descriptions) >> Orig. comb.: *Nicrophorus marginatus* [!N, S]
- 1806 Melsheimer (catalog)
- 1807 Herschel: 271 (descriptions in German)
- 1821 Dejean: 42 (catalog)
- 1825 Say: 178 (description) >> compared to *N. orbicollis*
- 1833 Dejean: 117 (catalog in French)
- 1835 Harris
- 1836 Dejean: 131 (catalog in French)
- 1839 Matzek: 23 (morphology: internal & external anatomy in Latin) >> as *N. marginatum*
- 1853 LeConte: 275 (descriptions)
- 1853 Melsheimer: 39 (catalog)
- 1854 Lacordaire: 200 (biology, catalog in French)
- 1854 LeConte: 20 (descriptions)
- 1857b Gistel: 565 (in German)
- 1859c LeConte: 37 (checklist)
- 1866a LeConte: 367 (nomenclature)
- 1867 Walsh: 108 (comment: ecology)
- 1868 Gemminger & Harold: 718 (catalog)
- 1869 Glover (biology, behavior)
- 1869 Walsh & Riley: 61 (comment) >> "Biology" - Hatch 1928
- 1870 LeConte: 398 (nomenclature)
- 1873 Crotch: 37 (checklist) >> as *Silpha marginata*
- 1877 Provancher: 224, 225 (in French)
- 1878b Hubbard & Schwarz: 650 (checklist)
- 1880 Horn: 231 (revision: key, descriptions & catalog)
- 1885 Henshaw: 26 (checklist)
- 1888 Matthews: 93 (description)
- 1895 Clark: 61 (biology, behavior) >> feeding on maggots
- 1895 Hamilton: 324 (checklist)
- 1901 Fall: 13, 58 (checklist)
- 1902 Dury: 12 (checklist)
- 1902 Snow (biology, ecology)
- 1904 Davis: 18 (checklist)
- 1907 Fall & Cockerell: 164 (checklist)
- 1908 Heyne & Taschenberg: 38 (descriptions in German)
- 1910 Barkowski: 79 (key, descriptions, regional in German)
- 1910 Blatchley: 275 (key, descriptions, regional)
- 1910 Smith: 229 (checklist)

- 1911 Wickham: 10 (checklist)
 1915 McIndoo (biology, behavior)
 1917 Strand: 84 (descriptions in German) >> as senior syn. of *N. requiescator*
 1920 Britton: 224 (checklist)
 1920 Leng: 86 (catalog)
 1922 Sherborn: 3875 (catalog - index)
 1924 Portevin: 84 (key, descriptions in French) >> description of variation: 1 unavailable name
 1925 Hatch & Angell: 216 (descriptions) >> compared with *N. hybridus*
 1926a Portevin: 212 (revision: key, descriptions & catalog in French)
 1927a Hatch: 5, 7, 19 (key, descriptions, description of variation)
 1927b Hatch: 360 (revision: key, descriptions & catalog)
 1928 Leonard: 271 (checklist)
 1930 Johnson: 44 (checklist)
 1933 Roberts: 313 (comment: ecology) >> Reported as an infrequent predator of blow-flies
 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin)
 1934 Hatch & Rueter: 159 (key, distribution, variation, descriptions)
 1936 Meserve: 133 (checklist, distribution)
 1936 Williams: 391 (comment: ecology)
 1937 Moore: 21 (checklist)
 1938 Brimley: 135 (checklist)
 1941 Foster: 21 (biology, ecology)
 1944 Arnett: 4, 24 (morphology: female genitalia) >> female genitalia figured, pl. 4, fig. 6
 1944 Blackwelder: 100 (catalog)
 1944 Milne & Milne: 311 (biology, behavior)
 1944 Walkden (biology, ecology)
 1945 Blake: 234 (checklist) >> listed among grassland habitat community
 1946 La Rivers: 117 (methods, ecology)
 1949 Bliss: 201 (morphology: sexual dimorphism)
 1949 Pierce: 67 (fossils, descriptions)
 1950 Stroud: 667 (checklist)
 1951 Jaques: 83 (key, descriptions)
 1958 Madge: 62 (revision: key, descriptions, ecology, distributions)
 1961 Dillon & Dillon: 175 (key, descriptions)
 1966 Payne & Crossley: 56 (biology, ecology)
 1970 Gersdorf: 366 (morphology: female genitalia in German)
 1970 Kirk: 25 (checklist)
 1970 Payne & King: 230 (biology, ecology)
 1972 Swan & Papp: 356 (description) >> brief description
 1973 Blackwelder: 3 (checklist, synonymy)
 1975 Baldwin: 24 (key, description, distribution, ecology)
 1975 Kirk & Balsbaugh: 52 (checklist)
 1976 Milne & Milne: 86 (popular review)
 1976 Shubeck: 265 (biology, ecology) >> cites Smith (1910)
 1977 Headstrom: 106 (description) >> brief description

- 1979 Miller & Peck: 96 (fossils)
- 1979 Powell & Hogue: 272 (field guide) >> brief description
- 1980 Arnett et al.: 128 (key, descriptions)
- 1980 Milne & Milne: 549 (field guide, brief descriptions, ecology)
- 1981 Kozol: 13 (biology, conservation, genetics)
- 1981 Schoenly (biology, ecology)
- 1982 Abell et al.: 304 (biology, ecology)
- 1982a Anderson: 258 (key, descriptions, morphology, larval stages)
- 1982c Anderson: 1316 (biology, ecology)
- 1982 Shubeck & Blank (biology, ecology)
- 1983 Schoenly & Reid: 256 (biology, ecology)
- 1983 White: 121 (field guide) >> descriptive note
- 1984 Papp: 70 (descriptions) >> brief description
- 1984 Shubeck (biology, ecology)
- 1985 Anderson & Peck: 63 (revision: key, descriptions & catalog)
- 1985 Peck & Anderson: 266 (key, descriptions, phylogenetics)
- 1986 Nishikawa: 98 (catalog in Japanese (English summary))
- 1987 Peck & Kaulbars: 54 (checklist)
- 1987 Staines: 16 (key, descriptions) >> Maryland records
- 1989 Kozol et al.: 170 (biology, conservation)
- 1990 Peck: 1122 (key)
- 1991 Campbell: 86 (catalog, distribution)
- 1991 Laplante et al.: 29 (checklist in French)
- 1991 Raithel: 2 (biology, conservation)
- 1993 Creighton et al.: 276 (biology, conservation)
- 1993 Peck & Miller: 8 (species-group catalog)
- 1993 Shubeck: 89 (biology, ecology)
- 1994 Brown & Wilson: 3 (biology, symbionts: mites)
- 1995 Lingafelter: 220 (biology, ecology)
- 1995 Lomolino et al.: 609 (biology, conservation in English (Spanish summary))
- 1995 Navarrete-Heredia: 14 (biology, ecology, key in Spanish)
- 1996 Downie & Arnett: 356 (key, descriptions, regional)
- 1996 Lomolino & Creighton: 238 (biology, conservation)
- 1996 Ratcliffe: 72 (revision: key, descriptions & catalog)
- 1997 Backlund & Marrone: 56 (biology, conservation)
- 1997 King & Cummings: 1088-1095 (biology, genetics)
- 1997 Rana et al.: 375-380 (biology, physiology) >> focal species
- 1998 Arellano: 9 (checklist, distribution in Spanish)
- 1998 Carlton & Rothwein: 183 (biology, conservation)
- 1998 Coyle & Larsen: 163 (biology, ecology)
- 1998 Peck & Thomas: 37 (checklist, distribution)
- 1998b Scott: 599+ (biology, review of: ecology, behavior)
- 1999 Bedick et al.: 177 (biology, conservation)
- 1999 De Jong & Chadwick: 843 (biology, ecology)
- 2000 Navarrete-Heredia & Fierros-López: 407 (checklist, distribution in Spanish (English summary))
- 2000 Peck: 268 (family treatment) >> figured

- 2000 Sikes & Peck: 395 (descriptions, phylogenetics)
 2000 Szalanski et al.: 590 (biology, conservation, phylogenetics, genetics)
 2000 Trumbo & Bloch: 247 (biology, ecology, conservation)
 2001 Navarrete-Heredia: 170 (checklist, distribution in Spanish)

= *labreae* Pierce, 1949 [fossil]

Type locality: "Pit X, Pit A, Pit B..." [USA: California: Los Angeles Co., Rancho La Brea; descrip]

Type depository: LACM: Los Angeles

- 1949 Pierce: 63 (fossils, descriptions) >> Orig. comb.: *Nicrophorus guttulus labreae* [fossil] [!N, S]
 1979 Miller & Peck: 96 (fossils) >> as syn. of *N. marginatus*; desig. lectotype
 1985 Anderson & Peck: 63 (revision: key, descriptions & catalog) >> as syn. of *N. marginatus*
 1993 Peck & Miller: 8 (species-group catalog) >> as syn. of *N. marginatus*
 1996 Ratcliffe: 72 (revision: key, descriptions & catalog) >> as syn. of *N. marginatus*

= *latifrons* Pierce, 1949 [fossil]

Type locality: "Pit X" [USA: California: Los Angeles Co., Rancho La Brea; descrip.]

Type depository: LACM: Los Angeles [head C120d]

- 1949 Pierce: 67 (fossils, descriptions) >> Orig. comb.: *Nicrophorus investigator latifrons* [fossil] [!N, S]
 1979 Miller & Peck: 96 (fossils) >> as syn. of *N. marginatus*
 1985 Anderson & Peck: 63 (revision: key, descriptions & catalog) >> as syn. of *N. marginatus*
 1993 Peck & Miller: 8 (species-group catalog) >> as syn. of *N. marginatus*
 1996 Ratcliffe: 72 (revision: key, descriptions & catalog) >> as syn. of *N. marginatus*

= *lunatus* Gistel, 1857 NEW SYNONYM of *N. marginatus*

Type locality: "America borealis" [Canada?; descrip.]

Type depository: unknown

- 1857b Gistel: 564 (in German) >> Orig. comb.: *Nicrophorus lunatus*, with *N. lunulatus* Gistel as syn., preocc., not Fischer [!N]

= *lunulatus* Gistel, 1848 NEW SYNONYM of *N. marginatus*

Type locality: "North America" [descrip.]

Type depository: ZSMC: München?

- 1848 Gistel: 189 (descriptions in German) >> Orig. comb.: *Nicrophorus lunulatus*
 1857b Gistel: 564 (in German) >> New junior primary homonym, not Fischer 1842
 1917 Strand: 83 (descriptions in German)
 1928 Hatch: 129 (catalog) >> as syn. of *N. sayi* Lap.
 1944 Arnett: 4 (morphology: female genitalia) >> as syn. of *N. sayi*; misspelled as *N. lumulatus*
 1985 Anderson & Peck: 69 (revision: key, descriptions & catalog) >> as syn. of *N. sayi*
 1993 Peck & Miller: 9 (species-group catalog) >> as syn. of *N. sayi* (cited as "following Hatch 1928")

- = mckittricki Pierce, 1949 [fossil]
 Type locality: "McKittrick" [USA: California: Kern Co.; descrip]
 Type depository: LACM: Los Angeles
 1949 Pierce: 66 (fossils, descriptions) >> Orig. comb.: *Nicrophorus mckittricki* [fossil] [!N, S]
 1979 Miller & Peck: 96 (fossils) >> as syn. of *N. marginatus*
 1985 Anderson & Peck: 63 (revision: key, descriptions & catalog) >> as syn. of *N. marginatus*
 1993 Peck & Miller: 8 (species-group catalog) >> as syn. of *N. marginatus*
 1996 Ratcliffe: 72 (revision: key, descriptions & catalog) >> as syn. of *N. marginatus*
- = montezumae Matthews, 1888 CONFIRMED as SYNONYM of *N. marginatus*
 Fabricius
 Type locality: "Mexico, Villa Lerdo in Durango, Cholula, Jalapa, Mexico city, Esperanza" [descrip.]
 Type depository: BMNH: London [!] 3 syntypes
 1888 Matthews: 92 (description) >> Orig. comb.: *Nicrophorus montezumae* [!N, S]
 1924 Portevin: 83 (key, descriptions in French) >> as valid species, with reservation
 1926a Portevin: 211 (revision: key, descriptions & catalog in French) >> as valid species
 1928 Hatch: 147 (catalog) >> as syn. of *N. marginatus*
 1944 Arnett: 4 (morphology: female genitalia) >> as syn. of *N. marginatus*
 1985 Anderson & Peck: 63 (revision: key, descriptions & catalog) >> as syn. of *N. marginatus*
 1985 Peck & Anderson: 266 (key, descriptions, phylogenetics) >> as syn. of *N. marginatus*
 1993 Peck & Miller: 8 (species-group catalog) >> as syn. of *N. marginatus*
 1996 Ratcliffe: 72 (revision: key, descriptions & catalog) >> as syn. of *N. marginatus*
- = obtusiscutellum Pierce, 1949 [fossil]
 Type locality: "Pit A" [USA: California: Los Angeles Co., Rancho La Brea; descrip]
 Type depository: LACM: Los Angeles
 1949 Pierce: 67 (fossils, descriptions) >> Orig. comb.: *Nicrophorus obtusiscutellum* [fossil] [!N, S]
 1979 Miller & Peck: 96 (fossils) >> as syn. of *N. marginatus*
 1985 Anderson & Peck: 63 (revision: key, descriptions & catalog) >> as syn. of *N. marginatus*
 1993 Peck & Miller: 8 (species-group catalog) >> as syn. of *N. marginatus*
 1996 Ratcliffe: 72 (revision: key, descriptions & catalog) >> as syn. of *N. marginatus*

Comments: As discussed above (see *N. germanicus* and *N. interruptus*) regarding the names proposed by Gistel (1848, 1857), usually treated as *nomina dubia*, we herein move *N. lunulatus* Gistel, 1848 from synonymy under *N. sayi* to *N. marginatus* based on the following: Gistel described *N. lunulatus* from North America as being like *N. vespillo* but

with the elytral fascia sharply “toothed, as if tattered,” and bound with the side margins of the elytra. The similarity to *N. vespillo* suggests curved metatibiae, which are possessed by *N. sayi* and *N. marginatus*. However, *N. sayi* does not have the elytral fascia toothed, whereas *N. marginatus* does.

Nicrophorus mexicanus Matthews, 1888 desig. lectotype

Type locality: “Mexico City”[Mexico; 19.4°N, 99.15°W; label]

Type depository: BMNH: London [!] lectotype male, 8 paralectotypes

Distribution: Nearctic, Neotropical: southwestern North America, Mexico, Guatemala, El Salvador, Honduras*

- 1888 Matthews: 91 (description) >> Orig. comb.: *Nicrophorus mexicanus*; auth. attrib. Chevrolat [!N, S]
- 1901 Villada: 35 (checklist in Spanish)
- 1924 Portevin: 188 (key, descriptions in French)
- 1926a Portevin: 226 (revision: key, descriptions & catalog in French)
- 1927b Hatch: 357 (revision: key, descriptions & catalog)
- 1928 Hatch: 144 (catalog)
- 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin)
- 1943 Portevin: 48 (description of variation in French) >> description of variation: 1 unavailable name
- 1944 Arnett: 6, 22 (morphology: female genitalia) >> female genitalia figured, pl. 3, fig. 7
- 1944 Blackwelder: 100 (catalog)
- 1958 Madge: 56 (revision: key, descriptions, ecology, distributions) >> as *N. investigator* subsp. *mexicanus*
- 1972 Howden & Peck: 71 (biology, ecology)
- 1973 Blackwelder: 6 (checklist, synonymy)
- 1975 Zaragoza et al.: 459-475 (biology, ecology in Spanish (English summary)) >> focal species
- 1982 Halffter et al.: 50-52 (biology, behavior, morphology: ovaries, in Spanish) >> focal species
- 1984 Halffter et al.: 648-666 (biology, behavior in French) >> focal species
- 1985 Anderson & Peck: 49 (revision: key, descriptions & catalog) >> in key only
- 1985 Peck & Anderson: 267 (key, descriptions, phylogenetics)
- 1986 Nishikawa: 98 (catalog in Japanese (English summary))
- 1987 Peck & Kaulbars: 53 (checklist)
- 1990 Peck: 1122 (key)
- 1992 Halffter: 283 (biology, behavior)
- 1992 Huerta: 13-21 (morphology: sternal glands in Spanish (English summary)) >> focal species
- 1992 Terrón et al.: 315-324 (biology, ecology in Spanish (English summary))
- 1993 Huerta et al.: 151-157 (biology, behavior) >> focal species
- 1993 Peck & Miller: 8 (species-group catalog)
- 1995 Lingafelter: 220 (biology, ecology) >> not found during surveys
- 1995 Navarrete-Heredia: 12 (biology, ecology, key in Spanish)

- 1996 Halffter et al.: 162 (biology, ecology)
 1996 Palestini et al.: 435-445 (larval descriptions, phylogenetics) >> focal species;
 larval stage descriptions
 1996 Ratcliffe: 74 (revision: key, descriptions & catalog)
 1998 Arellano: 9 (checklist, distribution in Spanish)
 1998 Huerta & Anduaga: 79-81 (biology, behavior, physiology in Spanish) >> focal
 species
 1998 Rivera-Cervantes & García-Real: 14 (biology, ecology in Spanish)
 2000 Navarrete-Heredia & Quiroz-Rocha: 4 (biology, ecology, distribution in Spanish)
 2000 Navarrete-Heredia & Fierros-López: 407 (checklist, distribution in Spanish
 (English summary)) >> distribution and habitat notes
 2000 Sikes & Peck: 395 (descriptions, phylogenetics)
 2001 Anduaga & Huerta: 264-271 (biology, behavior, physiology) >> focal species
 2001 Burgos Solorio & Trejo-Loyo: 94 (checklist in Spanish)
 2001 Fierros-Lopez & Navarrete-Heredia: 45-46 (biology, ecology)
 2001 Navarrete-Heredia: 170 (checklist, distribution in Spanish)

Comments: Lectotype data for *Nicrophorus mexicanus* Matthews, 1888: 91 (The only male in the syntype series.) MEXICO: Mexico City, [19.4°N, 99.15°W,](coll. Höge) / red rectangular label with double black border "LECTOTYPE *Nicrophorus mexicanus* (Matthews1888) det. Sikes 1997"- male (London [BMNH]); pronotal width: 6.80 mm.

Paralectotype data "N. mexicanus Chevrolat" red bordered circular label: "Type", / MEXICO: Ciudad, Mex., elev. 8100 ', (coll. Forrer) / red rectangular label with double black border "PARALECTOTYPE *Nicrophorus mexicanus* (Matthews1888) det. Sikes 1997"- female (London [BMNH]) / MEXICO: Mexico City, [19.4° ' N, 99.15° ' W,](coll. Höge) / red rectangular label with double black border "PARALECTOTYPE *Nicrophorus mexicanus* (Matthews1888) det. Sikes 1997"- 4 females (London [BMNH]); "Nicrophorus mexicanus Chev. apud Sallé" / MEXICO: Parada, (coll. Sallé) / red rectangular label with double black border "PARALECTOTYPE *Nicrophorus mexicanus* (Matthews1888) det. Sikes 1997"- 2 females (London [BMNH]); "Nicrophorus mexicanus Chev. apud Sallé" / "1777" / MEXICO: Yolotepec, (coll. Sallé) / red rectangular label with double black border "PARALECTOTYPE *Nicrophorus mexicanus* (Matthews1888) det. Sikes 1997"- female (London [BMNH]).

Nicrophorus mongolicus Shchegoleva-Barovskaya, 1933 desig. lectotype

Type locality: "Nordl. Mongolei. Changai"[Mongolia; 47.5°N, 100°E; label]

Type depository: ZMAS: St. Petersburg [!] lectotype male, 6 paralectotypes [BMNH, ZMAS]

Distribution: Palearctic: Mongolia, Russia: Siberia, Tadzhikistan*, Kazahkstan*

- 1933a Shchegoleva-Barovskaya: 189 (revision: key, descriptions & catalog in Russian)
 >> Orig. comb.: *Nicrophorus* (*Nicrophorus*) *mongolicus* [!N, S]
 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin)
 1964a Hlisnikovsky: 223 (key, descriptions in German)

- 1975a Emetz: 60 (checklist in German)
 1975b Emetz: 105 (checklist in Russian)
 1986 Nishikawa: 98 (catalog in Japanese (English summary))
 1992 Kozminykh: 64 (checklist in Russian)
 1993b Kozminykh: 66 (key, descriptions, regional in Russian)
 2002 Nikolajev & Kozminykh: 123 (catalog, distribution, descriptions, keys, figures in Russian (English summary))

Comments: Lectotype data for *Nicrophorus mongolicus* Shchegoleva-Barovskaya, 1933 "Nicrophorus semenowi; N. mongolicus Stsh-Bar. Typ. x Barovskaja 1931 det. [handwritten]/Paratypus [red label]Nicrophorus mongolicus"; / "collection the Zoological Institute Academy of Sciences, St. Petersburg, Russia"; /"201";/ gold-foil circular label; /"48" [-corresponds to genitalia on separate pin with label "48"]; /"Coll. Semenov-Tian-Shansky"/ [MONGOLIA]: Nordl. Mongolei. Changai, [47.5°N, 100°E,](coll. Leder) / white black bordered label "Nicrophorus mongolicus Shchegoleva-Bar., 1933 Det. D. S. Sikes 1998 ZMAS006217Nic" / red rectangular label with double black border "LECTOTYPE Nicrophorus mongolicus (Shchegoleva-Barovskaya 1933) det. Sikes 1997"- male (St. Petersburg [ZMAS]); pronotal width: 5.86 mm.

Paralectotype data "Nicrophorus semenowi pseudobrutato Rtt. Nicrophorus mongolicus / "collection the Zoological Institute Academy of Sciences, St. Petersburg, Russia"; "201"; gold-foil circular label; "k. g. Sueersa" / [MONGOLIA]: Nordl. Mongolei. Changai, [47.5° ' N, 100° ' E,](coll. Leder) / red rectangular label with double black border "PARALECTOTYPE Nicrophorus mongolicus (Shchegoleva-Bar. 1933) det. Sikes 1997"- male (St. Petersburg [ZMAS]); "mongolicus" [handwritten] / "Nicrophorus mongolicus" / "collection the Zoological Institute Academy of Sciences, St. Petersburg, Russia"; "201"; gold-foil circular label / MONGOLIA: Changai mts, [47.5° ' N, 100° ' E,] 22 July 1926 (coll. Kiritshenko) / red rectangular label with double black border "PARALECTOTYPE Nicrophorus mongolicus (Shchegoleva-Bar. 1933) det. Sikes 1997"- female (St. Petersburg [ZMAS]); "Nicrophorus mongolicus" / "collection the Zoological Institute Academy of Sciences, St. Petersburg, Russia"; "201"; gold-foil circular label / MONGOLIA: S-3. Mongolía Klemenú, 23 May - 15 June 1894 / red rectangular label with double black border "PARALECTOTYPE Nicrophorus mongolicus (Shchegoleva-Bar. 1933) det. Sikes 1997" - female (St. Petersburg [ZMAS]); "Nicrophorus semenowi" [handwritten] / "Nicrophorus mongolicus" / "collection the Zoological Institute Academy of Sciences, St. Petersburg, Russia"; "201"; gold-foil circular label; "33" -corresponds to genitalia on separate pin with label "33" / [MONGOLIA]: Nordl. Mongolei. Changai, [47.5° ' N, 100° ' E,](coll. Leder) / red rectangular label with double black border "PARALECTOTYPE Nicrophorus mongolicus (Shchegoleva-Bar. 1933) det. Sikes 1997"- female (St. Petersburg [ZMAS]); "N. mongolicus Stsh-Bar. Typ. z Barovskaja 1931 det." [handwritten] / "Nicrophorus mongolicus" / "collection the Zoological Institute Academy of Sciences, St. Petersburg, Russia"; "201"; gold-foil circular label; "47" -corresponds to genitalia on sepa-

rate pin with label "47"; "Coll. Semenov-Tian-Shansky"; data label handwritten & illegible / 16 July 1899 / red rectangular label with double black border "PARALECTOTYPE *Nicrophorus mongolicus* (Shchegoleva-Bar. 1933) det. Sikes 1997" - female (St. Petersburg [ZMAS]).

Nicrophorus montivagus Lewis, 1887 desig. lectotype

Type locality: "Chiuzenji" [Lake Chuzenji, Honshu Japan; 36.73°N, 139.48°E; label]

Type depository: BMNH: London [!] lectotype male, 14 paralectotypes

Distribution: Palearctic: Japan: Honshu, Shikoku

- 1887 Lewis: 340 (description) >> Orig. comb.: *Nicrophorus montivagus* [!N, S]
- 1910 Jakobson: 612 (checklist in Russian)
- 1914b Portevin: 224 (description of variation in French)
- 1914b Portevin: 224 (description of variation in French)
- 1924 Portevin: 291 (key, descriptions in French)
- 1925 Winkler: 264 (catalog)
- 1926a Portevin: 231 (revision: key, descriptions & catalog in French)
- 1928 Hatch: 136 (catalog)
- 1929 Kôno: 164 (checklist, annotated)
- 1932 Hlisnikovsky: 29 (key, descriptions in German)
- 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin)
- 1955b Nakane: 54 (key, descriptions in Japanese)
- 1956 Esaki et al.: 1029 (checklist, descriptions in Japanese)
- 1963 Nakane: 75 (checklist, brief descriptions in Japanese)
- 1964 Kamimura et al.: A20 (biology, ecology)
- 1979 Nakane & Baba: 10 (checklist, distribution in Japanese)
- 1985a Kurosawa: 248 (checklist) >> color habitus figure pl. 44
- 1986 Nishikawa: 98 (catalog in Japanese (English summary))
- 1989 Martin: 876-879 (biology, ecology)
- 1993b Kozminykh: 67 (key, descriptions, regional in Russian)
- 1998 Harusawa: 35 (key in Japanese)
- 2000 Růžička et al.: 381 (descriptions)

= *mixtus* Hlisnikovsky, 1964 NEW SYNONYM of *N. montivagus* Lewis

Type locality: "Insel Sado, Japan" [Sado Island, w of central Honshu, Japan; label]

Type depository: NMPC: Praha [!] holotype male, paratype male

- 1964b Hlisnikovsky: 242 (descriptions in German) >> Orig. comb.: *Nicrophorus*
(*Necropter*) *mixtus* [!N, S]
- 1993b Kozminykh: 67 (key, descriptions, regional in Russian) >> as valid species,
incertae sedis

Comments: Lectotype data for *Nicrophorus montivagus* Lewis, 1887: 340 "*Nicrophorus montivagus* Lewis Type male" / [on card, only 2 of the 15 syntypes are carded, one male and one female, this is the best choice as lectotype]. JAPAN: Chiuzenji, [36.73°N, 139.48°E,] 19-24 August 1881 (coll. G. Lewis) / red rectangular label with double black

border “LECTOTYPE *Nicrophorus montivagus* (Lewis 1887) det. Sikes 1997”- male (London [BMNH]); pronotal width: 3.97 mm.

Paralectotype data “*Nicrophorus montivagus* Lewis Type male” / “Type”, / JAPAN: Nikko., [36.75° ' N, 139.6° ' E,]10-18 August 1881 (coll. G. Lewis) / red rectangular label with double black border “PARALECTOTYPE *Nicrophorus montivagus* (Lewis 1887) det. Sikes 1997”– 1 male, 1 female [on card] (London [BMNH]); “*Nicrophorus montivagus* Lewis Type male” / “Type”, / JAPAN: Chiuzenji, [36.73° ' N, 139.48° ' E,]1-30 June 1880 (coll. G. Lewis) / red rectangular label with double black border “PARALECTOTYPE *Nicrophorus montivagus* (Lewis 1887) det. Sikes 1997”– 2 males (London [BMNH]); JAPAN: Chiuzenji, [36.73° ' N, 139.48° ' E,]19-24 August 1881 (coll. G. Lewis) / red rectangular label with double black border “PARALECTOTYPE *Nicrophorus montivagus* (Lewis 1887) det. Sikes 1997”– 3 males, 6 females (London [BMNH]); “*montivagus* Lewis” / “*Nicrophorus montivagus* Lewis co-type” / [JAPAN]: Chiuzenji, [36.73° ' N, 139.48° ' E,] / red rectangular label with double black border “PARALECTOTYPE *Nicrophorus montivagus* (Lewis 1887) det. Sikes 1997”- male (London [BMNH])

DSS examined the types of the name *N. mixtus* Hlisnikovskiy and concluded they were conspecific with *N. montivagus* Lewis. They share the nonproduced apical angles of the mesotibiae, no row of setae on the humerus, and the most diagnostic character of *N. montivagus* – the basal three segments of the antennal club are black/grey and the apical segment is orange (a color pattern unique in the subfamily). The types differ from most *N. montivagus* in having an orange spot on the frons and in a few aspects of the elytral maculations.

***Nicrophorus morio* Gebler, 1817** NEW STATUS as valid species

Type locality: not mentioned, no data on types

Type depository: MNHN: Paris [!] lectotype female, 1 paralectotype male

Distribution: Palearctic: neChina, Mongolia, Turkmenistan*, Kazakhstan, Kirgiziya*, Afghanistan, Iran*, eastern and sRussia, Uzbekistan

- 1817 Gebler: 319 (descriptions in Latin) >> Orig. Comb.: *Nicrophorus Morio* [!N, S]
- 1833 Dejean: 117 (catalog in French)
- 1835b Faldermann: 340 (descriptions)
- 1836 Dejean: 131 (catalog in French) >> as valid species
- 1849 Ménétrés: 52 (checklist in French)
- 1854 Lacordaire: 200 (biology, catalog in French) >> as valid species
- 1859 Gebler: 459 (checklist)
- 1859b Motschulsky: 304
- 1863 Marseul: 88 (catalog in French)
- 1866 Marseul: 38 (catalog in French)
- 1868 Gemminger & Harold: 718 (catalog)
- 1868 Stein: 42 (catalog in Latin)
- 1874 Seidlitz: 215 (key in German)

- 1874 Solsky: 213 (checklist in Russian)
- 1876c Kraatz: 396 (in German)
- 1877 Stein & Weise: 61 (catalog in Latin)
- 1880 Heyden: 86 (checklist in German) >> as valid species
- 1883 Heyden et al.: 73 (checklist) >> as valid species
- 1884 Kraatz: 230 (descriptions in German) >> as valid species; compared to *N. nigerimus*
- 1884 Marseul: 185 (key, descriptions in French) >> suggests might be var. of *N. germanicus*
- 1884 Reitter: 86 (descriptions in German) >> as *Silpha morio*; as valid species
- 1885 Marseul: 169 (catalog in French)
- 1885 Reitter: 319 (in German)
- 1890 Jakovlev: 127 (descriptions in Russian) >> as *Necrophorus morio*; compared to *N. funebris* (as *N. morioni* Gebl.)
- 1891 Heyden et al.: 138 (checklist) >> as valid species
- 1893 Heyden: 51 (checklist in German) >> as valid species
- 1893 Reitter: 147 (key, descriptions in German) >> as valid species
- 1895b Reitter: 324 (description of variation in German) >> as valid species
- 1896 Heyden: 38 (checklist in German) >> as valid species
- 1906 Heyden et al.: 247 (checklist) >> as valid species
- 1910 Jakobson: 611 (checklist in Russian) >> as valid species
- 1914b Portevin: 224 (description of variation in French) >> as valid species
- 1916 Pasquet (description of variation in French)
- 1922 Sherborn: 4164 (catalog - index)
- 1923 Portevin: 229 (key, descriptions in French) >> as valid species
- 1925 Winkler: 263 (catalog) >> as valid species
- 1926a Portevin: 197 (revision: key, descriptions & catalog in French) >> as valid species
- 1927b Hatch: 355 (revision: key, descriptions & catalog) >> as valid species
- 1928 Hatch: 135 (catalog) >> as valid species
- 1929 Kôno: 164 (checklist, annotated) >> as valid species
- 1932 Hlisenkovsky: 25 (key, descriptions in German) >> as valid species
- 1933 Semenov-Tian-Shanskij: 155 (catalog in Russian & Latin) >> as *N. germanicus* subsp. *morio*
- 1933a Shchegoleva-Barovskaya: 175 (revision: key, descriptions & catalog in Russian) >> as *N. germanicus* subsp. *morio*
- 1953 Mazokhin-Porshnyakov: 236 (descriptions, catalog in Russian) >> as *N. germanicus* subsp. *morio*
- 1955b Nakane: 53 (key, descriptions in Japanese)
- 1964a Hlisenkovsky: 223 (key, descriptions in German) >> as valid species
- 1966a Mroczkowski: 333 (checklist) >> as *N. germanicus* subsp. *morio*
- 1969 Gersdorf: 305 (fossils, descriptions in German) >> as valid species but possible subsp. of *N. germanicus*
- 1970 Gersdorf: 366 (morphology: female genitalia in German) >> as valid species
- 1975a Emetz: 59 (checklist in German) >> as *N. germanicus* subsp. *morio*
- 1975b Emetz: 104 (checklist in Russian) >> as *N. germanicus* subsp. *morio*
- 1986 Nishikawa: 99 (catalog in Japanese (English summary)) >> as valid species

- 1992 Kozminykh: 64 (checklist in Russian) >> as *N. germanicus* subsp. *morio*
 1992 Kozminykh & Esjunin: 68 (checklist in Russian) >> as *N. germanicus* subsp. *morio*
 1993b Kozminykh: 63 (key, descriptions, regional in Russian) >> as *N. germanicus* subsp. *morio*
 1994 Kozminykh & Esjunin: 78 (biology, ecology in English (Russian summary)) >> as *N. germanicus* subsp. *morio*
 1995 Kozminykh: 109 (key in Russian) >> as *N. germanicus* subsp. *morio*
 1995 Kozminykh & Nemkov: 112 (catalog in Russian) >> as *N. germanicus* subsp. *morio*
 1996 Růžička & Schneider: 80 (checklist in English (Czech summary)) >> as *N. germanicus* subsp. *morio*
 2002 Nikolajev & Kozminykh: 106 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as *N. germanicus* subsp. *morio*

= *funnebris* Jakovlev, 1890 REVISED SYNONYM of *N. morio* Gebler

Type locality: “circa Urgam urbem”, [Ulaan Bator, Mongolia; descrip.] and “Ordos” [Ulan Balgas, Mongolia, 39.08N, 107.98E; label]

Type depository: ZMAS: St. Petersburg [!] holotype male

- 1890 Jakovlev: 127 (descriptions in Russian) >> Orig. comb.: *Necrophorus funnebris* [!N, S]
 1893 Heyden: 51 (checklist in German) >> as valid species
 1893 Reitter: 147 (key, descriptions in German) >> as *N. morio* var. *funnebris*
 1895b Reitter: 324 (description of variation in German) >> as *N. morio* var. *funnebris*
 1896 Heyden: 38 (checklist in German) >> as *N. morio* var. *funnebris*
 1910 Jakobson: 611 (checklist in Russian) >> as *N. morio* var. *funnebris*
 1914b Portevin: 224 (description of variation in French) >> as *N. morio* var. *funnebris*
 1923 Portevin: 230 (key, descriptions in French) >> as *N. morio* var. *funnebris*
 1925 Winkler: 263 (catalog) >> as *N. morio* ab. *funnebris*
 1926a Portevin: 197 (revision: key, descriptions & catalog in French) >> as *N. morio* var. *funnebris*
 1928 Hatch: 135 (catalog) >> as *N. morio* var. *funnebris*
 1933a Shchegoleva-Barovskaya: 175 (revision: key, descriptions & catalog in Russian) >> as *N. germanicus* subsp. *morio* ab. *funnebris*
 1975b Emetz: 104 (checklist in Russian) >> as syn. of *N. germanicus* subsp. *morio*
 1993b Kozminykh: 63 (key, descriptions, regional in Russian) >> as absolute syn. of *N. germanicus*
 1995 Kozminykh & Nemkov: 111 (catalog in Russian) >> as absolute syn. of *N. germanicus*

= *rugulipennis* Jakovlev, 1890 NEW SYNONYM of *N. morio* Gebler

Type locality: “prope urbem chinensen Kalgan” [Zhangjiakou; 125m. nw of Beijing; Hebei Prov., ne China; label]

Type depository: ZMAS: St. Petersburg [!] holotype female

- 1890 Jakovlev: 126 (descriptions in Russian) >> Orig. comb.: *Necrophorus rugulipennis* [!N, S]

- 1893 Heyden: 51 (checklist in German) >> as valid species
 1895b Reitter: 324 (description of variation in German) >> as valid species
 1896 Heyden: 38 (checklist in German) >> as valid species
 1910 Jakobson: 611 (checklist in Russian) >> as valid species
 1923 Portevin: 230 (key, descriptions in French) >> as valid species
 1925 Winkler: 263 (catalog) >> as valid species
 1926a Portevin: 198 (revision: key, descriptions & catalog in French) >> as valid species
 1927b Hatch: 355 (revision: key, descriptions & catalog) >> as valid species; specimens not seen by Hatch
 1928 Hatch: 136 (catalog) >> as valid species
 1932 Hlisnikovsky: 25 (key, descriptions in German) >> unknown to author
 1933 Semenov-Tian-Shanskij: 155 (catalog in Russian & Latin) >> as valid species
 1986 Nishikawa: 99 (catalog in Japanese (English summary)) >> as valid species
 1993b Kozminykh: 65 (key, descriptions, regional in Russian) >> as valid species

Comments: The name *Nicrophorus morio* has been treated as a valid species throughout most of its earlier history and as a subspecies of *N. germanicus* during most of its more recent history. This problem would be ideal for the application of molecular data to help establish how divergent these two taxa are. However, without such data, we base our decision to elevate this name to species rank on the following: *N. morio* is consistently diagnosable from *N. germanicus* based on the color of the epipleura which is black in *N. morio* and orange in *N. germanicus*, and on the row of setae near the humerus which is longer and has setae of equal length in *N. morio* but shorter and has setae of decreasing length in *N. germanicus*. Additionally, these two species' distributions overlap between 34° to 46°E longitude and 47° to 52°N latitude with no specimens from this region showing mixed character states indicative of gene flow between *N. morio* and *N. germanicus*.

The name *N. morio* var. *funebri* Jakovlev has been considered subordinate to *N. morio* throughout most of its history but with the more recent treatment of *N. morio* as a subspecies of *N. germanicus*, this name has been considered subordinate to *N. germanicus*. DSS has studied the type of *N. morio* var. *funebri* and it is *N. morio*, not *N. germanicus*.

The name *N. rugulipennis* Jakovlev has never been treated as anything but a valid species. However, DSS has studied the type, which is the only known specimen of this name, and although the elytra are unusually rugose for *N. morio*, it matches *N. morio* in all other respects and thus we herein synonymize it under *N. morio*.

***Nicrophorus nepalensis* Hope, 1831**

Type locality: "Nepaul" [Nepal; descrip.]

Type depository: BMNH: London [!] holotype male

Distribution: Oriental: nPakistan, Himalayas, Indonesia: Java, Flores, China, Laos, Burma, Malaysia, Japan: Ryukyu; Philippines, Taiwan, Thailand, Vietnam

1831 Hope: 21 (descriptions) >> Orig. comb.: *Nicrophorus Nepalensis* [!N, S]

1877 Harold: 346 (descriptions in German) >> "mainland relative of *N. maculifrons*"

- 1879 Dohrn: 459 (comment in German)
- 1887 Lewis: 339 (description) >> compared with *N. maculifrons*
- 1897 Reitter: 48 (description of variation in German)
- 1908 Heyne & Taschenberg: 38 (descriptions in German) >> brief description
- 1910 Jakobson: 612 (checklist in Russian)
- 1912 Fowler: 84 (comment) >> dorsal habitus figured
- 1916 Heller: 276 (in German) >> from Luzon Prov. Philippines, Benguet: Baguio
- 1920 Portevin: 399 (descriptions in French)
- 1922 Portevin: 55 (descriptions in French)
- 1922 Sherborn: 4291 (catalog - index)
- 1923 Bernet Kempers: 79 (morphology: wing venation in German) >> "Wing venation" -Hatch 1928
- 1923 Portevin: 307 (key, descriptions in French) >> description of variation: 1 unavailable name p. 308
- 1925 Winkler: 263 (catalog)
- 1926a Portevin: 208 (revision: key, descriptions & catalog in French)
- 1927b Hatch: 354 (revision: key, descriptions & catalog)
- 1928 Hatch: 129 (catalog)
- 1931 Miwa: 46 (catalog)
- 1932 Hlisnikovsky: 27 (key, descriptions in German)
- 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin)
- 1937 Wu (catalog)
- 1946b Arnett: 208 (descriptions) >> compared with *N. benguetensis*; female genitalia figured.
- 1950 Arnett: 66 (description)
- 1964b Hlisnikovsky: 244 (descriptions in German) >> description of variation: 1 unavailable name
- 1966b Mroczkowski: 325 (checklist)
- 1969 Hinton: 185 (morphology: diffraction gratings) >> focal species on iridescent morphology study
- 1969 Shibata: 53 (catalog) >> compared to *N. quadripunctatus*- no male genitalic differences found
- 1975 Emetz & Schawaller: 230 (checklist in German (English summary)) >> description of variation: 1 unavailable name
- 1977 Schawaller: 259 (checklist in German)
- 1982 Schawaller: 253 (checklist in German (English summary))
- 1985a Kurosawa: 247 (checklist) >> color habitus figure pl. 44
- 1986 Nishikawa: 98 (catalog in Japanese (English summary))
- 1990 Hanski & Niemelä: 149 (biology: ecology)
- 1991 Hanski & Krikken: 195 (biology: ecology)
- 1992 Zhang (checklist in Chinese (English summary))
- 1993b Kozminykh: 67 (key, descriptions, regional in Russian)
- 1993 Zhang (in Chinese (English summary))
- 1996 Růžička & Schneider: 81 (checklist in English (Czech summary))
- 1998 Harusawa: 35 (key in Japanese)
- 2000 Růžička et al.: 381 (descriptions)
- 2001 Peck: 94 (keys, descriptions and distributions)

- = *benguetensis* Arnett, 1946 NEW SYNONYM of *N. nepalensis* Hope
 Type locality: “Baguio, Mountain Province, Luzon Island, Philippines” [descrip. & label]
 Type depository: NMNH: Washington, D. C. [!] holotype female, allotype male, 5 paratypes [USNM, BMNH]
 1946b Arnett: 207 (descriptions) >> Orig. comb.: *Nicrophorus benguetensis* [!M, N, S]
 1950 Arnett: 67 (description) >> as valid species
 1986 Nishikawa: 98 (catalog in Japanese (English summary)) >> as valid species
 2001 Peck: 94 (keys, descriptions and distributions) >> as valid species
- = *ocellatus* Deyrolle & Fairmaire, 1878 CONFIRMED as SYNONYM of *N. nepalensis* Hope
 Type locality: not mentioned [in descr. nor on type labels]
 Type depository: MNHN: Paris [!] holotype female
 1878 Deyrolle & Fairmaire: 90 (descriptions in French) >> Orig. comb.: *Nicrophorus ocellatus* [!S]
 1903 Portevin: 331 (descriptions in French) >> as doubtfully valid
 1915 Schultze: 31 (checklist) >> as valid species
 1917a Pic: 2 (description of variation in French) >> as valid species
 1920 Portevin: 399 (descriptions in French) >> as valid species
 1922 Portevin: 56 (descriptions in French) >> as syn. of *N. nepalensis*
 1925 Winkler: 263 (catalog) >> as questionable syn. of *N. quadripunctatus*
 1926a Portevin: 253 (revision: key, descriptions & catalog in French) >> as syn. of *N. nepalensis*
 1928 Hatch: 129 (catalog) >> as syn. of *N. nepalensis*
 1982 Schawaller: 253 (checklist in German (English summary)) >> as syn. of *N. nepalensis*
 1993b Kozminykh: 67 (key, descriptions, regional in Russian) >> as syn. of *N. nepalensis*

Comments: Arnett (1946b) described *N. benguetensis* based on differences in punctuation density and the apparent shininess of the elytra, and differences in elytral setal color between the types of this species and *N. nepalensis*. We have studied the types of *N. benguetensis* at the USNM and the BMNH and noted that Arnett's diagnosable characters were not constant in all the type specimens. In some specimens the characters were identical to *N. nepalensis* and in others the states were the reverse of Arnett's description, e.g. some *N. benguetensis* were shinier than *N. nepalensis*. Nevertheless, in some specimens, Arnett's characters were apparent and could be used to sort specimens according to Arnett's concept. However, although the *N. benguetensis* population is clearly isolated from *N. nepalensis* s. str., being restricted to Luzon Island in the Philippines, the degree of the differences do not indicate that this island population is sufficiently distinct to warrant species rank.

Nicrophorus nigricornis Faldermann, 1835

Type locality: "Russia" [descrip.]

Type depository: ZMAS: St. Petersburg? [not found]

Distribution: Palearctic: Caucasus, Armenia, Azerbaijan, n. Iran, Turkey, Georgia

- 1833 Dejean: 118 (catalog in French) >> pre description; nomen nudum; auth. attrib. Dejean
- 1835a Faldermann: 217 (descriptions) >> Orig. comb.: *Nicrophorus nigricornis* [auth. attrib. Dejean] [!M, S]
- 1854 Lacordaire: 200 (biology, catalog in French)
- 1863 Marseul: 88 (catalog in French)
- 1866 Marseul: 38 (catalog in French)
- 1868 Gemminger & Harold: 719 (catalog)
- 1876d Kraatz: 397 (comment in German)
- 1877 Stein & Weise: 61 (catalog in Latin)
- 1877 Stierlin: 288 (in German)
- 1883 Heyden et al.: 73 (checklist)
- 1883 Reitter: 60 (comment in German) >> in Caucasus
- 1884 Marseul: 192 (key, descriptions in French) >> (considered separate from *N. sepulchralis*)
- 1884 Reitter: 88 (descriptions in German) >> as *Silpha nigricornis*
- 1885 Marseul: 169 (catalog in French)
- 1885 Reitter: 322 (in German)
- 1888 Seidlitz: 312 (key in German) >> misspelled as *Necrophagus nigricornis*
- 1889 Seidlitz: 329 (key in German) >> misspelled as *Necrophagus nigricornis*
- 1891 Heyden et al.: 139 (checklist) >> as *Nicrophorus nigricornis*
- 1895b Reitter: 329 (description of variation in German)
- 1899 Ganglbauer: 166 (key, descriptions, in German)
- 1901 Carret: 328 (description of variation in French) >> compared with *N. sepulchralis*
- 1902 Heyden: 12 (nomenclature in French)
- 1906 Heyden et al.: 247 (checklist)
- 1909 Reitter: 240 (in German)
- 1910 Jakobson: 612 (checklist in Russian)
- 1913 Kuhnt: 336 (in German)
- 1916 Pasquet: 175 (description of variation in French)
- 1922 Sherborn: 4338 (catalog - index)
- 1925 Portevin: 165 (description of variation in French)
- 1925 Winkler: 265 (catalog) >> *N. sepulchralis* not mentioned
- 1926 Porta: 333 (key, checklist in Italian)
- 1926a Portevin: 243 (revision: key, descriptions & catalog in French)
- 1927b Hatch: 363 (revision: key, descriptions & catalog) >> from Europe, Greece, Caucasus
- 1928 Hatch: 152 (catalog)
- 1929 Portevin: 540 (key, intraspecific variation in French)
- 1932 Hlisnikovskiy: 30 (key, descriptions in German) >> from Turkey
- 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin)
- 1933a Shchegoleva-Barovskaya: 179 (revision: key, descriptions & catalog in Russian)

- 1939 Roubal: 85 (description of variation in Czech (French summary))
 1949 Horion: 77 (biology, ecology, distribution in German)
 1955 Mroczkowski: 23 (key, descriptions in Polish)
 1965 Báguena: 51 (checklist in Spanish)
 1971 Freude: 194 (key in German)
 1985 Zahradník: 122 (catalog, annotated & figured in German)
 1986 Nishikawa: 98 (catalog in Japanese (English summary))
 1987 Lucht: 67 (catalog in German)
 1989 Koch: 165 (biology, ecology in German)
 1990 Zahradník: 122 (key in Spanish)
 1992 Kozminykh: 64 (checklist in Russian)
 1993b Kozminykh: 65 (key, descriptions, regional in Russian)
 1995 Angelini et al.: 10 (checklist, distribution in Italian)
 1998 Háva et al.: 179 (distribution note in English (Czech summary)) >> cites Hlisenikovsky (1932) record
 1999 Bertin & Lebboroni: 60 (checklist in Italian)
 1999 Háva et al.: 78 (key, descriptions)
 2002 Nikolajev & Kozminykh: 114 (catalog, distribution, descriptions, keys, figures in Russian (English summary))

Nicrophorus nigrita Mannerheim, 1843

Type locality: "California"[USA: descrip.]

Type depository: not MZHF: Helsinki (H. Silfverberg in litt.); not ZMAS : St. Petersburg (Gusarov in litt.) - lost?

Distribution: Nearctic: North America west of the Sierra Nevada mountains

- 1843 Mannerheim: 251 (descriptions in German) >> Orig. comb.: *Nicrophorus nigrita* [!S]
 1845a Motschulsky: 53 (descriptions in French) >> as valid species; compared to *N. guttula*
 1853 LeConte: 276 (descriptions) >> as valid species
 1853 Melsheimer: 39 (catalog) >> as valid species
 1854 Lacordaire: 200 (biology, catalog in French) >> as valid species
 1854 LeConte: 20 (descriptions) >> as valid species
 1859a LeConte: 69 (checklist)
 1868 Gemminger & Harold: 719 (catalog) >> as valid species
 1870 Motschulsky: 352 (descriptions in French) >> compares *N. plagiatus* Mots. to *N. nigrita*
 1873 Crotch: 37 (checklist) >> as *Silpha nigrita*
 1880 Austin: 16 (checklist) >> as *N. pustulatus* var. *nigrita*
 1880 Horn: 314 (revision: key, descriptions & catalog) >> as *N. pustulatus* (sensu Horn) var. *nigrita*
 1885 Henshaw: 26 (checklist) >> as *N. nigrinus*
 1897 Fall (checklist) >> recorded from Santa Rosa Isl., CA, USA
 1901 Fall: 13, 58 (checklist) >> as *N. pustulatus* var. *nigrinus*
 1908 Heyne & Taschenberg: 38 (descriptions in German)
 1910 Jakobson: 612 (checklist in Russian) >> as *N. pustulatus* var. *nigrita* Mann.

- 1920 Leng: 86 (catalog) >> as *N. pustulatus* subsp. *nigritus*
 1922 Sherborn: 4359 (catalog - index)
 1924 Portevin: 150 (key, descriptions in French) >> as *N. investigator* var. *nigrita*
 1925 Essig: 381 (comment)
 1925 Winkler: 264 (catalog) >> as *N. investigator* ab. *nigrita*
 1926a Portevin: 222 (revision: key, descriptions & catalog in French) >> *N. investigator* var. *nigrita*
 1927b Hatch: 357 (revision: key, descriptions & catalog) >> as *N. investigator* subsp. *nigritus*
 1927 Illingworth (biology, ecology) >> noted as feeding on maggots
 1928 Hatch: 141 (catalog) >> as *N. investigator* var. *nigrita*
 1933a Shchegoleva-Barovskaya: 187 (revision: key, descriptions & catalog in Russian) >> as absolute syn. of *N. investigator*
 1934 Hatch & Rueter: 159 (key, distribution, variation, descriptions) >> as *N. investigator* subsp. *nigritus*
 1936 Meserve: 133 (checklist, distribution) >> as *N. pustulatus* subsp. *nigritus*
 1937 Moore: 21 (checklist) >> as *N. pustulatus* var. *nigritus*
 1940 Hatch: 235 (description of variation) >> as *N. investigator* subsp. *nigritus*
 1940 Hatch: 235 (description of variation) >> as *N. investigator* subsp. *nigritus*
 1944 Arnett: 5, 15, 22 (morphology: female genitalia) >> as valid species; female genitalia figured, pl. 3, fig. 3
 1945 Hatch: 14 (distribution note) >> as valid species
 1945 Löding: 32 (checklist) >> locality data probably erroneous
 1946 Hatch: 99 (descriptions) >> agrees with Arnett's (1944) treatment as valid species
 1948 Clark: 27 (checklist) >> as *N. nigritus*
 1949 Bliss: 201 (morphology: sexual dimorphism) >> as valid species
 1949 Pierce: 67 (fossils, descriptions) >> as *N. investigator* subsp. *nigritus*
 1951 Jaques: 83 (key, descriptions) >> as *N. pustulatus* var. *nigrita*
 1958 Madge: 54 (revision: key, descriptions, ecology, distributions) >> as *N. investigator* subsp. *nigrita*
 1972 Swan & Papp: 356 (description) >> as *N. pustulatus* subsp. *nigritus*
 1973 Blackwelder: 5 (checklist, synonymy) >> as *N. nigritus*
 1975 Kirk & Balsbaugh: 52 (checklist) >> as *N. nigritus*
 1979 Miller & Peck: 95 (fossils) >> as valid species
 1979 Powell & Hogue: 272 (field guide)
 1980 Arnett et al.: 129 (key, descriptions) >> as *N. nigritus*
 1982a Anderson: 261 (key, descriptions, morphology, larval stages) >> as valid species
 1984 Papp: 70 (descriptions) >> brief description; as *N. pustulatus* subsp. *nigritus*
 1985 Anderson & Peck: 64 (revision: key, descriptions & catalog)
 1985 Miller & Miller: 25, 124 (biology, symbionts: mites, checklist) >> prob. host of *Poecilochirus pilosula* mites
 1985 Peck & Anderson: 268 (key, descriptions, phylogenetics)
 1986 Anderson & Peck: 283 (morphology: color variation)
 1987 Peck & Kaulbars: 53 (checklist)
 1990 Peck: 1122 (key)
 1991 Campbell: 86 (catalog, distribution)

- 1993 Peck & Miller: 8 (species-group catalog)
 1993 Sikes: 231-232 (description of variation) >> comment on variation
 1995 Navarrete-Heredia: 14 (biology, ecology, key in Spanish)
 1996 Hava: 167 (description of variation in English (Czech summary))
 1996 Palestirini et al.: 435 (larval descriptions, phylogenetics)
 1996 Sikes: 70-81 (biology, ecology) >> focal species
 2000 Navarrete-Heredia & Fierros-López: 407 (checklist, distribution in Spanish (English summary))
 2000 Sikes & Peck: 396 (descriptions, phylogenetics)
 2000 Szalanski et al.: 590 (biology, conservation, phylogenetics, genetics)
 2001 Navarrete-Heredia: 170 (checklist, distribution in Spanish)
 2001 Nishikawa: 81 (larval descriptions, phylogenetics in English (Japanese summary)) >> larva compared to *N. maculifrons*

= *alpha* Pierce, 1949 [fossil]

Type locality: "Pit A" [USA: California: Rancho La Brea; descrip.]

Type depository: LACM: Los Angeles

- 1949 Pierce: 67 (fossils, descriptions) >> Orig. comb.: *Nicrophorus investigator alpha* [fossil] [!N, S]
 1979 Miller & Peck: 95 (fossils) >> as syn. of *N. nigrita*; desig. lectotype
 1985 Anderson & Peck: 65 (revision: key, descriptions & catalog) >> as syn. of *N. nigrita*
 1993 Peck & Miller: 8 (species-group catalog) >> as absolute syn. of *N. nigrita*

= *ruficornis* Motschulsky, 1870

Type locality: "Californie" [USA: California; descrip.]

Type depository: ZMUM: Moscow

- 1870 Motschulsky: 352 (descriptions in French) >> Orig. comb.: *Nicrophorus ruficornis* [!N, S]
 1924 Portevin: 288 (key, descriptions in French) >> as valid species
 1927b Hatch: 359 (revision: key, descriptions & catalog) >> as *N. investigator* var. *ruficornis*; specimens not seen by Hatch
 1928 Hatch: 146 (catalog) >> Misidentification as *N. guttulus* ab. *ruficornis*
 1944 Arnett: 5 (morphology: female genitalia) >> as *N. nigritus* var. *ruficornis*; also as *N. guttula* subsp. *guttula* ab. *ruficornis*
 1985 Anderson & Peck: 65 (revision: key, descriptions & catalog) >> as syn. of *N. nigrita*
 1993 Peck & Miller: 8 (species-group catalog) >> as syn. of *N. nigrita*

Nicrophorus oberthuri Portevin, 1924

Type locality: "Yunnan" [Yunnan Province, China; label]

Type depository: MNHN: Paris [!] holotype female

Distribution: Palearctic: China: Yunnan, Shaanxi, Qinghai, Sichuan; nBurma

- 1924 Portevin: 187 (key, descriptions in French) >> Orig. comb.: *Nicrophorus Oberthuri* [!N, S]

- 1925 Winkler: 264 (catalog)
 1926a Portevin: 225 (revision: key, descriptions & catalog in French)
 1930 Kieseritzky: 63 (descriptions in Russian (German summary))
 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin)
 1986 Nishikawa: 98 (catalog in Japanese (English summary))
 1993b Kozminykh: 67 (key, descriptions, regional in Russian)

= *burmanicus* Hlisnikovsky, 1964 NEW SYNONYM of *N. oberthuri* Portevin

Type locality: “Adung Valley, Nord Burma, 12,000 feet” [label]

Type depository: BMNH: London [!] 2 (or more) syntypes

- 1964a Hlisnikovsky: 223 (key, descriptions in German) >> Orig. comb.: *Necrophorus*
 (*Necrophorus*) *burmanicus* [!N, S]
 1982 Schawaller: 256 (checklist in German (English summary)) >> as valid species
 1986 Nishikawa: 99 (catalog in Japanese (English summary)) >> as valid species
 1993b Kozminykh: 63 (key, descriptions, regional in Russian) >> as valid species
 2002 Nikolajev & Kozminykh: 111 (catalog, distribution, descriptions, keys, figures in
 Russian (English summary)) >> as valid species, compared with *N. lunatus*

= *unifasciatus* Hlisnikovsky, 1964 NEW SYNONYM of *N. oberthuri* Portevin

Type locality: “Tasienu-Kiulung China” [Kangding; 30.00°N, 102.04° E; label]

Type depository: NMPC: Praha [!] holotype male

- 1964a Hlisnikovsky: 224 (key, descriptions in German) >> Orig. comb.: *Necrophorus*
 (*Necrophorus*) *unifasciatus* [!N, S]
 1986 Nishikawa: 99 (catalog in Japanese (English summary)) >> as valid species
 1993b Kozminykh: 63 (key, descriptions, regional in Russian) >> as valid species
 1996 Růžička & Schneider: 81 (checklist in English (Czech summary)) >> as valid
 species
 2002 Nikolajev & Kozminykh: 111 (catalog, distribution, descriptions, keys, figures in
 Russian (English summary)) >> as valid species, compared with *N. lunatus*

Comments: Hlisnikovsky (1964a) showed no indication that he was aware of Portevin's *N. oberthuri* when he described two new unifasciate species of *Nicrophorus*. He compared his two new species, which differed apparently in aspects of their pygidial pubescence, to another unifasciate *Nicrophorus*, *N. lunatus* Fisch. – a species not closely related to *N. oberthuri*. We have studied the types of both of Hlisnikovsky's *N. burmanicus* and *N. unifasciatus* and they agree in all critical respects with the holotype of *N. oberthuri* in the Paris museum (which itself bore a determination label of *N. unifasciatus*!)

***Nicrophorus obscurus* Kirby, 1837**

Type locality: “N. amer.”[label] “from New York to Cumberland-House”[descrip]

Type depository: BMNH: London [!] holotype female

Distribution: Nearctic: northeastern Rocky mountains

- 1837 Kirby: 97 (descriptions) >> Orig. comb.: *Nicrophorus obscurus* [!N, S]
 1853 LeConte: 275 (descriptions) >> missidentified as *N. Melsheimeri*

- 1853 Melsheimer: 39 (catalog)
 1854 Lacordaire: 200 (biology, catalog in French)
 1866a LeConte: 367 (nomenclature) >> suggests does not differ from *N. Melsheimeri*
 1868 Gemminger & Harold: 719 (catalog)
 1870 LeConte: 398 (nomenclature) >> notes prior misid of this sp. as *N. melsheimeri*
 1873 Crotch: 37 (checklist) >> as *Silpha obscura*
 1878a Hubbard & Schwarz: 632 (checklist)
 1880 Horn: 231 (revision: key, descriptions & catalog)
 1885 Henshaw: 26 (checklist)
 1910 Barkowski: 80 (key, descriptions, regional in German)
 1911 Wickham: 10 (checklist)
 1920 Leng: 86 (catalog)
 1922 Sherborn: 4491 (catalog - index)
 1924 Portevin: 86 (key, descriptions in French)
 1925 Hatch & Angell: 216 (descriptions) >> compared with *N. hybridus*
 1926a Portevin: 215 (revision: key, descriptions & catalog in French)
 1927a Hatch: 5, 7, 19 (key, descriptions, description of variation)
 1927b Hatch: 360 (revision: key, descriptions & catalog) >> description of variation: 2
 unavailable names
 1928 Hatch: 147 (catalog)
 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin)
 1934 Hatch & Rueter: 158 (key, distribution, variation, descriptions)
 1936 Meserve: 132 (checklist, distribution)
 1944 Arnett: 6, 24 (morphology: female genitalia) >> female genitalia figured, pl. 4,
 fig. 5
 1947 Arnett: 110 (catalog) >> notes that LeConte 1870 misidentified this sp. as *N.*
 melsheimeri
 1958 Madge: 67 (revision: key, descriptions, ecology, distributions)
 1973 Blackwelder: 6 (checklist, synonymy)
 1975 Baldwin: 25 (key, description, distribution, ecology)
 1975 Kirk & Balsbaugh: 52 (checklist)
 1982a Anderson: 258 (key, descriptions, morphology, larval stages)
 1985 Anderson & Peck: 65 (revision: key, descriptions & catalog)
 1985 Peck & Anderson: 287 (key, descriptions, phylogenetics)
 1986 Nishikawa: 98 (catalog in Japanese (English summary))
 1987 Peck & Kaulbars: 54 (checklist)
 1990 Peck: 1122 (key)
 1991 Campbell: 86 (catalog, distribution)
 1993 Peck & Miller: 8 (species-group catalog)
 1996 Ratcliffe: 76 (revision: key, descriptions & catalog)
 1997 Backlund & Marrone: 56 (biology, conservation)
 1999 Bedick et al.: 177 (biology, conservation)
 2000 Sikes & Peck: 395 (descriptions, phylogenetics)

***Nicrophorus olidus* Matthews, 1888**

Type locality: "Mexico, Cordova" [28°46'N, 110°20'W; label]

Type depository: BMNH: London [!] holotype female

Distribution: Nearctic: n Mexico; Neotropical: Mexico, Honduras*

- 1888 Matthews: 92 (description) >> Orig. comb.: *Necrophorus olidus*; auth. attrib. Chevrolat [!N, S]
- 1924 Portevin: 376 (key, descriptions in French)
- 1926a Portevin: 239 (revision: key, descriptions & catalog in French)
- 1927b Hatch: 353 (revision: key, descriptions & catalog)
- 1928 Hatch: 129 (catalog)
- 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin)
- 1944 Blackwelder: 100 (catalog)
- 1973 Blackwelder: 6 (checklist, synonymy)
- 1985 Peck & Anderson: 269 (key, descriptions, phylogenetics)
- 1986 Nishikawa: 98 (catalog in Japanese (English summary))
- 1995 Navarrete-Heredia: 12 (biology, ecology, key in Spanish)
- 1996 Halffter et al.: 162 (biology, ecology)
- 1997 Deloya: 39 (biology, ecology in Spanish)
- 1998 Arellano: 9 (checklist, distribution in Spanish)
- 1998 Navarrete-Heredia & Fierros-López: 49 (distribution note in Spanish)
- 1998 Rivera-Cervantes & García-Real: 14 (biology, ecology in Spanish)
- 2000 Navarrete-Heredia & Quiroz-Rocha: 4 (biology, ecology, distribution in Spanish)
- 2000 Navarrete-Heredia & Fierros-López: 407 (checklist, distribution in Spanish (English summary)) >> distribution and habitat notes
- 2000 Sikes & Peck: 395 (descriptions, phylogenetics)
- 2001 Burgos Solorio & Trejo-Loyo: 94 (checklist in Spanish)
- 2001 Fierros-Lopez & Navarrete-Heredia: 45-46 (biology, ecology)
- 2001 Navarrete-Heredia: 170 (checklist, distribution in Spanish)

= *quadricollis* Gistel, 1848

Type locality: "Mexico" [descrip.]

Type depository: ZSMC: München? [lost?]

- 1848 Gistel: 190 (descriptions in German) >> Orig. comb.: *Necrophorus quadricollis*
- 1857b Gistel: 565 (in German) >> described as new
- 1917 Strand: 83 (descriptions in German) >> as *nomen dubium*
- 1928 Hatch: 153 (catalog) >> *Incertae sedis*
- 1944 Blackwelder: 100 (catalog) >> as valid species
- 1973 Blackwelder: 6 (checklist, synonymy) >> as valid species

Gistel's description of the Mexican *N. quadricollis* matches *N. olidus* of Matthews more than the few alternatives (*N. mexicanus*, *N. marginatus*, *N. quadrimaculatus*). Unfortunately, the Gistel name is older, and thus would have priority over the Matthews name but is apparently without a type and has never been used as the senior to *N. olidus*. The Matthews name does not fit the criteria of the ICZN 23.9.1.1. to be made a *nomen protectum* so we will request the Commission of the ICZN preserve stability and retain *N. olidus* as the valid name. The ICZN (23.9.3) states that while such a case is under consideration "use of the junior name is to be maintained."

Nicrophorus orbicollis Say, 1825

Type locality: "N.W. Territory" [USA; Minnesota, Wisconsin, Illinois, Michigan, Indiana, or Ohio; descrip. no data on type]

Type depository: MCZC: Cambridge [!] neotype female

Distribution: Nearctic: North America east of the Rocky Mountains

- 1825 Say: 177 (description) >> Orig. comb.: *Nicrophorus orbicollis* [!M, N, S]
1853 LeConte: 277 (descriptions)
1853 Melsheimer: 39 (catalog) >> misspelled *N. orbicularis*
1854 Lacordaire: 200 (biology, catalog in French)
1859c LeConte: 37 (checklist)
1868 Gemminger & Harold: 719 (catalog)
1873 Crotch: 37 (checklist) >> as *Silpha orbicollis*
1877 Harold: 345 (descriptions in German) >> compared with *N. japonicus*
1877 Provancher: 225 (in French)
1878a Hubbard & Schwarz: 632 (checklist)
1878b Hubbard & Schwarz: 650 (checklist)
1878 Schwarz: 443 (checklist)
1880 Horn: 230 (revision: key, descriptions & catalog)
1885 Henshaw: 26 (checklist)
1895 Clark: 61 (biology, behavior)
1895 Hamilton: 324 (checklist)
1902 Dury: 12 (checklist)
1904 Davis: 18 (checklist)
1908 Houghton: 120-121 (biology, behavior) >> observation of stridulation & fighting for carcass
1910 Barkowski: 79 (key, descriptions, regional in German)
1910 Blatchley: 275 (key, descriptions, regional)
1910 Smith: 229 (checklist)
1911 Wickham: 10 (checklist)
1915 Frost: 209 (biology, ecology)
1915 Jaques: 526 (biology, ecology)
1920 Britton: 224 (checklist)
1920 Leng: 86 (catalog)
1922 Sherborn: 4595 (catalog - index)
1924 Hatch: 560 (checklist)
1927b Abbott: 208-216 (biology, behavior)
1927c Abbott: 552 (biology, behavior) >> focal species
1927a Hatch: 5, 7, 19 (key, descriptions, description of variation)
1927b Hatch: 353 (revision: key, descriptions & catalog)
1927 Steele: 77 (biology, behavior)
1928 Hatch: 128 (catalog)
1928 Leonard: 271 (checklist)
1929 Frost & Dietrich (biology, ecology)
1930 Johnson: 44 (checklist)
1932 Jones: 352 (biology, ecology) >> not accepted as prey by birds in tests
1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin)

- 1933 Wolcott & Montgomery: 131 (comment: ecology)
 1935 Balduf: 70 (biology, ecology, behavior)
 1936 Abbott: 37-39 (biology, ecology)
 1936 Meserve: 133 (checklist, distribution)
 1937 Abbott (biology, behavior)
 1938 Brimley: 135 (checklist)
 1944 Arnett: 3, 20 (morphology: female genitalia) >> female genitalia figured, pl. 2, fig. 9
 1944 Milne & Milne: 311 (biology, behavior)
 1945 Löding: 32 (checklist)
 1946 Procter: 121 (checklist, ecology)
 1948 Clark: 27 (checklist)
 1949 Bliss: 201 (morphology: sexual dimorphism)
 1949 Hoffmann et al.: 10 (comment: ecology) >> eliminated from area sprayed with DDT, 1 year later
 1951 Jaques: 83 (key, descriptions)
 1957 Walker: 273 (biology, ecology)
 1958 Madge: 34 (revision: key, descriptions, ecology, distributions)
 1958 Reed: 232 (biology, ecology)
 1961 Dillon & Dillon: 175 (key, descriptions)
 1961 Robertson: 248 (morphology: ovaries) >> 12 ovarioles per ovary
 1964 Frost (biology, ecology)
 1966 Payne & Crossley: 56 (biology, ecology)
 1968a Shubeck: 565 (methods)
 1968b Shubeck: 256 (biology, behavior)
 1969 Shubeck: 143 (biology, ecology)
 1970 Kirk: 25 (checklist)
 1970 Payne & King: 230 (biology, ecology)
 1970 Shubeck: 67 (biology, ecology)
 1971 Shubeck: 43 (biology, behavior)
 1973 Blackwelder: 3 (checklist, synonymy)
 1974 Pirone: 658 (biology, ecology)
 1975 Baldwin: 21 (key, description, distribution, ecology)
 1975 Kirk & Balsbaugh: 52 (checklist)
 1975 Shubeck: 37 (biology, behavior)
 1976 Milne & Milne: 88 (popular review)
 1976 Shubeck: 267 (biology, ecology)
 1977 Headstrom: 106 (description)
 1977 Shubeck et al.: 13 (biology, ecology)
 1979 Miller & Peck: 98 (fossils)
 1980 Arnett et al.: 128 (key, descriptions)
 1980 Wallace & Fox: 619 (morphology: wing venation) >> hind wing figured
 1981 Kozol: 12 (biology, conservation, genetics)
 1981 Shubeck et al.: 14 (biology, ecology)
 1982a Anderson: 262 (key, descriptions, morphology, larval stages)
 1982c Anderson: 1316 (biology, ecology)
 1982 Peck & Miller: 153 (nomenclature) >> desig. neotype

- 1982 Shubeck & Blank (biology, ecology)
- 1982 Wilson: 293-296 (biology, symbionts: mites) >> focal species
- 1983 Lago & Miller: 85 (checklist)
- 1983 Wilson: 858-870 (biology, symbionts: mites) >> focal species
- 1984 Shubeck (biology, ecology)
- 1984 Shubeck & Schleppek (biology, ecology)
- 1984 Wilson & Fudge: 195-203 (biology, ecology) >> focal species
- 1984 Wilson & Knollenberg: 165-170 (biology, behavior, physiology) >> focal species
- 1984 Wilson et al.: 205-216 (biology, ecology) >> focal species
- 1985 Anderson & Peck: 66 (revision: key, descriptions & catalog)
- 1985 Peck & Anderson: 273 (key, descriptions, phylogenetics)
- 1985 Shubeck: 164 (biology, ecology)
- 1986 Nishikawa: 98 (catalog in Japanese (English summary))
- 1987 Peck & Kaulbars: 52 (checklist)
- 1987 Staines: 16 (key, descriptions) >> Maryland records
- 1987 Wilson & Knollenberg: 139-159 (biology, symbionts: mites) >> focal species
- 1988a Bartlett: 123 (biology, symbionts: mites)
- 1988 Scott et al.: 325-331 (biology, ecology) >> focal species
- 1989 Kozol et al.: 170 (biology, conservation)
- 1989 Scott: 133-137 (biology, behavior) >> focal species
- 1989 Scott & Traniello: 32-36 (popular review) >> focal species
- 1989 Staines: 69 (key, descriptions, distributions) >> Maryland records
- 1990 Fetherston et al. (biology, behavior)
- 1990 Peck: 1123 (key)
- 1990 Scott: 31-39 (biology, behavior) >> focal species
- 1990 Scott & Traniello: 274-283 (biology, ecology, behavior) >> focal species
- 1990a Trumbo: 347-355 (biology, ecology) >> focal species
- 1990b Trumbo: 269-273 (biology, behavior) >> focal species
- 1990c Trumbo: 1-11 (biology, behavior) >> focal species
- 1991 Campbell: 86 (catalog, distribution)
- 1991 Laplante et al.: 29 (checklist in French)
- 1991 Newton: 340 (morphology, larval stages) >> larva habitus illustrated
- 1991 Raithel: 2 (biology, conservation)
- 1991 Trumbo: 82-105 (biology, behavior) >> focal species
- 1991 Trumbo & Fiore: 637-642 (biology, genetics) >> focal species
- 1992 Beninger & Peck: 79-86 (biology, ecology)
- 1992 Brown & Wilson: 463-478 (biology, symbionts: mites) >> focal species
- 1992b Creamer: 5-8 (biology)
- 1992 Muths: 447-450 (biology, ecology) >> focal species
- 1992 Robertson: 191 (biology, ecology)
- 1992 Trumbo: 289-298 (biology, behavior) >> focal species
- 1993 Creighton et al.: 276 (biology, conservation)
- 1993 Peck & Miller: 8 (species-group catalog)
- 1993 Robertson: 583-593 (biology, behavior) >> focal species
- 1993 Scott & Gladstein: 362-378 (biology, behavior) >> focal species
- 1993 Shubeck: 89 (biology, ecology)
- 1993 Trumbo & Wilson: 332-339 (biology, behavior) >> focal species

- 1994 Beninger: 135-143 (biology, ecology in English (French summary))
- 1994 Berdela et al.: 49 (biology, symbionts: bacteria) >> gut bacteria
- 1994 Brown & Wilson: 3 (biology, symbionts: mites) >> focal species
- 1994 Dunn (biology, behavior)
- 1994 Fetherston et al.: 777-785 (biology, behavior) >> focal species
- 1994 Kozol et al.: 928-935 (biology, conservation, genetics) >> genetic variation compared to *N. americanus*
- 1994 Neal et al.: 128 (checklist)
- 1994a Scott: 367-373 (biology, ecology, behavior) >> focal species
- 1994b Scott: 537-543 (biology, behavior) >> focal species
- 1994 Trumbo: 241-249 (biology, behavior) >> focal species
- 1995 Eggert & Sakaluk: 150 (biology, behavior)
- 1995 Lingafelter: 220 (biology, ecology)
- 1995 Lomolino et al.: 609 (biology, conservation in English (Spanish summary))
- 1995 Matthews (biology, conservation)
- 1995 Robertson: 418-420 (biology, behavior) >> focal species
- 1995 Trumbo: 125-130 (biology, behavior) >> focal species
- 1995 Trumbo & Fernandez: 313-322 (biology, behavior) >> focal species
- 1995 Trumbo et al.: 535-543 (biology, behavior, physiology) >> focal species
- 1996 Downie & Arnett: 356 (key, descriptions, regional)
- 1996 Dunn: 169 (catalog)
- 1996 Lomolino & Creighton: 238 (biology, conservation)
- 1996 Ratcliffe: 77 (revision: key, descriptions & catalog)
- 1996 Scott: 378 (popular review)
- 1996a Trumbo: 14-16 (biology, behavior)
- 1997 Amaral et al.: 128 (biology, conservation)
- 1997 Backlund & Marrone: 56 (biology, conservation)
- 1997 Eggert & Müller: 224 (biology, review of: ecology, behavior)
- 1997 King & Cummings: 1088-1095 (biology, genetics)
- 1997 Trumbo: 479-490 (biology, behavior, physiology) >> focal species
- 1998 Carlton & Rothwein: 183 (biology, conservation)
- 1998 Coyle & Larsen: 163 (biology, ecology)
- 1998 Eggert et al.: 105 (biology, behavior)
- 1998 Peck & Thomas: 37 (checklist, distribution)
- 1998a Scott: 597-603 (biology, behavior) >> focal species
- 1998b Scott: 598+ (biology, review of: ecology, behavior)
- 1998 Trumbo & Thomas: 85-95 (biology, ecology) >> focal species
- 1999 Bedick et al.: 177 (biology, conservation)
- 1999 Beeler et al.: 578-584 (biology, behavior) >> focal species
- 1999 Rauter & Moore: 1691-1696 (biology, ecology, behavior) >> focal species
- 2000 Eggert & Sakaluk: 263 (biology, behavior)
- 2000 Safryn & Scott: 291-297 (biology, behavior) >> focal species
- 2000 Sikes & Peck: 393 (descriptions, phylogenetics)
- 2000 Szalanski et al.: 590 (biology, conservation, phylogenetics, genetics)
- 2000 Trumbo & Sikes: 585-589 >> focal species
- 2000 Trumbo & Bloch: 247 (biology, ecology, conservation)
- 2000 Werner & Raffa: 144 (comment: ecology)

- 2001 Scott et al.: 295-302 (biology, behavior, physiology) >> focal species
 2001 Trumbo et al.: 552 (biology, ecology, behavior) >> compared changes in ovarian mass with *P. morio*

= *hallii* Kirby, 1837 CONFIRMED as SYNONYM of *N. orbicollis* Say

Type locality: “Nova Scotia” and “Massachusetts” [descrip.]

Type depository: BMNH: London [!] 2 (or more) syntypes

- 1837 Kirby: 98 (descriptions) >> Orig. comb.: *Necrophorus Hallii* [!N, S]
 1853 LeConte: 277 (descriptions) >> as syn. of *N. orbicollis*
 1853 Melsheimer: 39 (catalog) >> as valid but possible syn. of *N. orbicollis* [misspelled *N. orbicularis*]
 1854 Lacordaire: 200 (biology, catalog in French) >> as syn. of *N. orbicollis*
 1859c LeConte: 37 (checklist) >> as syn. of *N. orbicollis*
 1868 Gemminger & Harold: 719 (catalog) >> as syn. of *N. orbicollis*
 1873 LeConte: 327 (nomenclature) >> as syn. of *N. orbicollis*
 1920 Leng: 86 (catalog) >> as syn. of *N. orbicollis*
 1924 Portevin: 189 (key, descriptions in French) >> as valid species
 1926a Portevin: 242 (revision: key, descriptions & catalog in French) >> as valid species
 1928 Hatch: 128 (catalog) >> as syn. of *N. orbicollis*
 1944 Arnett: 3 (morphology: female genitalia) >> as syn. of *N. orbicollis*
 1970 Gersdorf: 368 (morphology: female genitalia in German) >> as valid species
 1985 Anderson & Peck: 66 (revision: key, descriptions & catalog) >> as syn. of *N. orbicollis*
 1993 Peck & Miller: 8 (species-group catalog) >> as syn. of *N. orbicollis*
 1996 Ratcliffe: 77 (revision: key, descriptions & catalog) >> as syn. of *N. orbicollis*

= *quadrisignatus* Laporte, 1840

Type locality: “Amérique du Nord” [North America; descrip.]

Type depository: unknown

- 1840 Laporte: 1 (descriptions in French) >> Orig. comb.: *Necrophorus 4-signatus* [!N, S]
 1854 Lacordaire: 200 (biology, catalog in French) >> as valid species
 1868 Gemminger & Harold: 719 (catalog) >> as valid species
 1920 Leng: 86 (catalog) >> as syn. of *N. orbicollis*
 1926a Portevin: 259 (revision: key, descriptions & catalog in French) >> as syn. of *N. Halli* (as *N. quadrisignatus* Cast.)
 1928 Hatch: 128 (catalog) >> assyn. of *N. orbicollis* (as *N. quadrisignatus* Cast.)
 1944 Arnett: 3 (morphology: female genitalia) >> as syn. of *N. orbicollis*
 1985 Anderson & Peck: 66 (revision: key, descriptions & catalog) >> as syn. of *N. orbicollis*
 1993 Peck & Miller: 8 (species-group catalog) >> as syn. of *N. orbicollis* (as *N. quadrisignatus* Laporte)
 1996 Ratcliffe: 77 (revision: key, descriptions & catalog) >> as syn. of *N. orbicollis*

Nicrophorus podagricus Portevin, 1920 desig. lectotype

Type locality: "Bornéo," [Malaysia, label]

Type depository: MNHN: Paris [!] lectotype male, 6 paralectotypes

Distribution: Oriental: Borneo

- 1920 Portevin: 400 (descriptions in French) >> Orig. comb.: *Nicrophorus* (*Nicrophorus*) *podagricus* [!N, S]
- 1922 Portevin: 55 (descriptions in French)
- 1923 Portevin: 308 (key, descriptions in French)
- 1926a Portevin: 209 (revision: key, descriptions & catalog in French)
- 1926b Portevin: 211 (descriptions in French) >> compared to *N. Heurni*
- 1927b Hatch: 354 (revision: key, descriptions & catalog)
- 1928 Hatch: 129 (catalog)
- 1933 Semenov-Tian-Shanskij: 153 (catalog in Russian & Latin) >> as type sp. of new subgenus *Nesonicrophorus*
- 1933a Shchegoleva-Barovskaya: 166 (revision: key, descriptions & catalog in Russian) >> as *Nicrophorus* (*Nesonicrophorus*) *podagricus*, in key
- 1969 Hinton: 186 (morphology: diffraction gratings) >> has iridescent morphology
- 1980 Madge: 357 (catalog)
- 1985 Peck & Anderson: 274 (key, descriptions, phylogenetics)
- 1986 Hanski & Hammond: 4 (biology, ecology)
- 1986 Nishikawa: 99 (catalog in Japanese (English summary))
- 1990 Hanski & Niemelä: 149 (biology: ecology)
- 1991 Hanski & Krikken: 195 (biology: ecology)
- 1997 Kikuta et al.: 125 (biology, ecology) >> 224 adults in carrion traps, 2 in dung traps
- 2000 Růžička et al.: 381 (descriptions)
- 2001 Peck: 94 (keys, descriptions and distributions)

= *nigrifrons* Portevin, 1922 NEW STATUS as absolute syn. of *N. podagricus*
Portevin

Type locality: "Kina Balu" [Malaysia: Borneo; label]

Type depository: MNHN: Paris [!] holotype male

- 1922 Portevin: 56 (descriptions in French) >> Orig. comb.: *Nicrophorus podagricus* var. *nigrifrons* [!N, S]
- 1923 Portevin: 308 (key, descriptions in French) >> as *N. podagricus* var. *nigrifrons*
- 1926a Portevin: 209 (revision: key, descriptions & catalog in French) >> as *N. podagricus* var. *nigrifrons*
- 1928 Hatch: 129 (catalog) >> as *N. podagricus* var. *nigrifrons*

Comments: Lectotype data for *Nicrophorus podagricus* Portevin, 1920: 400 "co-type";/ "Acquis de Portevin" [Pic/Port coll. MNHN]/ BORNEO: / red rectangular label with double black border "LECTOTYPE *Nicrophorus podagricus* (Portevin 1920) det. Sikes 1997" - male (Paris [MNHN]); pronotal width: 6.12 mm.

Paralectotype data "N. *podagricus* Port." / red label: "PARATYPE" designated by Madge, according to the type list. / [MALAYSIA]: Kina Balu, elev. 8 m, [5.98° ' N,

116.07° ' E,](coll. Waterstradt) / red rectangular label with double black border “PARALECTOTYPE *Nicrophorus podagricus* (Portevin 1920) det. Sikes 1997” – 2 males, 2 females (Paris [MNHN]); “*N. podagricus* Port.” / red label: "TYPE" "MUSEUM PARIS Coll. A. GROUVELLE 1915" "MUSÉUM PARIS Coll. M. Pic" [Pic/Port coll. MNHN] / [MALAYSIA]: Kina Balu, elev. 8 m, [5.98° ' N, 116.07° ' E,](coll. Waterstradt) / red rectangular label with double black border “PARALECTOTYPE *Nicrophorus podagricus* (Portevin 1920) det. Sikes 1997” - male (Paris [MNHN]); “*Nicrophorus* [sic] *podagricus* m.” / "co-type" "Acquis de Portevin" "MUSÉUM PARIS Coll. M. Pic" [Pic/Port coll. MNHN] / BORNEO: / red rectangular label with double black border “PARALECTOTYPE *Nicrophorus podagricus* (Portevin 1920) det. Sikes 1997” - female (Paris [MNHN]).

Nicrophorus przewalskii Semenov-Tian-Shanskij, 1894 desig. lectotype

Type locality: “Ganq-su” [c China: Gansu Prov.; label]

Type depository: ZMAS: St. Petersburg [!] lectotype male

Distribution: Palearctic: China: Sichuan, Gansu, Qinghai

- 1894 Semenov-Tian-Shanskij: 528 (description in Latin) >> Orig. comb.: *Nicrophorus przewalskii* [!S]
- 1895b Reitter: 328 (description of variation in German)
- 1896 Heyden: 38 (checklist in German)
- 1910 Jakobson: 612 (checklist in Russian)
- 1922 Portevin: 54 (descriptions in French) >> compared to *N. armeniacus*
- 1923 Portevin: 232 (key, descriptions in French)
- 1925 Winkler: 263 (catalog)
- 1926a Portevin: 200 (revision: key, descriptions & catalog in French)
- 1926 Semenov-Tian-Shanskij: 46 (descriptions in Latin) >> as *Necroxenus przewalskii*
- 1927b Hatch: 354 (revision: key, descriptions & catalog) >> as *Nicrophorus przewalskyi*; specimens not seen by Hatch
- 1928 Hatch: 132 (catalog) >> as *Nicrophorus przewalskyi*
- 1932 Hlisnikovsky: 26 (key, descriptions in German) >> as *Nicrophorus przewalskyi*
- 1933 Semenov-Tian-Shanskij: 150 (catalog in Russian & Latin) >> as type sp. of genus *Necroxenus* Sem.
- 1933a Shchegoleva-Barovskaya: 164 (revision: key, descriptions & catalog in Russian) >> as *Necroxenus przewalskii*, in key
- 1933b Shchegoleva-Barovskaya: 251 (descriptions in Russian) >> as *Necroxenus przewalskii*
- 1937 Wu (catalog)
- 1964b Hlisnikovsky: 242 (descriptions in German) >> as *Nicrophorus przewalskii*; compared to *N. tibetanus*
- 1969 Gersdorf: 305 (fossils, descriptions in German)
- 1980 Madge: 356 (catalog)
- 1986 Nishikawa: 99 (catalog in Japanese (English summary))
- 1996 Růžička & Schneider: 80 (checklist in English (Czech summary))

- 1999 Háva et al.: 76 (key, descriptions) >> compared to *N. smefarka*
 2000 Sikes & Peck: 396 (descriptions, phylogenetics)

Comments: Lectotype data for *Nicrophorus przewalskii* Semenov-Tian-Shanskij, 1894 "Nicrophorus Przewaskii m. typ. [male symbol] A. Semenow det."; /"Nicrophorus przewalskii"/ [only type specimen found in ZMAS- orig. descr. indicates another exists, but were not found, thus we designate the found specimen the lectotype]; "Collection the Zoological Institute, Academy of Sciences, St. Petersburg, Russia"; /gold foil circle label; / [CHINA]: [Gansu prov.], "Ganq-su", 1-31 August 1872 (coll. N. Przewalsky) / red rectangular label with double black border "LECTOTYPE *Nicrophorus przewalskii* Semenov-Tian-Shanskij, 1894 Det. D. S. Sikes 2001 ZMAS70116Nic" - male (St. Petersburg [ZMAS]); pronotal width: 7.90 mm.

***Nicrophorus pustulatus* Herschel, 1807**

Type locality: "aus NordAmerika" [descrip.]

Type depository: ZMHB: Berlin ?

Distribution: Nearctic: eastern through northeastern & north central North America

- 1807 Herschel: 271 (descriptions in German) >> Orig. comb.: *Nicrophorus pustulatus*; described in footnote [!N, S]
 1853 LeConte: 276 (descriptions)
 1853 Melsheimer: 39 (catalog) >> auth. attrib. Illiger
 1854 Lacordaire: 200 (biology, catalog in French)
 1859c LeConte: 37 (checklist)
 1868 Gemminger & Harold: 719 (catalog)
 1873 Crotch: 37 (checklist) >> as *Silpha pustulata*
 1877 Provancher: 225 (in French)
 1878b Hubbard & Schwarz: 650 (checklist)
 1880 Horn: 233 (revision: key, descriptions & catalog)
 1885 Henshaw: 26 (checklist)
 1895 Hamilton: 324 (checklist)
 1903 Portevin: 330 (descriptions in French) >> as *N. pustulatus* var. *Melsheimeri* (maritimus Guér.)
 1905 Davis: 13 (checklist)
 1910 Barkowski: 80 (key, descriptions, regional in German)
 1910 Blatchley: 275 (key, descriptions, regional)
 1910 Jakobson: 612 (checklist in Russian)
 1910 Smith: 229 (checklist)
 1911 Wickham: 11 (checklist)
 1918 McAtee (biology, ecology)
 1920 Britton: 224 (checklist)
 1920 Leng: 86 (catalog)
 1920 Weiss & West: 4 (biology, ecology) >> "Biology" - Hatch 1928
 1924 Hatch: 560 (checklist)
 1924 Portevin: 86 (key, descriptions in French) >> description of variation: 2 unavailable names

- 1925 Winkler: 263 (catalog)
- 1926a Portevin: 214 (revision: key, descriptions & catalog in French) >> description of variation: 2 unavailable names
- 1927a Hatch: 5, 7, 19 (key, descriptions, description of variation)
- 1927b Hatch: 357 (revision: key, descriptions & catalog)
- 1928 Hatch: 141 (catalog)
- 1928 Leonard: 271 (checklist)
- 1929 Kôno: 164 (checklist, annotated)
- 1932 Hlisnikovsky: 27 (key, descriptions in German)
- 1932 Jones: 352 (biology, ecology) >> not accepted as prey by birds in tests
- 1933 Semenov-Tian-Shanskij: 154 (catalog in Russian & Latin) >> as type sp. of new subgenus *Stictonecropter*
- 1933a Shchegoleva-Barovskaya: 166 (revision: key, descriptions & catalog in Russian) >> as *Necrophorus (Stictonecropter) pustulatus*, in key
- 1938 Brimley: 135 (checklist)
- 1944 Arnett: 5, 22 (morphology: female genitalia) >> female genitalia figured, pl. 3, fig. 4
- 1944 Milne & Milne: 311 (biology, behavior)
- 1945 Löding: 32 (checklist)
- 1946 Procter: 121 (checklist, ecology)
- 1947 Arnett: 110 (catalog) >> notes that Horn missidentified this sp. as *N. melsheimeri*
- 1948 Clark: 27 (checklist)
- 1949 Bliss: 201 (morphology: sexual dimorphism)
- 1951 Jaques: 83 (key, descriptions)
- 1957 Walker: 273 (biology, ecology)
- 1958 Madge: 39 (revision: key, descriptions, ecology, distributions)
- 1964 Frost (biology, ecology)
- 1966 Payne & Crossley: 56 (biology, ecology)
- 1968a Shubeck: 565 (methods)
- 1969 Kirk: 28 (checklist)
- 1969 Shubeck: 143 (biology, ecology)
- 1970 Kirk: 25 (checklist)
- 1970 Payne & King: 230 (biology, ecology)
- 1972 Swan & Papp: 356 (description)
- 1973 Blackwelder: 5 (checklist, synonymy)
- 1974 Pirone: 664 (biology, ecology)
- 1975 Baldwin: 23 (key, description, distribution, ecology)
- 1975 Kirk & Balsbaugh: 52 (checklist) >> as *N. pustulatus* subsp. *pustulatus*
- 1976 Shubeck: 267 (biology, ecology)
- 1977 Headstrom: 106 (description) >> brief description
- 1977 Shubeck et al.: 13 (biology, ecology)
- 1979 Miller & Peck: 98 (fossils)
- 1980 Arnett et al.: 129 (key, descriptions)
- 1980 Madge: 359 (catalog)
- 1980 Milne & Milne: 550 (field guide, brief descriptions, ecology)
- 1981 Kozol: 115 (biology, conservation, genetics)
- 1981 Shubeck et al.: 14 (biology, ecology)

- 1982c Anderson: 1316 (biology, ecology)
 1982 Shubeck & Blank (biology, ecology)
 1982 Wilson: 293 (biology, symbionts: mites) >> not a host for *Poecilochirus necrophori*
 1983 Lago & Miller: 85 (checklist)
 1984 Papp: 70 (descriptions)
 1984 Shubeck (biology, ecology)
 1985 Anderson & Peck: 68 (revision: key, descriptions & catalog)
 1985 Peck & Anderson: 276 (key, descriptions, phylogenetics)
 1985 Shubeck: 164 (biology, ecology)
 1986 Nishikawa: 98 (catalog in Japanese (English summary))
 1987 Peck & Kaulbars: 55 (checklist)
 1987 Ryabukhin & Matis: 9 (key, descriptions, distributions in Russian)
 1987 Staines: 16 (key, descriptions) >> Maryland records
 1989 Lafer: 339 (key, descriptions, description of variation in Russian)
 1989 Staines: 69 (key, descriptions, distributions) >> Maryland records
 1990 Peck: 1123 (key)
 1990c Trumbo: 1-11 (biology, behavior) >> focal species
 1991 Campbell: 86 (catalog, distribution)
 1991 Laplante et al.: 29 (checklist in French)
 1992 Robertson: 189-197 (biology, ecology) >> focal species
 1992 Trumbo: 294-298 (biology, behavior) >> focal species
 1993 Creighton et al.: 276 (biology, conservation)
 1993b Kozminykh: 66 (key, descriptions, regional in Russian)
 1993 Peck & Miller: 9 (species-group catalog)
 1993 Shubeck: 89 (biology, ecology)
 1994 Madge: 545 (comment)
 1994 Neal et al.: 128 (checklist)
 1994 Trumbo: 241-249 (biology, behavior) >> focal species
 1995 Lingafelter: 221 (biology, ecology)
 1995 Robertson: 418-420 (biology, behavior) >> focal species
 1996 Downie & Arnett: 356 (key, descriptions, regional)
 1996 Lomolino & Creighton: 238 (biology, conservation)
 1996 Ratcliffe: 80 (revision: key, descriptions & catalog)
 1997 Backlund & Marrone: 56 (biology, conservation)
 1997 Eggert & Müller: 233 (biology, review of: ecology, behavior)
 1998 Carlton & Rothwein: 183 (biology, conservation)
 1998 Coyle & Larsen: 163 (biology, ecology)
 1998 Peck & Thomas: 37 (checklist, distribution)
 1998b Scott: 600+ (biology, review of: ecology, behavior)
 1998 Trumbo & Thomas: 85-95 (biology, ecology) >> focal species
 1999 Bedick et al.: 177 (biology, conservation)
 2000 Blouin-Demers & Weatherhead: 395-397 (biology, ecology, behavior) >> focal species; as parasitoid of snake eggs
 2000 Sikes & Peck: 396 (descriptions, phylogenetics)
 2001 Keller & Heske: 167-169 (biology, ecology, behavior) >> focal species; as parasitoid of snake eggs

- 2002 Rauter & Moore: 96 (biology, behavior, genetics) >> focal species
 2002 Nikolajev & Kozminykh: 121 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> “it is clear that this species is missing in the fauna of Russia”

= bicolon Newman, 1838 CONFIRMED as SYNONYM of *N. pustulatus* Herschel

Type locality: “North America” [descrip.]

Type depository: BMNH: London [!] holotype female

- 1838 Newman: 385 (descriptions) >> Orig. comb.: *Necrophorus bicolon* [!S]
 1853 LeConte: 276 (descriptions) >> as syn. of *N. pustulatus*
 1853 Melsheimer: 39 (catalog) >> as syn. of *N. pustulatus*; misspelled as *N. bicolor*
 1854 Lacordaire: 200 (biology, catalog in French) >> as syn. of *N. pustulatus*
 1859b LeConte: 37 >> as syn. of *N. pustulatus*
 1868 Gemminger & Harold: 719 (catalog) >> as syn. of *N. pustulatus*
 1880 Horn: 314 (revision: key, descriptions & catalog) >> as syn. of *N. pustulatus*
 1910 Jakobson: 612 (checklist in Russian) >> as syn. of *N. pustulatus*
 1920 Leng: 86 (catalog) >> as syn. of *N. pustulatus*
 1926a Portevin: 254 (revision: key, descriptions & catalog in French) >> as syn. of *N. pustulatus*
 1928 Hatch: 142 (catalog) >> as syn. of *N. pustulatus*; misspelled as *N. bicolor*
 1944 Arnett: 5 (morphology: female genitalia) >> as syn. of *N. pustulatus*; misspelled as *N. bicolor*
 1985 Anderson & Peck: 68 (revision: key, descriptions & catalog) >> as syn. of *N. pustulatus*
 1993 Peck & Miller: 9 (species-group catalog) >> as syn. of *N. pustulatus*
 1996 Ratcliffe: 80 (revision: key, descriptions & catalog) >> as syn. of *N. pustulatus*

= tardus Mannerheim, 1853

Type locality: “Insula Sitka”, Alaska, USA [prob. erroneous; descrip.]

Type depository: unknown, not MZHF: Helsinki, lost? [Silfverberg, in litt.]

- 1853 Mannerheim: 170 (descriptions in German) >> Orig. comb.: *Necrophorus tardus* [!N, S]
 1868 Gemminger & Harold: 719 (catalog) >> as valid species
 1873 Crotch: 37 (checklist) >> as syn. of *Silpha pustulata*
 1910 Jakobson: 612 (checklist in Russian) >> as syn. of *N. pustulatus* (sensu Horn 1880)
 1920 Leng: 86 (catalog) >> as syn. of *N. pustulatus*
 1926b Portevin: 254 (descriptions in French) >> as syn. of *N. pustulatus*
 1928 Hatch: 142 (catalog) >> as syn. of *N. pustulatus*; misspelled as *N. tarsus*
 1944 Arnett: 5 (morphology: female genitalia) >> as syn. of *N. pustulatus*
 1985 Anderson & Peck: 68 (revision: key, descriptions & catalog) >> as syn. of *N. pustulatus*
 1993 Peck & Miller: 9 (species-group catalog) >> as syn. of *N. pustulatus*
 1996 Ratcliffe: 80 (revision: key, descriptions & catalog) >> as syn. of *N. pustulatus*

Nicrophorus quadraticollis Portevin, 1903 desig. lectotype

Type locality: “Mou-Pin”=Bao Xin [30:23 °N, 102:50 °E], Sichuan Province, sw China [label]

Type depository: MNHN: Paris [!] lectotype male, 1 paralectotype female

Distribution: Palearctic: China: Tibet*, Sichuan, Heilongjiang; Korea; Russia: Amur, Siberia*, Ussuri reg.

- 1903 Portevin: 330 (descriptions in French) >> Orig. comb.: *Nicrophorus quadraticollis* [!N, S]
- 1910 Jakobson: 612 (checklist in Russian)
- 1924 Portevin: 87 (key, descriptions in French)
- 1925 Winkler: 263 (catalog)
- 1926a Portevin: 216 (revision: key, descriptions & catalog in French)
- 1928 Hatch: 146 (catalog) >> as syn. of *N. quadricollis* [replacement name]
- 1930 Kieseritzky: 61 (descriptions in Russian (German summary)) >> as valid species
- 1932 Hlisnikovsky: 28 (key, descriptions in German) >> as valid species
- 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin) >> as valid species
- 1933a Shchegoleva-Barovskaya: 176 (revision: key, descriptions & catalog in Russian) >> as valid species
- 1937 Wu (catalog)
- 1953 Mazokhin-Porshnyakov: 236 (descriptions, catalog in Russian)
- 1961 Székessy: 333 (description of variation in German) >> description of variation; 1 unavailable name
- 1986 Nishikawa: 98 (catalog in Japanese (English summary))
- 1989 Lafer: 337 (key, descriptions, description of variation in Russian)
- 1992 Cho & Lee: 28 (revision: key, descriptions & catalog) >> new record for Korea
- 1992 Kozminykh: 64 (checklist in Russian)
- 1993b Kozminykh: 67 (key, descriptions, regional in Russian) >> ungrouped; incertae sedis
- 2002 Nikolajev & Kozminykh: 130 (catalog, distribution, descriptions, keys, figures in Russian (English summary))

= inclusus Reitter, 1913 CONFIRMED as SYNONYM of *N. quadraticollis* Portevin

Type locality: “Ost-Sibirien: Chitaizki-Sterana” [=China, Heilongjiang Prov., Kitaiskaya starana – Chinese side of the Amur River; label]

Type depository: HNHM: Budapest [!] holotype

- 1913 Reitter: 651 (descriptions in German) >> Orig. comb.: *Nicrophorus inclusus* [!N, S]
- 1915 Bodemeyer: 444 (checklist in German)
- 1925 Winkler: 265 (catalog) >> as valid species
- 1926a Portevin: 254 (revision: key, descriptions & catalog in French) >> as syn. of *N. quadraticollis*
- 1928 Hatch: 146 (catalog) >> as syn. of *N. quadraticollis*
- 1930 Kieseritzky: 61 (descriptions in Russian (German summary)) >> as syn. of *N. quadraticollis*
- 1933a Shchegoleva-Barovskaya: 176 (revision: key, descriptions & catalog in Russian) >> as syn. of *N. quadraticollis*

- 1993b Kozminykh: 67 (key, descriptions, regional in Russian) >> as syn. of *N. quadraticollis*
 2002 Nikolajev & Kozminykh: 130 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as syn. of *N. quadraticollis*

= *quadracollis* Hatch, 1928 (unec. nomen novum for *N. quadraticollis* Portevin & junior primary homonym, not Gistel 1848)

Type locality: see *N. quadraticollis* Portevin

Type depository: see *N. quadraticollis* Portevin

- 1928 Hatch: 146 (catalog) >> Orig. comb.: *Nicrophorus quadracollis*; New junior primary homonym, not *N. quadracollis* Gistel 1848; unec. replacement name [!N, S]
 1933a Shchegoleva-Barovskaya: 176 (revision: key, descriptions & catalog in Russian) >> as syn. of *N. quadraticollis*
 1993b Kozminykh: 67 (key, descriptions, regional in Russian) >> as syn. of *N. quadraticollis*
 2002 Nikolajev & Kozminykh: 130 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as syn. of *N. quadraticollis*

Comments: Lectotype data for *Nicrophorus quadraticollis* Portevin, 1903: 330 "Nicrophorus quadraticollis Type Bull. Mus. 1903, p.330 Prt."/ label: "TYPE" / printed red ink. "MUSEUM PARIS"/ "401" small, round label with same data as printed on larger rectangular label;/ [CHINA]: Mou-Pin Thibet, 1-31 March 1869 (coll. A. David) / red rectangular label with double black border "LECTOTYPE *Nicrophorus quadraticollis* (Portevin1903) det. Sikes 1997" - male (Paris [MNHN]); pronotal width: 6.24 mm.

Paralectotype data "Nicrophorus quadraticollis Type -Prt. Bull. Mus. 1903, p.330" / label: "TYPE" printed red ink. "MUSEUM PARIS" small, round label with same data as printed on larger rectangular label. / [CHINA]: [Sichuan prov.], Mou-Pin Thibet [=Pao Hsing?], [30° 23' N, 102° 50' E,]1-31 March 1869 (coll. A. David) red rectangular label with double black border "PARALECTOTYPE *Nicrophorus quadraticollis* (Portevin1903) det. Sikes 1997"- female (Paris [MNHN]).

***Nicrophorus quadrimaculatus* Matthews, 1888**

Type locality: "Guatemala" [label]

Type depository: BMNH: London [!] holotype male

Distribution: Neotropical: Mexico: Chiapas, through Panama

- 1888 Matthews: 93 (description) >> Orig. comb.: *Nicrophorus quadrimaculatus* [!N, S]
 1903 Portevin: 331 (descriptions in French)
 1924 Portevin: 189 (key, descriptions in French)
 1926a Portevin: 240 (revision: key, descriptions & catalog in French)
 1927b Hatch: 353 (revision: key, descriptions & catalog)
 1928 Hatch: 129 (catalog)

- 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin)
 1944 Blackwelder: 100 (catalog)
 1972 Howden & Peck: 71 (biology, ecology)
 1973 Blackwelder: 6 (checklist, synonymy)
 1985 Peck & Anderson: 268 (key, descriptions, phylogenetics)
 1986 Nishikawa: 98 (catalog in Japanese (English summary))
 1995 Navarrete-Heredia: 14 (biology, ecology, key in Spanish)
 2000 Navarrete-Heredia & Fierros-López: 407 (checklist, distribution in Spanish (English summary))
 2000 Sikes & Peck: 395 (descriptions, phylogenetics)
 2001 Navarrete-Heredia: 170 (checklist, distribution in Spanish)
 2002 Maes & Navarrete-Heredia: 2 (distribution note in Spanish) >> first record in Nicaragua

***Nicrophorus quadripunctatus* Kraatz, 1877**

Type locality: "Japan" [from title of paper]

Type depository: unknown; not DEIC: Eberswalde [L. Zerche, in litt.] 3 syntypes?

Distribution: Palearctic: nChina, Japan, Korea, Russia: Ussuri reg. & Amur, Taiwan*

- 1877 Kraatz: 101 (descriptions in German) >> Orig. comb.: *Nicrophorus maculifrons* var. *quadripunctatus* [!N, S]
 1877 Harold: 346 (descriptions in German) >> as *N. maculifrons* var. *quadripunctatus*
 1878 Deyrolle & Fairmaire: 91 (descriptions in French) >> as *N. maculifrons* var. *quadripunctatus*; compared to *N. ocellatus*
 1887 Lewis: 342 (description) >> as valid species
 1891 Fairmaire: 191 (checklist in French) >> as *N. maculifrons* var. *quadripunctatus*
 1895b Reitter: 325 (description of variation in German) >> as *N. maculifrons* var. *quadripunctatus*
 1897 Reitter: 48 (description of variation in German) >> comments on (agrees with) status as valid species
 1903 Portevin: 331 (descriptions in French) >> as valid species
 1908 Heyne & Taschenberg: 38 (descriptions in German) >> as var. of *N. nepalensis*
 1910 Jakobson: 612 (checklist in Russian) >> as valid species
 1914b Portevin: 224 (description of variation in French) >> as valid species
 1923 Portevin: 307 (key, descriptions in French) >> description of variation: 1 unavailable name
 1923 Portevin: 67 (key, descriptions in French) >> comment that this sp. can be found on mushrooms
 1925 Winkler: 263 (catalog) >> as valid species
 1926a Portevin: 207 (revision: key, descriptions & catalog in French)
 1927b Hatch: 354 (revision: key, descriptions & catalog) >> lapsus calami, as *N. quadrimaculatus*
 1928 Hatch: 130 (catalog)
 1929 Kôno: 164 (checklist, annotated)
 1930 Kieseritzky: 61 (descriptions in Russian (German summary))
 1930 Yokoyama: 121 (descriptions in Japanese)
 1932 Hlisnikovsky: 27 (key, descriptions in German)

- 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin)
- 1933a Shchegoleva-Barovskaya: 178 (revision: key, descriptions & catalog in Russian)
- 1936 Cho: 155 (checklist in Korean)
- 1936 Mochizuki (checklist)
- 1936 Takagi: 192 (checklist in Japanese)
- 1937 Mochizuki & Tsunekawa (checklist)
- 1938 Mori & Cho (checklist)
- 1939 Masui (checklist)
- 1953 Mazokhin-Porshnyakov: 236 (descriptions, catalog in Russian)
- 1955a Nakane: 48 (checklist, brief descriptions)
- 1955b Nakane: 54 (key, descriptions in Japanese)
- 1956 Esaki et al.: 1029 (checklist, descriptions in Japanese)
- 1957 Cho (catalog in Korean)
- 1963 Nakane: 75 (checklist, brief descriptions in Japanese)
- 1964b Hlisenkovsky: 244 (descriptions in German)
- 1964 Kamimura et al.: A20 (biology, ecology)
- 1966c Mroczkowski: 436 (checklist)
- 1969 Hinton: 186 (morphology: diffraction gratings) >> has iridescent morphology
- 1969 Shibata: 53 (catalog)
- 1973 Krivolutskaya: 71 (checklist in Russian (with electronic english translation))
- 1975 Katakura & Fukuda: 78 (biology, ecology)
- 1978 Kim: 63 (catalog, distribution)
- 1979 Nakane & Baba: 10 (checklist, distribution in Japanese)
- 1980 Schawaller: 153 (checklist in German (English summary))
- 1984 Nishikawa: 18 (biology, note in Japanese (English summary))
- 1985 Katakura & Ueno: 463 (biology, ecology) >> “virtually restricted to forest”
- 1985a Kurosawa: 248 (checklist) >> color habitus figure pl. 44
- 1985 Lee et al. (checklist in Korean)
- 1985 Paik: 2-12
- 1986 Cho & Lee: 21 (phylogenetics)
- 1986 Katakura et al.: 43-55 (biology, ecology)
- 1986 Nishikawa: 98 (catalog in Japanese (English summary))
- 1987 Ôhara & Higashi: 1095 (comment: ecology) >> reported as nocturnal
- 1988 Andreev (biology, symbionts: mites in Russian (English summary))
- 1988 Cho et al.: 9 (phylogenetics)
- 1989 Lafer: 337 (key, descriptions, description of variation in Russian)
- 1989 Martin: 876-879 (biology, ecology)
- 1991 Ohkawara: 463-467 (biology, ecology in Japanese (English summary)) >> focal species
- 1992 Cho & Lee: 22 (revision: key, descriptions & catalog)
- 1992 Kozminykh: 64 (checklist in Russian)
- 1992 Morimoto: 28 (descriptions in Japanese) >> brief description, photo
- 1992 Nomura & Lee: 81 (catalog)
- 1992b Ôhara: 9 (checklist in Japanese (English summary))
- 1992 Ôhara & Yabuki: 57 (checklist in Japanese (English summary))
- 1993b Kozminykh: 67 (key, descriptions, regional in Russian) >> ungrouped; incertae sedis

- 1994a Ôhara: 58 (checklist in Japanese)
 1994b Ôhara: 61 (checklist in Japanese) >> misspelled as *Nicropholus quadripunctatus*
 1994 Takaku et al.: 306 (biology, symbionts: mites) >> mite host
 1995a Ôhara: 24 (checklist in Japanese (English summary))
 1995b Ôhara: 6 (checklist in Japanese (English summary))
 1995 Ôhara et al.: 68 (checklist in Japanese (English summary))
 1997 Krivolutskaya: 3 (checklist) >> (translation of Krivolutskaya 1973)
 1998 Harusawa: 35 (key in Japanese)
 1998 Ohkawara et al.: 551-559 (biology, ecology) >> focal species
 1998 Suzuki: 152-153 (biology, behavior in Japanese)
 1999 Suzuki: 207 (biology, ecology, behavior)
 2000 Nomura et al.: 268
 2000 Růžička et al.: 381 (descriptions)
 2000 Satou et al.: 265-268 (biology, symbionts: mites) >> focal species
 2000b Suzuki: 25-28 (biology, behavior) >> focal species
 2000c Suzuki: 38 (biology, ecology, behavior in Japanese with English abstract)
 2000 Szalanski et al.: 590 (biology, conservation, phylogenetics, genetics)
 2001 Satou et al.: 975-979 (biology, behavior) >> focal species
 2001 Suzuki: 403-405 (biology, ecology, behavior) >> focal species
 2001 Trumbo et al.: 543-560 (biology, ecology, behavior) >> focal species
 2001 Xu & Suzuki: 217-222 (biology, ecology, behavior) >> focal species
 2002 Nisimura et al.: 220 (biology, behavior) >> focal species
 2002 Nikolajev & Kozminykh: 128 (catalog, distribution, descriptions, keys, figures in Russian (English summary))

= *immaculatus* Portevin, 1923 NEW STATUS as absolute syn. of *N. quadripunctatus*
 Kraatz

Type locality: "Tokio" [Japan: Tokyo; label]

Type depository: MNHN: Paris [!] holotype male

- 1923 Portevin: 307 (key, descriptions in French) >> Orig. comb.: *Nicrophorus quadripunctatus* var. *immaculatus* [!N, S]
 1925 Winkler: 263 (catalog) >> as *N. quadripunctatus* ab. *immaculatus*
 1926a Portevin: 207 (revision: key, descriptions & catalog in French) >> as *N. quadripunctatus* var. *immaculatus*
 1928 Hatch: 130 (catalog) >> as *N. quadripunctatus* var. *immaculatus*
 1933a Shchegoleva-Barovskaya: 178 (revision: key, descriptions & catalog in Russian) >> as *N. quadripunctatus* ab. *immaculatus*
 1964b Hlisnikovsky: 244 (descriptions in German) >> as *N. quadripunctatus* form *immaculatus*

Nicrophorus reichardti Kieseritzky, 1930 desig. lectotype

Type locality: "Fergana merid.: Sary-tash in valle Alaiensi"[Kyrgyzstan; descrip. & label]

Type depository: ZMAS: St. Petersburg [!] lectotype male, 2 paralectotypes

Distribution: Palearctic: Kyrgyzstan

- 1930 Kieseritzky: 60 (descriptions in Russian (German summary)) >> Orig. comb.:
Necrophorus sepultor var. reichardti [!N, S]
- 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin) >> as valid species
- 1933a Shchegoleva-Barovskaya: 187 (revision: key, descriptions & catalog in Russian)
>> as valid species
- 1986 Nishikawa: 98 (catalog in Japanese (English summary)) >> as valid species
- 1992 Kozminykh: 64 (checklist in Russian) >> as valid species
- 1993b Kozminykh: 66 (key, descriptions, regional in Russian) >> as valid species
- 2002 Nikolajev & Kozminykh: 122 (catalog, distribution, descriptions, keys, figures in
Russian (English summary))

Comments: Lectotype data for *Necrophorus reichardti* Kieseritzky, 1930: 60 "Syntypus ?
Necrophorus reichardti Kieser. [red label]";/ "Necrophorus reichardti";/ "ZOOLOGICAL
INSTITUTE Russian Academy of Sciences, ST. PETERSBURG, RUSSIA";/ "collection
the Zoological Institute Academy of Sciences, St. Petersburg, Russia";/ [KYR-
GYZSTAN]: [Alajskaja (Alaiskaya) Dol. ur. Sary-tasz], 28 June 1928 (coll. [Rejhardt]) /
white label with black border "Nicrophorus reichardti Kieseritzky, 1930: 60 Det. D. S.
Sikes 1997 ZMAS004984Nic" / red rectangular label with double black border "LECTO-
TYPE Nicrophorus reichardti (Kieseritzky, 1930) det. Sikes 1997" - male (St. Petersburg
[ZMAS]); pronotal width: 4.71 mm.

Paralectotype data "Necrophorus sepultor Charp. v. reichardti n. V. Kieseritzkij det.
[red label] / Syntypus ? Necrophorus reichardti Kieser. / Necrophorus reichardti / "ZOO-
LOGICAL INSTITUTE Russian Academy of Sciences, ST. PETERSBURG, RUSSIA";
"collection the Zoological Institute Academy of Sciences, St. Petersburg, Russia" / [KYR-
GYZSTAN]: Alaiskaya dol. , elev. 3000 m, 2 August 1928 (coll. Gordukow) / red rectan-
gular label with double black border "PARALECTOTYPE Nicrophorus reichardti
(Kieseritzky, 1930) det. Sikes 1997"- male (St. Petersburg [ZMAS]); Syntypus ? Necro-
phorus reichardti Kieser. [red label] / Necrophorus reichardti / "ZOOLOGICAL INSTI-
TUTE Russian Academy of Sciences, ST. PETERSBURG, RUSSIA"; "collection the
Zoological Institute Academy of Sciences, St. Petersburg, Russia" / [KYRGYZSTAN]:
[Alajskaja (Alaiskaya) Dol. ur. Sary-tasz], 28 June 1928 (coll. [Rejhardt]) / red rectangular
label with double black border "PARALECTOTYPE Nicrophorus reichardti (Kieseritzky,
1930) det. Sikes 1997"- male (St. Petersburg [ZMAS])

Nicrophorus satanas Reitter, 1893

Type locality: "Sudrussland: Kirguiskaja-steppe östlich bei Astrachan"= Kirgizia
(Astrakhan), Kazakhstan [descrip. & label]

Type depository: HNHM: Budapest [!] holotype female

Distribution: Palearctic: cRussia, Afghanistan, Kazakhstan, Iran*, Pakistan*, Turk-
menistan, Uzbekistan

- 1893 Reitter: 147 (key, descriptions in German) >> Orig. comb.: *Necrophorus Satanas*
[!N, S]

- 1895b Reitter: 324 (description of variation in German)
 1896 Heyden: 38 (checklist in German)
 1906 Heyden et al.: 247 (checklist)
 1910 Jakobson: 611 (checklist in Russian)
 1923 Portevin: 231 (key, descriptions in French)
 1925 Winkler: 263 (catalog)
 1926a Portevin: 198 (revision: key, descriptions & catalog in French)
 1927b Hatch: 355 (revision: key, descriptions & catalog)
 1932 Hlisnikovsky: 25 (key, descriptions in German)
 1933 Semenov-Tian-Shanskij: 153 (catalog in Russian & Latin)
 1933a Shchegoleva-Barovskaya: 173 (revision: key, descriptions & catalog in Russian)
 1986 Nishikawa: 99 (catalog in Japanese (English summary)) >> as *N. satana*
 1992 Kozminykh: 64 (checklist in Russian)
 1992 Kozminykh & Esjunin: 68 (checklist in Russian)
 1993b Kozminykh: 64 (key, descriptions, regional in Russian)
 1994 Kozminykh & Esjunin: 78 (biology, ecology in English (Russian summary))
 1995 Kozminykh: 109 (key in Russian)
 1995 Kozminykh & Nemkov: 112 (catalog in Russian)
 1998 Pushkin & Sigida: 84 (biology, ecology in Russian)
 2002 Nikolajev & Kozminykh: 108 (catalog, distribution, descriptions, keys, figures in Russian (English summary))

Nicrophorus sausai Růžička, Háva & Schneider, 2000

Type locality: "LAOS c. Bolikhamsai prov. BAN NAPE - Kaew Nua Pass, alt. 600 m, N 18° 22.3' E 105° 09.1' ". [label]

Type depository: SMTD: Dresden, holotype female, allotype male, 4 paratypes [JSC, JHC, JRC]

Distribution: Oriental: Laos, northeastern India

2000 Růžička et al.: 378 (descriptions) >> Orig. comb.: *Nicrophorus sausai* [!S]

Nicrophorus sayi Laporte, 1840

Type locality: "Amérique du Nord"[North America; descrip.]

Type depository: unknown

Distribution: Nearctic: northeastern to northcentral North America

- 1840 Laporte: 2 (descriptions in French) >> Orig. comb.: *Nicrophorus Sayi* [!N, S]
 1854 Lacordaire: 200 (biology, catalog in French)
 1868 Gemminger & Harold: 719 (catalog)
 1870 LeConte: 398 (nomenclature)
 1873 Crotch: 37 (checklist) >> as *Silpha sayi*
 1877 Provancher: 224, 226 (in French)
 1878b Hubbard & Schwarz: 650 (checklist)
 1880 Horn: 231 (revision: key, descriptions & catalog)
 1885 Henshaw: 26 (checklist)
 1902 Dury: 12 (checklist)
 1904 Davis: 18 (checklist)

- 1909 Stevens: 106 (biology, cytology) >> chromosomes figured
 1910 Barkowski: 79 (key, descriptions, regional in German)
 1910 Blatchley: 274 (key, descriptions, regional)
 1910 Smith: 229 (checklist)
 1911 Wickham: 10 (checklist)
 1920 Britton: 224 (checklist)
 1920 Leng: 86 (catalog)
 1922 Sherborn: 5764 (catalog - index)
 1924 Hatch: 560 (checklist)
 1924 Portevin: 148 (key, descriptions in French)
 1926a Portevin: 221 (revision: key, descriptions & catalog in French)
 1927a Hatch: 5, 7, 19 (key, descriptions, description of variation)
 1927b Hatch: 353 (revision: key, descriptions & catalog)
 1928 Hatch: 129 (catalog)
 1928 Leonard: 271 (checklist)
 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin)
 1938 Brimley: 135 (checklist)
 1944 Arnett: 4, 22 (morphology: female genitalia) >> female genitalia figured, pl. 3, fig. 2
 1944 Milne & Milne: 311 (biology, behavior)
 1946 Procter: 121 (checklist, ecology)
 1947 Arnett: 110 (catalog) >> notes that LeConte 1870 missidentified this sp. as *N. melsheimeri*
 1949 Bliss: 200 (morphology: sexual dimorphism)
 1949 Hoffmann et al.: 10 (comment: ecology) >> eliminated from area sprayed with DDT, 1 year later
 1953 Smith: 35 (biology, cytology)
 1958 Madge: 22 (revision: key, descriptions, ecology, distributions)
 1961 Dillon & Dillon: 175 (key, descriptions)
 1963 Arnett: 330 (key) >> figured
 1970 Gersdorf: 368 (morphology: female genitalia in German)
 1970 Kirk: 25 (checklist)
 1973 Blackwelder: 3 (checklist, synonymy)
 1975 Baldwin: 26 (key, description, distribution, ecology)
 1975 Kirk & Balsbaugh: 52 (checklist)
 1977 Headstrom: 105 (description)
 1978 Smith & Virkki: 240 (biology, cytology)
 1979 Uetz et al.: 299 (comment: ecology)
 1982 Abell et al.: 304 (biology, ecology)
 1982a Anderson: 261 (key, descriptions, morphology, larval stages)
 1982c Anderson: 1316 (biology, ecology)
 1982 Peck & Miller: 152 (nomenclature)
 1982 Wilson: 293 (biology, symbionts: mites)
 1983 Wilson: 858 (biology, symbionts: mites)
 1984 Wilson & Fudge: 195-203 (biology, ecology) >> focal species
 1984 Wilson et al.: 205-216 (biology, ecology) >> focal species
 1985 Anderson & Peck: 69 (revision: key, descriptions & catalog)

- 1985 Peck & Anderson: 287 (key, descriptions, phylogenetics)
 1986 Levesque & Levesque: 44 (biology, ecology in French)
 1986 Nishikawa: 98 (catalog in Japanese (English summary))
 1987 Peck & Kaulbars: 52 (checklist)
 1987 Staines: 16 (key, descriptions) >> not recorded from Maryland
 1987 Wilson & Knollenberg: 139-159 (biology, symbionts: mites) >> focal species
 1988 Scott et al.: 325-331 (biology, ecology) >> focal species
 1989 Scott & Traniello: 32-36 (popular review) >> focal species
 1989 Staines: 69 (key, descriptions, distributions) >> Maryland records
 1990 Peck: 1122 (key)
 1990 Scott & Traniello: 274-283 (biology, ecology, behavior) >> focal species
 1990a Trumbo: 347-355 (biology, ecology) >> focal species
 1991 Campbell: 86 (catalog, distribution)
 1991 Laplante et al.: 29 (checklist in French)
 1991 Newton: 340 (morphology, larval stages) >> larval mandible illustrated
 1992 Beninger & Peck: 79-86 (biology, ecology)
 1992 Brown & Wilson: 466 (biology, symbionts: mites)
 1992 Robertson: 191 (biology, ecology)
 1992 Trumbo: 295 (biology, behavior)
 1993 Creighton et al.: 276 (biology, conservation)
 1993 Peck & Miller: 9 (species-group catalog)
 1994 Beninger: 135-143 (biology, ecology in English (French summary))
 1994 Bertin & Fallaci: 218 (checklist in Italian (English summary))
 1994 Brown & Wilson: 3 (biology, symbionts: mites)
 1994b Scott: 538 (biology, behavior)
 1996 Downie & Arnett: 357 (key, descriptions, regional)
 1996 Lomolino & Creighton: 238 (biology, conservation)
 1997 Klausnitzer: 40 (morphology, larval stages in German)
 1998b Scott: 598+ (biology, review of: ecology, behavior)
 1998 Trumbo & Thomas: 85-95 (biology, ecology) >> focal species
 2000 Eggert & Sakaluk: 263 (biology, behavior)
 2000 Sikes & Peck: 395 (descriptions, phylogenetics)
 2000 Szalanski et al.: 590 (biology, conservation, phylogenetics, genetics)
 2000 Werner & Raffa: 144 (comment: ecology)
 2001 Nishikawa: 81 (larval descriptions, phylogenetics in English (Japanese summary)) >> larva compared to *N. maculifrons*

= *lunatus* LeConte, 1853 (junior primary homonym, not Fischer 1842) CONFIRMED as SYNONYM of *N. sayi* Laporte

Type locality: "New York and Georgia" [USA; descrip. no data on label]

Type depository: MCZC: Cambridge [!] lectotype male

- 1853 LeConte: 277 (descriptions) >> Orig. comb.: *Necrophorus lunatus* [not Fischer];
 LeConte described this sp. based on name in Dejean's catalog because it
 lacked a description [!N, S]
 1854 Lacordaire: 200 (biology, catalog in French) >> as valid species
 1868 Gemminger & Harold: 718 (catalog) >> as syn. of *N. luniger*

- 1870 LeConte: 398 (nomenclature) >> as syn. of *N. sayi*
 1873 Crotch: 37 (checklist) >> as syn. of *Silpha sayi*
 1877 Provancher: 225 (in French)
 1880 Horn: 314 (revision: key, descriptions & catalog) >> as syn. of *N. sayi*
 1920 Leng: 86 (catalog) >> as syn. of *N. sayi*
 1926a Portevin: 256 (revision: key, descriptions & catalog in French) >> as syn. of *N. sayi*
 1928 Hatch: 129 (catalog) >> as syn. of *N. sayi*
 1944 Arnett: 4 (morphology: female genitalia) >> as syn. of *N. sayi*
 1982 Peck & Miller: 152 (nomenclature) >> desig. lectotype; as syn. of *N. sayi*; as homonym of *N. lunatus* Fisch.
 1985 Anderson & Peck: 69 (revision: key, descriptions & catalog) >> as syn. of *N. sayi*
 1993 Peck & Miller: 9 (species-group catalog) >> as syn. of *N. sayi*

= *luniger* Harold, 1868 (nomen novum for *lunatus* LeConte)

Type locality: see *N. lunatus* LeConte

Type depository: see *N. lunatus* LeConte

- 1868 Harold: 104 (descriptions in German) >> Orig. comb.: *Necrophorus luniger*; (new name (nomen novum) (replacement name) for preoccupied *lunatus* LeConte) [!M]
 1868 Gemminger & Harold: 718 (catalog) >> as valid species
 1920 Leng: 86 (catalog) >> as syn. of *N. sayi*
 1926a Portevin: 256 (revision: key, descriptions & catalog in French) >> as syn. of *N. sayi*
 1928 Hatch: 129 (catalog) >> as syn. of *N. sayi*
 1944 Arnett: 4 (morphology: female genitalia) >> as syn. of *N. sayi*
 1982 Peck & Miller: 152 (nomenclature) >> as syn. of *N. sayi*
 1985 Anderson & Peck: 69 (revision: key, descriptions & catalog) >> as syn. of *N. sayi*
 1993 Peck & Miller: 9 (species-group catalog) >> as syn. of *N. sayi*

= *pulsator* Gistel, 1848 NEW SYNONYM of *N. sayi* Laporte

Type locality: "America borealis" [Canada; descrip.]

Type depository: ZSMC: München?

- 1848 Gistel: 190 (descriptions in German) >> Orig. comb.: *Necrophorus pulsator*
 1857b Gistel: 564 (in German) >> indicated as new; with "*N. americanus*? Melsheimer" as synonym
 1917 Strand: 83 (descriptions in German)
 1928 Hatch: 153 (catalog) >> *Incertae sedis*
 1993 Peck & Miller: 9 (species-group catalog) >> as unplaced species / *incertae sedis*

Comments: See comments for *N. germanicus* and *N. interruptus* regarding the names of Gistel. We herein move *N. pulsator* Gistel, previously considered a *nomen dubium*, to synonymy under *N. sayi*. Gistel's description indicates *N. pulsator* is similar to *N. vespillo*, suggesting the metatibiae are curved, which would limit this species to either *N. marginatus* or *N. sayi*; the description also indicates that the posterior fascia are round spots which excludes *N. marginatus* but matches *N. sayi*.

Nicrophorus scrutator Blanchard, 1842 desig. lectotype

Type locality: "Chuquisaca" [Bolivia:19.083°S, 65.250°W; label]

Type depository: MNHN: Paris [!] lectotype male, 1 paralectotype female

Distribution: Neotropical: Peru, Bolivia, n Argentina

- 1842 Blanchard: 74 (descriptions in French) >> Orig. comb.: *Nicrophorus scrutator* [!N]
- 1854 Lacordaire: 200 (biology, catalog in French)
- 1868 Gemminger & Harold: 719 (catalog)
- 1922 Portevin: 57 (descriptions in French) >> description of variation: 1 unavailable name
- 1922 Sherborn: 5823 (catalog - index)
- 1924 Portevin: 190 (key, descriptions in French)
- 1926a Portevin: 237 (revision: key, descriptions & catalog in French) >> year of Blanchard 1842 given as 1840
- 1927b Hatch: 353 (revision: key, descriptions & catalog)
- 1928 Hatch: 128 (catalog) >> year of Blanchard 1842 given as 1840
- 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin)
- 1944 Blackwelder: 100 (catalog)
- 1985 Peck & Anderson: 270 (key, descriptions, phylogenetics)
- 1986 Nishikawa: 98 (catalog in Japanese (English summary))
- 2000 Sikes & Peck: 395 (descriptions, phylogenetics)

Comments: Lectotype data for *Nicrophorus scrutator* Blanchard, 1842: 74 "N. srutator Blanch.Nicrophorus scrutator Blanch. Type label upside down";/ " Type" handwritten, black ink.;/"6316 34"-on round label; / label: "TYPE" printed red ink."/ MUSEUM PARIS"; / [BOLIVIA]: Chuquisaca, 1834 [19.083°S, 65.250°W](coll. d'Orbigny) / red rectangular label with double black border "LECTOTYPE *Nicrophorus scrutator* (Blanchard 1842) det. Sikes 1997"- male (Paris [MNHN]); pronotal width: 6.81 mm.

Paralectotype data "N. srutator Blanch. / *Nicrophorus scrutator* Blanch. Type / label upside down" Type" handwritten, black ink. label: "TYPE" printed red ink." MUSEUM PARIS" / de La Laguna Prov., 1834 (coll. d'Orbigny) / red rectangular label with double black border "PARALECTOTYPE *Nicrophorus scrutator* (Blanchard 1842) det. Sikes 1997"- female (Paris [MNHN]).

Nicrophorus semenowi (Reitter, 1887)

Type locality: "Centr. Asien, Zuflüsse des Blauen Flusses" [=“tributaries of the Blue Riv”. China?; label]

Type depository: HNHM: Budapest [!] holotype female

Distribution: Palearctic: China: Gansu & Qinghai prov.*, Tibet*

- 1887 Reitter: 216 (descriptions in German) >> Orig. comb.: *Silpha* (*Nicrophorus*) *Semenowi* [!N, S]
- 1893 Heyden: 51 (checklist in German)
- 1895b Reitter: 327 (description of variation in German) >> as *Nicrophorus Semenowi*
- 1896 Heyden: 38 (checklist in German)

- 1910 Jakobson: 612 (checklist in Russian)
 1924 Portevin: 186 (key, descriptions in French)
 1925 Winkler: 264 (catalog)
 1926a Portevin: 224 (revision: key, descriptions & catalog in French)
 1927b Hatch: 357 (revision: key, descriptions & catalog)
 1928 Hatch: 145 (catalog)
 1930 Kieseritzky: 63 (descriptions in Russian (German summary))
 1932 Hlisnikovsky: 29 (key, descriptions in German)
 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin)
 1933a Shchegoleva-Barovskaya: 190 (revision: key, descriptions & catalog in Russian)
 1933b Shchegoleva-Barovskaya: 251 (descriptions in Russian)
 1937 Wu (catalog)
 1964b Hlisnikovsky: 242 (descriptions in German) >> compared to *N. tibetanus*
 1982 Schawaller: 255 (checklist in German (English summary))
 1986 Nishikawa: 98 (catalog in Japanese (English summary))
 1993b Kozminykh: 67 (key, descriptions, regional in Russian)
 1996 Růžička & Schneider: 81 (checklist in English (Czech summary))

= *temporalis* Shchegoleva-Barovskaya, 1933 NEW SYNONYM of *N. semenowi* (Reitter)

Type locality: "Tibet or.: system fluvii Yan-Tse-Kiang; monasterium Surman; lit. mer.-orient. lacus Kuku-nor"[China: Qinghai Prov.; label]

Type depository: ZMAS: St. Petersburg [!] 3 syntypes

- 1933b Shchegoleva-Barovskaya: 251 (descriptions in Russian) >> Orig. comb.: *Necrophorus (Necropter) temporalis* [!N, S]
 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin) >> as valid species
 1964b Hlisnikovsky: 242 (descriptions in German) >> as valid species, compared to *N. tibetanus*
 1986 Nishikawa: 98 (catalog in Japanese (English summary)) >> as valid species

Comments: DSS has studied the type specimens of *N. temporalis* from the St. Petersburg collection and they show all the diagnostic traits of *N. semenowi* (dense brown metasternal setae, slender metafemora, setose metepimeral lobe, long setae behind mesocoxae) and no differentiating traits, so we herein synonymize this name.

***Nicrophorus sepulchralis* Heer, 1841** NEW STATUS as valid species

Type locality: "in alpinis (St. Bernhard)." [=border of Italy/France or France/Switzerland?, descrip.]

Type depository: ETHZ: Zürich

Distribution: Palearctic: mountains of southern Europe

- 1841a Heer: 388 (descriptions in German) >> Orig. comb.: *Nicrophorus sepulchralis* [!N, S]
 1841b Heer: 9 (checklist in German)
 1849 Gaubil: 55 (catalog in French) >> as valid species
 1854 Lacordaire: 199 (biology, catalog in French) >> as valid species

- 1859 Schaum: 36 (catalog in German)
- 1862 Schaum: 38 (catalog in German) >> as valid species
- 1863 Marseul: 88 (catalog in French)
- 1866 Marseul: 38 (catalog in French)
- 1868 Stein: 42 (catalog in Latin) >> as valid species
- 1869 Stierlin & Gautard: 116 (checklist in German) >> as valid species
- 1872 Stierlin: 475 (in German)
- 1874 Seidlitz: 216 (key in German) >> as valid species
- 1876d Kraatz: 396 (comment in German)
- 1877 Stein & Weise: 61 (catalog in Latin) >> as valid species
- 1877 Stierlin: 288 (in German)
- 1883 Reitter: 60 (comment in German) >> probable missidentification as *N. nigricornis* (record from Germany)
- 1884 Marseul: 188 (key, descriptions in French) >> as valid species
- 1884 Reitter: 88 (descriptions in German) >> as *Silpha sepulchralis*; as syn. of *N. nigricornis*
- 1885 Marseul: 169 (catalog in French) >> as valid species
- 1888 Seidlitz: 312 (key in German) >> as syn. of *N. nigricornis*; misspelled as *Necrophagus sepulchralis*
- 1889 Seidlitz: 329 (key in German) >> as syn. of *N. nigricornis*; misspelled as *Necrophagus*
- 1891 Heyden et al.: 139 (checklist) >> as *Necrophorus sepulchralis*; as syn. of *N. nigricornis*
- 1895b Reitter: 329 (description of variation in German) >> as syn. of *N. nigricornis*
- 1901 Carret: 328 (description of variation in French) >> missidentified as *N. nigricornis*, compared with *N. nigricornis*
- 1906 Heyden et al.: 247 (checklist) >> as syn. of *N. nigricornis*
- 1910 Jakobson: 612 (checklist in Russian) >> as syn. of *N. nigricornis*
- 1916 Pasquet: 179 (description of variation in French)
- 1922 Sherborn: 5890 (catalog - index)
- 1926a Portevin: 260 (revision: key, descriptions & catalog in French) >> as syn. of *N. nigricornis*
- 1927b Hatch: 363 (revision: key, descriptions & catalog) >> missidentified as *N. nigricornis*
- 1927 Marié: 70, 72 (biology, ecology in French) >> Missidentified as *N. nigricornis*, "Biology" - Hatch 1928
- 1928 Hatch: 153 (catalog) >> as syn. of *N. nigricornis*
- 1932 Hlisnikovsky: 30 (key, descriptions in German) >> missidentified as *N. nigricornis*, in part
- 1933a Shchegoleva-Barovskaya: 179 (revision: key, descriptions & catalog in Russian) >> as syn. of *N. nigricornis*
- 1965 Báguena: 51 (checklist in Spanish) >> as syn. of *N. nigricornis*
- 1984a Bredohl: 11-25 (morphology: stridulatory files in German (English summary)) >> missidentified as *N. nigricornis*
- 1985 Zahradník: 122 (catalog, annotated & figured in German) >> as syn. of *N. nigricornis* (Alps populations)
- 1986 Nishikawa: 98 (catalog in Japanese (English summary)) >> as syn. of *N. nigricornis* (pop in Europe)

- 1993b Kozminykh: 65 (key, descriptions, regional in Russian) >> as syn. of *N. nigricornis*
- 1996 Bertin & Lebboroni: 154 (checklist in Italian (English summary)) >> Missidentified as *N. nigricornis*
- 1999 Háva et al.: 78 (key, descriptions) >> missidentified as *N. nigricornis*, in part
- 2002 Nikolajev & Kozminykh: 114 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as syn. of *N. nigricornis*

Comments: Reitter (1884) was the first author we have found who treated *N. sepulchralis* as a synonym of *N. nigricornis*. All subsequent authors have also treated this name as a synonym. With the exception of Carret (1901), who studied both forms and concluded *N. sepulchralis* should remain in synonymy with *N. nigricornis*, these subsequent treatments include no commentary on this synonymy. This case is unusual because there are at least three easily observed morphological characters that differ between these species and their distributions are quite allopatric. DSS has seen 70 specimens of this relatively rare and montane species and all the locality records fall between 5° and 26° east longitude in the Alps and mountains of southeastern Europe (Italy, southeast France, Austria, Bosnia, Albania, Bulgaria, Croatia, Greece) whereas all the 72 specimens of *N. nigricornis* seen are from the Caucasus Mountains (between 38° and 48° east longitude). Because both of these species are montane, with no records from regions of lower elevations between their distributions, they are clearly separated geographically.

These species differ in the color of their clypeal membranes with that of *N. nigricornis* being usually black or very dark while that of *N. sepulchralis* is usually orange. A few rare exceptions to this pattern have been collected, but if the clypeal membrane doesn't fit the pattern then the hairs of the femoral apices and/or the prosternum will diagnose these species. The femoral apices of *N. nigricornis* have predominately brown hairs while those of *N. sepulchralis* are predominately golden. The prosternum has mostly brown hairs in *N. nigricornis* but mostly golden hairs in *N. sepulchralis* and there is a pattern of golden and brown hairs on the visible abdominal tergites that also differs between these species. These species are clearly sisters and it would be very interesting to compare samples of their mtDNA sequences to determine their genetic similarity.

Nicrophorus sepultor Charpentier, 1825

Type locality: "Germania"[descrip.]

Type depository: ZMHB: Berlin?

Distribution: Palearctic: Europe, (Mongolia?), Kazakhstan, Kyrgyzstan, Transcaucasia, Iran, Russia: Siberia?

1825 Charpentier: 200 (descriptions) >> Orig. comb.: *Nicrophorus sepultor* [!M, S]

1841a Heer: 387 (descriptions in German)

1841b Heer: 9 (checklist in German)

1846b Küster: nr. 39 (catalog in German (English summary))

1847a Gebler: 439

- 1849 Bach: 153 (checklist, brief descriptions in German)
 1849 Gaubil: 55 (catalog in French) >> as valid species
 1849 Redtenbacher: 140 (catalog in German)
 1855 Fairmaire & : 292
 1858 Calwer: 106 (checklist, brief descriptions in German) >> attrib. Gyll., as syn. of
 vestigator
 1858 Redtenbacher: 289 (catalog in German)
 1859 Gebler (checklist)
 1859 Gutfleisch & Bose: 202 (key, descriptions in German) >> as valid species
 1859 Schaum: 36 (catalog in German)
 1860 Motschulsky: 126 (descriptions in French) >> compared with *N. orientalis*
 1862 Schaum: 38 (catalog in German)
 1863 Grenier: 13 (checklist in French)
 1863 Marseul: 88 (catalog in French)
 1866 Marseul: 38 (catalog in French)
 1866 Michow: 411 (description of variation in German)
 1868 Gemminger & Harold: 719 (catalog) >> lapsus calami, misspelled as *N. sepul-*
chralis Charpentier
 1868 Stein: 42 (catalog in Latin)
 1869 Stierlin & Gautard: 116 (checklist in German) >> attrib. Heer
 1870 Rye: 182 (comment [translation of Michow 1866]) >> translation of Michow
 (1866)
 1870 Vollenhoven et al.: 54 (checklist in Dutch)
 1873 Klika: 127 (checklist in Czech)
 1873 Michow: 10 (in German)
 1874 Seidlitz: 217 (key in German)
 1876b Kraatz: 395 (morphology: clypeus in German)
 1876d Kraatz: 397 (comment in German)
 1877 Hickel & Dragicsevics: 27 (checklist in French)
 1877 Stein & Weise: 61 (catalog in Latin)
 1880 Heyden: 87 (checklist in German)
 1883 Heyden et al.: 73 (checklist)
 1884 Marseul: 191 (key, descriptions in French)
 1884 Reitter: 87 (descriptions in German) >> as *Silpha sepultor*
 1885 Marseul: 169 (catalog in French)
 1885 Reitter: 321 (in German)
 1887 Jakovlev: 154 (descriptions) >> compared to *Silpha* (*N.*) *maculiceps*
 1887 Reitter: 216 (descriptions in German) >> as *Silpha sepultor*; compared to *N.*
semenowi
 1888 Seidlitz: 313 (key in German) >> misspelled as *Necrophagus sepultor*
 1889 Seidlitz: 329 (key in German) >> misspelled as *Necrophagus sepultor*
 1891 Heyden et al.: 139 (checklist)
 1895b Reitter: 327 (description of variation in German) >> as *Necrophorus sepultor*
 1896 Acloque: 241 (key in French)
 1896 Heyden: 38 (checklist in German)
 1898 Everts: 413
 1899 Ganglbauer: 164 (key, descriptions, in German)

- 1901 Carret: 331 (description of variation in French)
 1906 Heyden et al.: 247 (checklist)
 1909 Reitter: 240 (in German)
 1910 Jakobson: 612 (checklist in Russian)
 1913 Kniephof: 187 (in German)
 1913 Kuhnt: 335 (in German)
 1913 Roubal (biology, ecology in Czech & German)
 1916 Pasquet: 155 (description of variation in French)
 1916 Schaufuss: 273 (checklist in German)
 1922 Hansen: 114 (key, descriptions, morphology, larval stages in Danish)
 1922 Sherborn: 5890 (catalog - index)
 1924 Portevin: 145 (key, descriptions in French) >> description of variation: 3 unavailable names
 1925 Fuente y Morales: 119 (checklist in Spanish)
 1925 Winkler: 263 (catalog)
 1926 Porta: 333 (key, checklist in Italian)
 1926a Portevin: 218 (revision: key, descriptions & catalog in French)
 1927b Hatch: 359 (revision: key, descriptions & catalog)
 1928 Hatch: 145 (catalog)
 1929 Portevin: 538 (key, intraspecific variation in French)
 1930 Kieseritzky: 60 (descriptions in Russian (German summary))
 1930 Roubal: 240 (catalog in Czech)
 1932 Hlisnikovsky: 28 (key, descriptions in German)
 1933 Rapp: 537 (biology, ecology, distribution in German)
 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin)
 1933a Shchegoleva-Barovskaya: 189 (revision: key, descriptions & catalog in Russian)
 1942 Roubal: 17 (description of variation in Czech) >> fig. of elytral variant
 1949 Horion: 76 (biology, ecology, distribution in German)
 1952 Benick: 33 (biology, ecology in German)
 1952 Novak: 62 (checklist in Croatian)
 1955 Mroczkowski: 23 (key, descriptions in Polish)
 1959 Hicks: 93 (biology, ecology)
 1960 Hansen et al.: 72 (checklist in Danish)
 1965 Báguena: 52 (checklist in Spanish)
 1966a Mroczkowski: 334 (checklist)
 1968 Hansen: 19 (key, descriptions in Danish)
 1968 Petruška: 168 (biology, ecology in Czech (English summary))
 1970 Franz: 214 (checklist, distribution in German)
 1971 Freude: 194 (key in German)
 1973 Audisio (checklist) >> 1972 record of this sp. in Trentino, Italy
 1975b Emetz: 105 (checklist in Russian)
 1976 Petruška: 162 (biology, ecology in Czech (English summary))
 1978 Burakowski et al.: 202 (catalog, distribution, synonymy in Polish)
 1978 Mroczkowski: 239 (biology, ecology in Polish (Russian & German summary))
 1978 Schneider: 199 (morphology: wing folding in German)
 1979 Salgado & Régil: 86 (catalog, annotated & figured in Spanish)
 1979 Silfverberg: 12 (checklist, distribution)

- 1980 Franssen: 46 (morphology: female genitalia in French) >> female genitalia figured
- 1981 Šustek: 40 (key, descriptions, regional in Czech)
- 1982 Wisiniewski (biology, symbionts: mites in German)
- 1984a Bredohl: 11-25 (morphology: stridulatory files in German (English summary))
- 1985 Zahradník: 123 (catalog, annotated & figured in German)
- 1986 Nishikawa: 98 (catalog in Japanese (English summary))
- 1987 Lucht: 67 (catalog in German)
- 1989 Koch: 164 (biology, ecology in German)
- 1990 Erbeling: 116 (biology, ecology in German (English summary))
- 1990 Zahradník: 123 (key in Spanish)
- 1992 Kozminykh: 64 (checklist in Russian)
- 1992 Kozminykh & Esjunin: 68 (checklist in Russian)
- 1992 Silfverberg: 14 (checklist, distribution in English (Finnish & Swedish summaries))
- 1993b Kozminykh: 66 (key, descriptions, regional in Russian)
- 1993 Růžička: 34 (checklist, distribution in English & Czech)
- 1994 Kozminykh & Esjunin: 78 (biology, ecology in English (Russian summary))
- 1994 Růžička: 69 (biology, ecology)
- 1995 Angelini et al.: 10 (checklist, distribution in Italian)
- 1995 Kozminykh: 111 (key in Russian)
- 1995 Kozminykh & Nemkov: 113 (catalog in Russian)
- 1996 Alexandrovich et al.: 17 (checklist, distribution in Russian & English)
- 1996 Bertin & Lebboroni: 150 (checklist in Italian (English summary))
- 1996 Hansen: 93 (checklist, distribution in Danish & English)
- 1997 Kozminykh: 65 (checklist in Russian)
- 1997 Telnov et al. (checklist)
- 1999 Tamutis (comment, distribution in Lithuanian (English summary))
- 2000a Parkhomenko: 89-92 (morphology, larval stages in Ukrainian (English summary)) >> focal species; larval stages descriptions
- 2000b Parkhomenko: 164 (morphology, larval stages in Ukrainian (English summary))
- 2002 Nikolajev & Kozminykh: 121 (catalog, distribution, descriptions, keys, figures in Russian (English summary))

= obrutor Erichson, 1837

Type locality: Mark Brandenburg, Germany [from title]

Type depository: ZMHB: Berlin?

- 1837 Erichson: 225 (species-group catalog in German) >> Orig. comb.: *Necrophorus obrutor* [!N, S]
- 1838 Sturm: 267 (in German)
- 1839 Stephens: 114 (descriptions) >> as valid species
- 1841a Heer: 388 (descriptions in German) >> as syn. of *N. sepultor* Charpentier
- 1849 Bach: 153 (checklist, brief descriptions in German) >> as syn. of *N. sepultor* Charpentier
- 1849 Gaubil: 55 (catalog in French) >> misspelled *N. Abruptor*, as syn. of *N. sepultor* Charpentier

- 1854 Lacordaire: 199 (biology, catalog in French) >> as valid species
 1863 Marseul: 88 (catalog in French) >> as syn. of *N. sepultor* Charpentier
 1868 Gemminger & Harold: 719 (catalog) >> as syn. of *N. sepultor* (misspelled as *N. sepulchralis*)
 1874 Seidlitz: 215 (key in German) >> as syn. of *N. sepultor* Charpentier
 1876d Kraatz: 397 (comment in German) >> as syn. of *N. sepultor*
 1877 Stein & Weise: 61 (catalog in Latin) >> as syn. of *N. sepultor* Charpentier
 1883 Heyden et al.: 73 (checklist) >> as syn. of *N. sepultor*
 1884 Marseul: 191 (key, descriptions in French) >> as syn. of *N. sepultor*
 1884 Reitter: 87 (descriptions in German) >> as syn. of *Silpha sepultor*
 1885 Marseul: 169 (catalog in French) >> as syn. of *N. sepultor* Charpentier
 1888 Seidlitz: 312 (key in German) >> as syn. of *N. sepultor*; misspelled as *Necrophagus obrutor*
 1889 Seidlitz: 328 (key in German) >> as syn. of *N. sepultor*; misspelled as *Necrophagus obrutor*
 1891 Heyden et al.: 139 (checklist) >> as syn. of *N. sepultor*
 1895b Reitter: 327 (description of variation in German) >> as syn. of *N. sepultor*
 1901 Carret: 331 (description of variation in French) >> as syn. of *N. sepultor*
 1906 Heyden et al.: 247 (checklist) >> as syn. of *N. sepultor*
 1910 Jakobson: 612 (checklist in Russian) >> as syn. of *N. sepultor*
 1926a Portevin: 254 (revision: key, descriptions & catalog in French) >> as syn. of *N. sepultor*
 1928 Hatch: 145 (catalog) >> as syn. of *N. sepultor*
 1930 Kieseritzky: 62 (descriptions in Russian (German summary)) >> as syn. of *N. sepultor*
 1933a Shchegoleva-Barovskaya: 189 (revision: key, descriptions & catalog in Russian) >> as syn. of *N. sepultor*
 1965 Báguena: 52 (checklist in Spanish) >> as syn. of *N. sepultor*
 1993b Kozminykh: 66 (key, descriptions, regional in Russian) >> as syn. of *N. sepultor*
 1995 Kozminykh & Nemkov: 113 (catalog in Russian) >> as syn. of *N. sepultor*; misspelled as *N. obirutor*
 2002 Nikolajev & Kozminykh: 121 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as syn. of *N. sepultor*

***Nicrophorus smefarka* Háva, Schneider & Růžička, 1999**

Type locality: “China: Sichuan, Gongga Shan, Hailuogou, above camp 3, 3200m 29° 35N 102° 00E” [label]

Type depository: JSC: Praha [!] holotype female

Distribution: Oriental: China: Sichuan, Shaanxi* & Hubei*

1999 Háva et al.: 74 (key, descriptions) >> Orig. comb.: *Nicrophorus smefarka* [!S]

***Nicrophorus tenuipes* Lewis, 1887** desig. lectotype

Type locality: “JAPAN: Chiuzenji”, [36.73°N, 139.48°E, label]

Type depository: BMNH: London [!] lectotype male, 2 paralectotypes

Distribution: Palearctic: northeastern China, Japan, Korea, Russia- Amur, Ussuri reg., Kuriles, Sakhalin

- 1887 Lewis: 341 (description) >> Orig. comb.: *Necrophorus tenuipes* [!N, S]
 1910 Jakobson: 612 (checklist in Russian) >> as valid species
 1914b Portevin: 224 (description of variation in French) >> as valid species
 1922 Portevin: 55 (descriptions in French) >> as valid species
 1923 Portevin: 304 (key, descriptions in French) >> as valid species
 1925 Winkler: 263 (catalog) >> as valid species
 1926a Portevin: 203 (revision: key, descriptions & catalog in French) >> as valid species
 1927b Hatch: 354 (revision: key, descriptions & catalog) >> as *N. humator* subsp. *tenuipes*
 1928 Hatch: 132 (catalog) >> as *N. humator* subsp. *tenuipes*
 1929 Kizeritsky (in Russian)
 1929 Kôno: 161, 164 (checklist, annotated) >> as *N. humator* subsp. *tenuipes*
 1932 Hlisenkovsky: 26 (key, descriptions in German) >> as valid species
 1933 Semenov-Tian-Shanskij: 151 (catalog in Russian & Latin) >> as valid species
 1933a Shchegoleva-Barovskaya: 172 (revision: key, descriptions & catalog in Russian) >> as valid species
 1936 Cho: 155 (checklist in Korean) >> as *N. humator* subsp. *tenuipes*
 1937 Mochizuki & Tsunekawa (checklist)
 1939 Masui (checklist)
 1944 Arnett: 4 (morphology: female genitalia) >> as *N. humator* subsp. *tenuipes*
 1953 Mazokhin-Porshnyakov: 235 (descriptions, catalog in Russian) >> as valid species
 1955a Nakane: 48 (checklist, brief descriptions)
 1955b Nakane: 53 (key, descriptions in Japanese)
 1957 Cho (catalog in Korean)
 1963 Nakane: 75 (checklist, brief descriptions in Japanese)
 1964 Kamimura et al.: A19 (biology, ecology) >> as valid species
 1966c Mroczkowski: 436 (checklist) >> as valid species
 1970 Gersdorf: 368 (morphology: female genitalia in German) >> as possible syn. of *N. humator*
 1971 Kryzhanovskiy: 212 (in Russian (English summary)) >> as valid species
 1973 Krivolutskaya: 70 (checklist in Russian (with electronic english translation)) >> as valid species
 1975 Katakura & Fukuda: 78 (biology, ecology) >> as valid species
 1980 Schawaller: 153 (checklist in German (English summary)) >> as valid species
 1985a Kurosawa: 247 (checklist) >> color habitus figure pl. 44
 1986 Cho & Lee: 20 (phylogenetics) >> as valid species
 1986 Nishikawa: 99 (catalog in Japanese (English summary)) >> as valid species
 1988 Cho et al.: 9 (phylogenetics) >> as valid species
 1989 Lafer: 336 (key, descriptions, description of variation in Russian) >> as valid species
 1989 Martin: 876-879 (biology, ecology) >> as valid species
 1991 Ohkawara: 463-467 (biology, ecology in Japanese (English summary)) >> as valid species; focal species
 1992 Cho & Lee: 21 (revision: key, descriptions & catalog) >> as valid species
 1992 Kozminykh: 64 (checklist in Russian) >> as valid species

- 1992 Ôhara & Yabuki: 57 (checklist in Japanese (English summary)) >> as valid species
- 1993b Kozminykh: 63 (key, descriptions, regional in Russian) >> as valid species
- 1994a Ôhara: 58 (checklist in Japanese) >> as valid species
- 1995 Ôhara et al.: 68 (checklist in Japanese (English summary)) >> as valid species
- 1997 Krivolutskaya: 2 (checklist) >> as valid species; (translation of Krivolutskaya 1973)
- 1997 Ôhara: 105 (checklist in Japanese (English summary)) >> as valid species
- 1998 Harusawa: 34 (key in Japanese)
- 1998 Ohkawara et al.: 553 (biology, ecology) >> as valid species
- 1999 Háva et al.: 77 (key, descriptions) >> as valid species
- 1999 Suzuki: 207 (biology, ecology, behavior) >> as valid species
- 2000c Suzuki: 38 (biology, ecology, behavior in Japanese with English abstract)
- 2002 Nikolajev & Kozminykh: 109 (catalog, distribution, descriptions, keys, figures in Russian (English summary))

= fasciatus Hlisenkovsky, 1932 NEW SYNONYM of *N. tenuipes* Lewis

Type locality: "Japan: Kamaishi", [Japan: Honshu, descrip.]

Type depository: NMPC: Praha [not found; lost?]

- 1932 Hlisenkovsky: 22 (key, descriptions in German) >> Orig. comb.: *Necrophorus fasciatus* [!N, S]
- 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin) >> as valid species
- 1986 Nishikawa: 98 (catalog in Japanese (English summary)) >> as doubtfully valid species

= vicinus Shchegoleva-Barovskaya, 1933 CONFIRMED as SYNONYM of *N. tenuipes* Lewis

Type locality: "South Ussuri Territory: Mt. of St. Ilya, Spassky distr." [Russia; descr.]

Type depository: ZMAS: St. Petersburg [!] holotype female

- 1933a Shchegoleva-Barovskaya: 172 (revision: key, descriptions & catalog in Russian) >> Orig. comb.: *Necrophorus (Necrocleptes) vicinus* [!N, S]
- 1933 Semenov-Tian-Shanskij: 155 (catalog in Russian & Latin) >> as valid species
- 1953 Mazokhin-Porshnyakov: 235 (descriptions, catalog in Russian) >> as valid species
- 1971 Kryzhanovskiy: 212 (in Russian (English summary)) >> as syn. of *N. tenuipes*
- 1973 Krivolutskaya: 70 (checklist in Russian (with electronic english translation)) >> as syn. of *N. tenuipes*
- 1986 Nishikawa: 99 (catalog in Japanese (English summary)) >> as probable syn. of *N. tenuipes*
- 1992 Kozminykh: 64 (checklist in Russian) >> as syn. of *N. tenuipes*
- 1993b Kozminykh: 63 (key, descriptions, regional in Russian) >> as syn. of *N. tenuipes*
- 2002 Nikolajev & Kozminykh: 109 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as syn. of *N. tenuipes*

Comments: Lectotype data for *Necrophorus tenuipes* Lewis, 1887: 341 "Necrophorus tenuipes Type (male symbol) Lewis"; /"Type"; / JAPAN: Chiuzenji, [36.73°N,

139.48°E,]19-24 August 1881 (coll. G. Lewis) / red rectangular label with double black border "LECTOTYPE *Nicrophorus tenuipes* (Lewis 1887) det. Sikes 1997"- male (London [BMNH]); pronotal width: 5.75 mm.

Paralectotype data "Nicrophorus tenuipes Type (female symbol) Lewis" / "Co-Type" / JAPAN: Chiuzenji, [36.73° ' N, 139.48° ' E,]19-24 August 1881 (coll. G. Lewis) / red rectangular label with double black border "PARALECTOTYPE *Nicrophorus tenuipes* (Lewis 1887) det. Sikes 1997"- male (London [BMNH]); *Nicrophorus tenuipes* Type (female symbol) Lewis / "Type" on card / JAPAN: Nikko., [36.75° ' N, 139.6° ' E,]10-18 August 1881 (coll. G. Lewis) / red rectangular label with double black border "PARALECTOTYPE *Nicrophorus tenuipes* (Lewis 1887) det. Sikes 1997"- male (London [BMNH]).

Hlisnikovsky (1932) described a new species, *N. fasciatus*, from Japan. Although the types could not be found in the Praha collection, where the rest of Hlisnikovsky's types are stored, the description of this species suggests it is a fasciate example of *N. tenuipes* which is only known to have all black elytra.

***Nicrophorus tomentosus* Weber, 1801**

Type locality: "America" [descrip.]

Type depository: ZMUC: Kiel?

Distribution: Nearctic: northeastern & northcentral North America

- 1792 Frölich: 126 (descriptions in German) >> description of variation: 1 unavailable name
- 1801 Weber: 47 (descriptions) >> Orig. comb.: *Nicrophorus tomentosus* [!S]
- 1837 Kirby: 96 (descriptions) >> as syn. of *N. velutinus*
- 1840 Laporte: 2 (descriptions in French) >> as syn. of *N. velutinus*
- 1853 LeConte: 277 (descriptions) >> as syn. of *N. velutinus*
- 1853 Melsheimer: 39 (catalog) >> as syn. of *N. velutinus*
- 1854 Emmons: 57 (descriptions)
- 1859c LeConte: 37 (checklist) >> as syn. of *N. velutinus*
- 1866 Bracket: 23-24 >> "Biology" - Hatch 1928
- 1868 Gemminger & Harold: 719 (catalog) >> as syn. of *N. velutinus*
- 1873 Crotch: 37 (checklist) >> as *Silpha tomentosa*
- 1878b Hubbard & Schwarz: 650 (checklist)
- 1880 Horn: 234 (revision: key, descriptions & catalog) >> as valid species
- 1881 Schaupp: 37-38 (morphology, larval stages) >> as valid species (in title) "Larva" - Hatch 1928
- 1882 Fletcher: 72 (biology) >> "Biology" - Hatch 1928
- 1885 Henshaw: 26 (checklist)
- 1886 Lintner: 118 >> "Biology; (parasite of)" - Hatch 1928
- 1895 Clark: 61 (biology, behavior) >> feeding on maggots
- 1895 Hamilton: 324 (checklist)
- 1902 Dury: 12 (checklist)
- 1904 Davis: 18 (checklist) >> as valid species
- 1910 Barkowski: 80 (key, descriptions, regional in German) >> as valid species
- 1910 Blatchley: 275 (key, descriptions, regional) >> as valid species

- 1910 Smith: 229 (checklist)
 1911 Wickham: 11 (checklist)
 1915 Jaques: 526 (biology, ecology) >> as valid species
 1920 Britton: 224 (checklist)
 1920 Leng: 86 (catalog) >> as valid species
 1922 Sherborn: 6536 (catalog - index)
 1924 Hatch: 560 (checklist)
 1926a Portevin: 245 (revision: key, descriptions & catalog in French) >> as syn. of *N. velutinus*
 1927a Abbott: 39 (description of variation) >> as valid species; note on elytral color variant
 1927b Abbott: 208-216 (biology, behavior) >> as valid species
 1927c Abbott: 552 (biology, behavior) >> as valid species
 1927a Hatch: 5, 7, 19 (key, descriptions, description of variation) >> as valid species
 1927b Hatch: 363 (revision: key, descriptions & catalog) >> as valid species; descr. of variation: 4 unavailable names
 1927 Steele: 77-81 (biology, behavior) >> "Biology" - Hatch 1928
 1928 Hatch: 149 (catalog) >> as valid species
 1928 Leonard: 271 (checklist)
 1930 Johnson: 44 (checklist)
 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin) >> as valid species
 1933 Wolcott & Montgomery: 131 (comment: ecology) >> as valid species; attracted with snake carrion
 1934b Pukowski: 54 (morphology, larval stages in German) >> as valid species; cites Schaupp (1882)
 1935 Balduf: 70 (biology, ecology, behavior) >> as valid species
 1936 Meserve: 133 (checklist, distribution)
 1938 Brimley: 135 (checklist)
 1944 Arnett: 5, 24 (morphology: female genitalia) >> as valid species; female genitalia figured, pl. 4, fig. 2
 1944 Blackwelder: 100 (catalog)
 1944 Milne & Milne: 311 (biology, behavior) >> as valid species
 1945 Löding: 32 (checklist) >> as valid species
 1946 Procter: 121 (checklist, ecology)
 1947 Dethier: 287 (biology, behavior) >> as valid species
 1948 Scheerpeltz & Höfler: 247 (biology, ecology in German)
 1949 Bliss: 201 (morphology: sexual dimorphism) >> as valid species
 1949 Hoffmann et al.: 10 (comment: ecology) >> as valid species
 1951 Jaques: 83 (key, descriptions)
 1957 Walker: 273 (biology, ecology) >> as valid species
 1958 Madge: 43 (revision: key, descriptions, ecology, distributions)
 1958 Reed: 232 (biology, ecology)
 1961 Dillon & Dillon: 176 (key, descriptions)
 1966 Payne & Crossley: 56 (biology, ecology)
 1968a Shubeck: 565 (methods) >> as valid species
 1968b Shubeck: 256 (biology, behavior) >> as valid species
 1969 Shubeck: 143 (biology, ecology)

- 1970 Gersdorf: 366 (morphology: female genitalia in German) >> as syn. of *N. velutinus*
- 1970 Kirk: 25 (checklist)
- 1970 Payne & King: 230 (biology, ecology)
- 1970 Shubeck: 67 (biology, ecology)
- 1971 Shubeck: 43 (biology, behavior) >> as valid species
- 1972 Swan & Papp: 356 (description)
- 1973 Blackwelder: 5 (checklist, synonymy)
- 1974 Pirone: 661 (biology, ecology)
- 1975 Baldwin: 21 (key, description, distribution, ecology)
- 1975 Kirk & Balsbaugh: 52 (checklist)
- 1975 Shubeck: 37 (biology, behavior) >> as valid species
- 1976 Milne & Milne: 88 (popular review) >> as valid species
- 1976 Shubeck: 267 (biology, ecology) >> as valid species
- 1977 Headstrom: 106 (description)
- 1977 Shubeck et al.: 13 (biology, ecology)
- 1979 Miller & Peck: 98 (fossils) >> as valid species
- 1980 Arnett et al.: 128 (key, descriptions)
- 1980 Davis: 247 (biology, conservation) >> as valid species
- 1980 Milne & Milne: 550 (field guide, brief descriptions, ecology)
- 1981 Kozol: 20 (biology, conservation, genetics) >> as valid species
- 1981 Shubeck et al.: 14 (biology, ecology) >> as valid species
- 1982a Anderson: 262 (key, descriptions, morphology, larval stages) >> as valid species
- 1982c Anderson: 1316 (biology, ecology) >> as valid species
- 1982 Shubeck & Blank (biology, ecology) >> as valid species
- 1982 Wilson: 293-296 (biology, symbionts: mites) >> as valid species; focal species
- 1983 White: 121 (field guide) >> descriptive note
- 1983 Wilson: 858-870 (biology, symbionts: mites) >> as valid species; focal species
- 1984 Lord & Burger (biology, ecology)
- 1984 Papp: 70 (descriptions) >> brief description
- 1984 Shubeck (biology, ecology) >> as valid species
- 1984 Wilson & Fudge: 195-203 (biology, ecology) >> as valid species; focal species
- 1984 Wilson & Knollenberg: 165-170 (biology, behavior, physiology) >> as valid species; focal species
- 1984 Wilson et al.: 205-216 (biology, ecology) >> as valid species; focal species
- 1985 Anderson & Peck: 70 (revision: key, descriptions & catalog) >> as valid species
- 1985 Peck & Anderson: 287 (key, descriptions, phylogenetics) >> as valid species
- 1985 Shubeck: 164 (biology, ecology) >> as valid species
- 1986 Fisher & Tuckerman: 22 (morphology: mimicry) >> as valid species
- 1986 Nishikawa: 98 (catalog in Japanese (English summary)) >> as valid species
- 1987 Peck & Kaulbars: 53 (checklist) >> as valid species
- 1987 Scott & Traniello: 693-696 (biology, behavior, physiology) >> as valid species; focal species
- 1987 Staines: 16 (key, descriptions) >> Maryland records
- 1987 Wilson & Knollenberg: 139-159 (biology, symbionts: mites) >> as valid species; focal species
- 1988 Scott et al.: 325-331 (biology, ecology) >> as valid species; focal species

- 1989 Scott & Traniello: 32-36 (popular review) >> as valid species; focal species
- 1989 Solter et al.: 354-359 (biology, symbionts: bacteria) >> as valid species; gut bacteria
- 1989 Staines: 69 (key, descriptions, distributions) >> Maryland records
- 1990 Peck: 1121 (key) >> as valid species
- 1990 Scott & Traniello: 274-283 (biology, ecology, behavior) >> as valid species; focal species
- 1990c Trumbo: 1-11 (biology, behavior) >> as valid species; focal species
- 1990d Trumbo: 491-500 (biology, behavior) >> as valid species; focal species
- 1991 Campbell: 86 (catalog, distribution)
- 1991 Laplante et al.: 29 (checklist in French)
- 1991 Raithel: 2 (biology, conservation) >> as valid species
- 1992 Beninger & Peck: 79-86 (biology, ecology) >> as valid species
- 1992 Brown & Wilson: 463-478 (biology, symbionts: mites) >> as valid species; focal species
- 1992 Robertson: 191 (biology, ecology) >> as valid species
- 1992 Trumbo: 289-298 (biology, behavior) >> as valid species; focal species
- 1993 Creighton et al.: 276 (biology, conservation) >> as valid species
- 1993 May: 22 (biology, behavior)
- 1993 Peck & Miller: 9 (species-group catalog) >> as valid species
- 1993 Scott & Williams (biology, behavior) >> as valid species
- 1993 Shubeck: 89 (biology, ecology) >> as valid species
- 1993 Trumbo & Wilson: 332-339 (biology, behavior) >> as valid species; focal species
- 1994 Beninger: 135-143 (biology, ecology in English (French summary)) >> as valid species
- 1994 Berdela et al.: 49 (biology, symbionts: bacteria) >> as valid species; gut bacteria
- 1994 Brown & Wilson: 3 (biology, symbionts: mites) >> as valid species; focal species
- 1994 Neal et al.: 128 (checklist) >> as valid species
- 1994a Scott: 367-373 (biology, ecology, behavior) >> as valid species; focal species
- 1994b Scott: 538 (biology, behavior) >> as valid species
- 1995 Lingafelter: 221 (biology, ecology) >> as valid species
- 1995 Lomolino et al.: 609 (biology, conservation in English (Spanish summary)) >> as valid species
- 1996 Downie & Arnett: 357 (key, descriptions, regional) >> as valid species
- 1996 Dunn: 169 (catalog) >> as valid species
- 1996 Lomolino & Creighton: 238 (biology, conservation) >> as valid species
- 1996 Palestini et al.: 435 (larval descriptions, phylogenetics) >> as valid species
- 1996 Ratcliffe: 82 (revision: key, descriptions & catalog) >> as valid species
- 1996 Scott: 376-382 (popular review) >> as valid species; focal species
- 1996b Trumbo: 118 (methods, biology, behavior) >> as valid species
- 1997 Backlund & Marrone: 56 (biology, conservation) >> as valid species
- 1997 Eggert & Müller: 218 (biology, review of: ecology, behavior) >> as valid species
- 1997 Scott (biology, behavior) >> as valid species
- 1997 Shubeck: 289 (biology, ecology) >> as valid species
- 1998 Carlton & Rothwein: 183 (biology, conservation) >> as valid species
- 1998 Coyle & Larsen: 163 (biology, ecology)
- 1998 Peck & Thomas: 37 (checklist, distribution)

- 1998b Scott: 598+ (biology, review of: ecology, behavior) >> as valid species
 1998 Trumbo & Thomas: 85-95 (biology, ecology) >> as valid species; focal species
 1999 Bedick et al.: 177 (biology, conservation) >> as valid species
 1999 De Jong & Chadwick: 836 (biology, ecology)
 1999 Háva et al.: 78 (key, descriptions) >> as valid species
 2000 Eggert & Sakaluk: 263 (biology, behavior) >> as valid species
 2000 Sikes & Peck: 393 (descriptions, phylogenetics) >> as valid species
 2000 Sikes & Peck: 395 (descriptions, phylogenetics) >> as valid species
 2000 Szalanski et al.: 590 (biology, conservation, phylogenetics, genetics) >> as valid species
 2000 Trumbo & Bloch: 247 (biology, ecology, conservation) >> as valid species
 2000 Werner & Raffa: 145 (comment: ecology) >> as valid species
 2001 Trumbo et al.: 554 (biology, ecology, behavior) >> in lab *P. morio* was a successful parasite of this sp.

= *aurigaster* Portevin, 1925

Type locality: "États-Unis" [descrip.]

Type depository: MNHN: Paris [not found]

- 1925 Portevin: 170 (description of variation in French) >> Orig. comb.: *Necrophorus velutinus* var. *aurigaster* [!N, S]
 1926a Portevin: 245 (revision: key, descriptions & catalog in French) >> as *N. velutinus* var. *aurigaster*
 1928 Hatch: 150 (catalog) >> as *N. velutinus* ab. *aurigaster*
 1944 Arnett: 5 (morphology: female genitalia) >> as *N. tomentosus* var. *aurigaster*
 1985 Anderson & Peck: 70 (revision: key, descriptions & catalog) >> as syn. of *N. tomentosus*
 1993 Peck & Miller: 9 (species-group catalog) >> as syn. of *N. tomentosus*
 1996 Ratcliffe: 82 (revision: key, descriptions & catalog) >> as syn. of *N. tomentosus*

= *marginatus* Gistel, 1857 (junior primary homonym, not Fabricius 1801) NEW

SYNONYM of *N. tomentosus*

Type locality: "America borealis" [descrip.]

Type depository: ZSMC: München?

- 1833 Dejean: 117 (catalog in French) >> nomen nudem; *N. velutinus* var. *marginatus* Dejean
 1857b Gistel: 565 (in German) >> Orig. comb.: *Necrophorus marginatus*; (ex. Dejean catalog); New junior primary homonym, not *N. marginatus* Fabricius 1801 [!N]

= *requiescator* Gistel, 1848 REVISED SYNONYM of *N. tomentosus*

Type locality: "North America" [descrip.]

Type depository: ZSMC: München?

- 1848 Gistel: 190 (descriptions in German) >> Orig. comb.: *Necrophorus Requiescator*
 1857b Gistel: 565 (in German) >> as syn. of *N. marginatus*
 1917 Strand: 84 (descriptions in German) >> as syn. of *N. marginatus*

- 1928 Hatch: 147 (catalog) >> as syn. of *N. marginatus*
 1944 Arnett: 4 (morphology: female genitalia) >> as syn. of *N. marginatus*
 1985 Anderson & Peck: 63 (revision: key, descriptions & catalog) >> as syn. of *N. marginatus*
 1993 Peck & Miller: 8 (species-group catalog) >> as syn. of *N. marginatus* (cited as “syn. following Hatch 1928”)
 1996 Ratcliffe: 72 (revision: key, descriptions & catalog) >> as syn. of *N. marginatus*

= *velutinus* Fabricius, 1801 CONFIRMED as SYNONYM of *N. tomentosus* Weber

Type locality: “in Carolina”, [USA, label]

Type depository: ZMUC: Kiel; syntype- MNHN: Paris [!] 2 (or more) syntypes

- 1801 Fabricius: 334 (descriptions) >> Orig. comb.: *Necrophorus velutinus* [!N, S]
 1806 Melsheimer: 16 (catalog) >> misspelled as *Microphorus velutinus*
 1807 Herschel: 271 (descriptions in German) >> as valid species
 1821 Dejean: 42 (catalog) >> auth. attrib. P. B. as syn. of *N. marginatus*, auth. attrib. F. as valid species
 1833 Dejean: 117 (catalog in French) >> as valid species
 1836 Dejean: 131 (catalog in French) >> as valid species
 1837 Kirby: 96 (descriptions) >> as valid species & senior syn. of *N. tomentosus* [first reviser]
 1839 Matzek: 23 (morphology: internal & external anatomy in Latin) >> as *N. velutinum*
 1840 Laporte: 2 (descriptions in French) >> as valid species & senior syn of *N. tomentosus*
 1853 LeConte: 277 (descriptions) >> as valid species & senior syn of *N. tomentosus*; with note discussing priority of *N. velutinus* F. vs. *N. tomentosus* Web.
 1853 Melsheimer: 39 (catalog) >> as senior syn. of *N. tomentosus*
 1854 Lacordaire: 200 (biology, catalog in French) >> as valid species
 1859c LeConte: 37 (checklist) >> as valid species
 1862 Osten-Sacken: 409 (biology, behavior in German) >> as valid species
 1868 Gemminger & Harold: 719 (catalog) >> as valid species
 1873 Crotch: 37 (checklist) >> as *Silpha velutina*, as syn. of *Silpha tomentosa*
 1877 Provancher: 224 (in French)
 1880 Horn: 315 (revision: key, descriptions & catalog) >> as syn. of *N. tomentosus*
 1881 Schaupp: 38 (morphology, larval stages) >> as valid species (although *N. tomentosus* is name used in title)
 1903 Portevin: 331 (descriptions in French) >> as valid species
 1908 Heyne & Taschenberg: 38 (descriptions in German) >> as valid species, with *N. tomentosus* as syn.
 1920 Leng: 86 (catalog) >> as syn. of *N. tomentosus*
 1922 Sherborn: 6835 (catalog - index)
 1925 Portevin: 170 (description of variation in French) >> as valid species & senior syn. of *N. tomentosus*; description of variation: 1 unavailable name
 1926a Portevin: 245 (revision: key, descriptions & catalog in French) >> as valid species, as senior syn. of *N. tomentosus*
 1928 Hatch: 150 (catalog) >> as syn. of *N. tomentosus*

- 1944 Arnett: 5 (morphology: female genitalia) >> as syn. of *N. tomentosus*
 1970 Gersdorf: 366 (morphology: female genitalia in German) >> as valid species & senior of *N. tomentosus*
 1985 Anderson & Peck: 70 (revision: key, descriptions & catalog) >> as syn. of *N. tomentosus*
 1993 Peck & Miller: 9 (species-group catalog) >> as syn. of *N. tomentosus*
 1996 Ratcliffe: 82 (revision: key, descriptions & catalog) >> as syn. of *N. tomentosus*

Comments: See comments for *N. germanicus* and *N. interruptus* regarding the names of Gistel. We herein move *N. requiescator* Gistel, 1848, previously considered a synonym of *N. marginatus*, to synonymy under *N. tomentosus*. We also synonymize the overlooked, junior homonym *N. marginatus* Gistel under *N. tomentosus*. Gistel described *N. requiescator* as having a pronotum with “silky hair”, black antennal clubs, and the posterior elytral fascia narrow; all traits which unambiguously fit the description of *N. tomentosus*.

The names *N. tomentosus* Weber 1801 and *N. velutinus* Fabricius 1801 were described in the same year for the same species. The name *N. tomentosus* has been considered the valid name for the species since Hatch (1927) stated that Sherborn (1922) indicated the Weber 1801 publication “probably antedates” Fabricius 1801. As a result the Weber name has been considered valid since 1927 and has appeared in dozens of publications. Sherborn’s (1922) statement of “probably” is opinion and is insufficient to resolve this case. Article 24 of the ICZN 4 specifies how to determine precedence between simultaneously published names. If the month (or day within the same month) of the two publications cannot be established, ICZN 24.2 states that precedence is determined by the first reviser. The first reviser is the first author who cites and selects from both names. In this case the first reviser is Kirby (1837) who selected *N. velutinus* as the valid name. Unfortunately the name *N. velutinus* cannot be made a *nomen oblitum* as it fails to meet the criteria of ICZN 23.9.1.1. because this name was used as valid after 1899 (by Portevin 1925, 1926a). We are currently attempting to determine the month of publication for these two works, which might show that Weber's name is the older, and thus valid name; however, if this is not true then we will put this case before the Commission of the ICZN for a ruling under the plenary power to preserve stability and retain *N. tomentosus* as the valid name, which it currently is not. The ICZN (23.9.3) states that while such a case is under consideration “use of the junior name is to be maintained.”

Nicrophorus ussuriensis Portevin, 1923

Type locality: “Ussuri” [Russian far east: S. Maritime territory; Ussuri River? border of ne China & Russia; label]

Type depository: MNHN: Paris [!] holotype female

Distribution: Oriental & Palearctic: China, Korea, Russia: Ussuri

- 1923 Portevin: 233 (key, descriptions in French) >> Orig. comb.: *Nicrophorus ussuriensis* [!N, S]

- 1925 Winkler: 263 (catalog)
 1926a Portevin: 201 (revision: key, descriptions & catalog in French)
 1927b Hatch: 354 (revision: key, descriptions & catalog)
 1928 Hatch: 132 (catalog)
 1932 Hlisnikovsky: 26 (key, descriptions in German)
 1932 Portevin: 59 (morphology in French)
 1933 Semenov-Tian-Shanskij: 150 (catalog in Russian & Latin)
 1933a Shchegoleva-Barovskaya: 175 (revision: key, descriptions & catalog in Russian)
 1953 Mazokhin-Porshnyakov: 236 (descriptions, catalog in Russian)
 1986 Nishikawa: 99 (catalog in Japanese (English summary))
 1989 Lafer: 336 (key, descriptions, description of variation in Russian)
 1992 Kozminykh: 64 (checklist in Russian)
 1993b Kozminykh: 67 (key, descriptions, regional in Russian) >> ungrouped; incertae sedis
 1999 Cho & Kwon: 223 (distribution note) >> first record from Korea
 2002 Nikolajev & Kozminykh: 127 (catalog, distribution, descriptions, keys, figures in Russian (English summary))

Nicrophorus validus Portevin, 1920

Type locality: “Inde” [n India; label]

Type depository: MNHN: Paris [!] holotype male

Distribution: Oriental: Himalayas: India: Sikkim*, Nepal*, Tibet*

- 1920 Portevin: 401 (descriptions in French) >> Orig. comb.: *Nicrophorus validus* [!N, S]
 1922 Portevin: 54 (descriptions in French) >> compared to *N. armeniacus*
 1924 Portevin: 291 (key, descriptions in French)
 1926a Portevin: 232 (revision: key, descriptions & catalog in French)
 1928 Hatch: 136 (catalog)
 1933 Semenov-Tian-Shanskij: 153 (catalog in Russian & Latin) >> as type sp. of new subgenus *Nicrophorindus*
 1933a Shchegoleva-Barovskaya: 165 (revision: key, descriptions & catalog in Russian) >> as *Nicrophorus (Nicrophorindus) validus*, in key
 1964c Hlisnikovsky: 132 (descriptions in German) >> compared to *N. ornatus*
 1980 Madge: 356 (catalog)
 1986 Nishikawa: 99 (catalog in Japanese (English summary))
 1999 Háva et al.: 78 (key, descriptions)

Nicrophorus vespillo (Linnaeus, 1758)

Type locality: “in Europae, Americae Cadaveribus” [descrip.]

Type depository: LSUK: London

Distribution: Palearctic: Europe, Mongolia, Russian plain, Kazakhstan, Caucasus, Turkey, Iran, Kyrgyzstan

- 1752 Gleditsch: 29-53 (biology in German) >> “Larva” - Hatch 1928
 1758 Linnaeus: 359 (descriptions in Latin) >> Orig. comb.: *Silpha Vespillo* [!N, S]
 1761 Linnaeus: 147 (catalog in Latin)
 1761 Poda: 23 (catalog)

- 1761 Rösel von Rosenhof: 20 (biology, behavior in German) >> "Larva" -Hatch 1928
 1761 Sulzer: 51, pl. 2, fig. 11 (in German)
 1763 Scopoli: 13 (checklist) >> as *Dermestes vespillo*
 1764 Geoffroy: 98 (in French) >> as *Dermestes vespillo*
 1764 Müller: 4 >> as *Nicrophorus Vespillo*
 1765 Gleditsch: 200-227 (in German) >> "Larva" - Hatch 1928
 1765 Pontoppidan: 200 (in German)
 1767 Linnaeus: 562 (catalog in Latin)
 1769 Schaeffer: 9 (catalog)
 1774 DeGeer: 174 (biology in French) >> "Larva" - Hatch 1928
 1776 Müller: 96 (catalog)
 1778 Bergsträsser: 10 (catalog in German)
 1781 Fabricius: 84 (catalog in Latin)
 1781 Laicharting: 87 (catalog)
 1781 Schrank: 41 (checklist)
 1783 Herbst: 32 (descriptions in German) >> as *Nicrophorus Vespillo*
 1785 Fourcroy: 17 (descriptions)
 1787 Fabricius: 48 (catalog)
 1789 Roemer: 34 (catalog)
 1789 Villers: 73 (catalog)
 1790 Brahm: 66
 1790 Linnaeus: 1616 (catalog in Latin)
 1790 Olivier: no.10, p. 5 (descriptions in French) >> habitus figured
 1790 Rossi: 168
 1790 Scriba: 168 (in German)
 1792 Fabricius: 247 (descriptions)
 1792 Frölich: 125 (descriptions in German)
 1793 Herbst: 157 (catalog in German)
 1793 Panzer: 21 (catalog in German)
 1793 Schwarz: 41 (in German)
 1795 Panzer: 118 (catalog in German)
 1798 Cederhielm: 45 (catalog)
 1798 Illiger: 354 (catalog in German)
 1798 Paykull: 324
 1798 Schrank: 420 (in German)
 1799 Hausmann: 33 (descriptions in German) >> compared to *N. bifasciatus*
 1801 Fabricius: 335 (descriptions)
 1802 Marsham: 114 >> as *Silpha vespillo*
 1803 Blumenbach: 324
 1804 Latreille: 270
 1807 Herschel: 274 (descriptions in German)
 1807 Latreille: 4 (catalog)
 1808 Gyllenhal: 259 (descriptions, catalog)
 1808 Schönherr: 119 (in German)
 1815 Leach: 88 (descriptions)
 1817 Gebler: 319 (descriptions in Latin) >> compared to *N. morio*
 1821 Dejean: 42 (catalog)

- 1824 Zetterstedt: 151 (descriptions) >> compared with *N. investigator*
 1825 Charpentier: 201 (descriptions) >> compared to *N. sepultor*
 1825 Curtis: pl. 71 (checklist) >> text accompanying Plate 71.
 1825 Duftschmid: 111 (descriptions in German)
 1825 Say: 178 (description) >> compared to *N. orbicollis*
 1827 Gyllenhal: 307 (descriptions)
 1829b Stephens: 75 (catalog)
 1830 Stephens: 20 (biology, descriptions)
 1833 Dejean: 117 (catalog in French) >> auth. attrib. Fabricius
 1833 Samouelle: 4-2 (descriptions) >> compared to *N. anglicus*
 1835a Faldermann: 217 (descriptions) >> compared to *N. nigricornis*
 1836 Dejean: 131 (catalog in French)
 1837 Erichson: 224 (species-group catalog in German)
 1838 Sturm: 60 (in German) >> "Larva" - Hatch 1928
 1838 Zetterstedt: 109 (description)
 1839 Matzek: 15 (morphology: internal & external anatomy in Latin) >> as *N. Vespillonem* and *N. Vespillonem*
 1839 Stephens: 114 (descriptions)
 1839 Westwood: 137 (biology)
 1840 Laporte: 2 (descriptions in French)
 1840 Mareuse: 39 (description of variation in French) >> "Biology" - Hatch 1928
 1841a Heer: 386 (descriptions in German)
 1841b Heer: 9 (checklist in German)
 1845a Motschulsky: 53 (descriptions in French) >> compared to *N. guttula*
 1846a Küster: nr. 52 (catalog in German)
 1847 Rosenhauer: 105 (checklist in German)
 1849 Bach: 153 (checklist, brief descriptions in German)
 1849 Gaubil: 55 (catalog in French)
 1849 Redtenbacher: 140 (catalog in German)
 1855 Fairmaire & : 291
 1858 Calwer: 106 (checklist, brief descriptions in German)
 1858 Redtenbacher: 289 (catalog in German)
 1859 Gutfleisch & Bose: 202 (key, descriptions in German)
 1859 Kirby & Spence (biology, morphology; stridulation)
 1859 Schaum: 36 (catalog in German)
 1862 Schaum: 38 (catalog in German)
 1862 Schiødte: 225 (morphology, larval stages in Danish) >> "Larva" - Hatch 1928
 1862 Thomson: 8 (descriptions)
 1863 Grenier: 13 (checklist in French)
 1863 Marseul: 88 (catalog in French)
 1864 Ranson (biology, ecology)
 1865 Power: 198 (revision: key, descriptions & catalog)
 1866 Marseul: 38 (catalog in French)
 1868 Gemminger & Harold: 719 (catalog)
 1868 Stein: 42 (catalog in Latin)
 1869 Stierlin & Gautard: 116 (checklist in German)
 1870 Vollenhoven et al.: 54 (checklist in Dutch)

- 1873 Klika: 127 (checklist in Czech)
 1873 Michow: 15, 20 (in German)
 1873 Wood: 90 (biology, ecology)
 1874 Cox: 407 (key, descriptions (brief))
 1876b Kraatz: 395 (morphology: clypeus in German)
 1876d Kraatz: 397 (comment in German)
 1877 Harold: 345 (descriptions in German) >> compared to *N. japonicus*
 1877 Hickel & Dragicsevics: 27 (checklist in French)
 1877 M. de T.: 179 (biology in French) >> "Biology" - Hatch 1928
 1878 Deyrolle & Fairmaire: 90 (descriptions in French) >> compared to *N. japonicus*
 1880 Heyden: 86 (checklist in German)
 1881 Westhoff: 108 (description of variation in German)
 1883 Heyden et al.: 73 (checklist)
 1883 Reitter: 60 (comment in German) >> compared to *N. nigricornis*
 1884 Marseul: 186 (key, descriptions in French)
 1884 Reitter: 88 (descriptions in German) >> as *Silpha vespillo*
 1884 Schmidt (biology in French)
 1885 Marseul: 169 (catalog in French)
 1885 Reitter: 322 (in German)
 1888 Fairmaire: 115 (checklist, annotated in French) >> as *Necrophorus vespillo*
 1888 Seidlitz: 312 (key in German) >> misspelled as *Necrophagus vespillo*
 1889 Fowler: 45 (descriptions, catalog)
 1889 Sahlberg: 19 (checklist in Swedish)
 1889 Seidlitz: 329 (key in German) >> misspelled as *Necrophagus vespillo*
 1891 Heyden et al.: 139 (checklist)
 1893 Fauconnet: 255 (description of variation) >> description of variation: entirely black form
 1895b Reitter: 329 (description of variation in German)
 1896 Acloque: 241 (key in French)
 1896 Heyden: 38 (checklist in German)
 1898 Everts: 413
 1899 Ganglbauer: 160 (key, descriptions, morphology, larval stages in German)
 1899 Poppius: 58 (checklist in Swedish)
 1900 Bordas: 268 (morphology: testes in French) >> "Morphology- testes" - Hatch 1928
 1901 Carret: 330 (description of variation in French)
 1902 Johnson & Halbert: 690 (checklist)
 1905 Voigts & Oudemans (biology, symbionts: mites in German)
 1905 Weber: 31 (biology, ecology, behavior in German) >> "Biology" - Hatch 1928
 1906 Heyden et al.: 247 (checklist)
 1909 Auel: 110 (biology in German) >> "Biology" - Hatch 1928
 1909 Reitter: 240 (in German) >> "Larva" - Hatch 1928
 1910 Jakobson: 612 (checklist in Russian)
 1912 Fowler: 84 (comment) >> "Larva" - Hatch 1928, figured
 1913 Bandermann: 20 (comment in German) >> "Biology" - Hatch 1928
 1913 Kuhnt: 337 (in German) >> "Larva" - Hatch 1928
 1914 Gorka: 235 (morphology: malpighian tubules in German)

- 1916 Labitte: 9 (biology in French) >> "Biology, longevity" - Hatch 1928
 1916 Pasquet: 165 (description of variation in French)
 1916 Schaufuss: 274 (checklist in German)
 1918 Weber: 2 (biology, behavior in German) >> "Biology" - Hatch 1928
 1920 Orchymont: 22, 50, pl. 3, fig 15. (morphology, wing venation in French) >>
 "Morphology, venation" - Hatch 1928
 1922 Everts: 182
 1922 Hansen: 114, 117 (key, descriptions, morphology, larval stages in Danish)
 1922 Henriksen: 256 (key) >> "Larva" - Hatch 1928
 1922 Houlbert: 6 (in French)
 1922 Portevin: 57 (descriptions in French) >> compared to *N. basalis*
 1923 Mueller: 2 (comment in German) >> "Morphology, sense organs" - Hatch 1928
 1924 Imms: fig. 482 (comment)
 1924 Schleicher: 57 (description of variation in German) >> description of variation:
 1 unavailable name
 1925 Fuente y Morales: 120 (checklist in Spanish)
 1925 Portevin: 166 (description of variation in French)
 1925 Weber: 124 >> "Biology" - Hatch 1928
 1925 Winkler: 265 (catalog)
 1926 Porta: 333 (key, checklist in Italian)
 1926a Portevin: 244 (revision: key, descriptions & catalog in French)
 1927b Hatch: 363 (revision: key, descriptions & catalog) >> description of variation: 1
 unavailable name
 1928 Hatch: 150 (catalog)
 1929 Portevin: 540 (key, intraspecific variation in French)
 1930 Roubal: 241 (catalog in Czech)
 1930 Vitzthum: 390 (biology, symbionts: mites in German) >> mite host, as valid spe-
 cies
 1931 Corset: 106 (morphology: elytral locking in French)
 1932 Hlisnikovsky: 30 (key, descriptions in German)
 1932 Joy: 466 (key)
 1933 Pukowski: 518-586 (biology, ecology in German)
 1933 Rapp: 538 (biology, ecology, distribution in German)
 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin)
 1933a Shchegoleva-Barovskaya: 180 (revision: key, descriptions & catalog in Russian)
 1933 Walsh: 29 (biology, ecology)
 1934a Pukowski: 4 (biology, ecology in German)
 1934b Pukowski: 53-60 (morphology, larval stages in German) >> description of larva
 1934c Pukowski: 112 (biology, behavior in German)
 1935 Balduf: 69 (biology, ecology, behavior)
 1936 Frankenberg: 220 (biology, behavior, morphology in German)
 1936 Mosebacht: 223 (morphology, larval stages in German)
 1937 Schleicher: 57 (description of variation) >> description of variation: 1 unavail-
 able name
 1938 Osinskii (biology, symbionts: bacteria in Ukrainian)
 1939 Lengerken: 263 (biology in German)
 1939 Roubal: 85 (description of variation in Czech (French summary))

- 1939 Székessy: 943 (morphology in German) >> abdominal tergal fringe described
 1942 Hlisenkovsky: 578 (nomenclature in German)
 1942 Roubal: 17 (description of variation in Czech)
 1943 Cooreman (biology, symbionts: mites in French)
 1944 Arnett: 4, 7, 24 (morphology: female genitalia) >> female genitalia figured, pl. 4, fig. 3
 1945 Kloet & Hincks: 155 (checklist)
 1946 Hatch: 99 (descriptions) >> as type species of *Nicrophorus*
 1947 Cantonnet & Lecordier: 134 (biology, ecology in French)
 1948 Smetana: 34 (description of variation in Czech) >> description of variation: 1 unavailable name
 1949 Horion: 77 (biology, ecology, distribution in German)
 1949 Mroczkowski: 196 (biology, ecology in Polish (English summary))
 1949 Roehrich: 44 (biology, ecology in French)
 1950b Théodoridès: 5 (biology, ecology, morphology in French)
 1953 Akopyan (biology, ecology in Russian)
 1954 Leclercq (biology, ecology, behavior)
 1955 Chapman & Sankey: 396 (biology, ecology)
 1955 Moore: 292 (biology, ecology)
 1955 Mroczkowski: 23 (key, descriptions in Polish)
 1955 Théodoridès (biology, symbionts: mites in French)
 1955 Wachek (biology, parasites in German)
 1958 Madge: 29 (revision: key, descriptions, ecology, distributions) >> distribution doubtful in North America
 1959 Hicks: 94 (biology, ecology)
 1959 Linssen: 162 (catalog)
 1960 Hansen et al.: 72 (checklist in Danish)
 1961 Dollfus (biology, symbionts: mites in French)
 1962 Boeckh: 214 (morphology: antennal in German) >> misspelled as *N. vespillio*
 1962 Schneider & Boeckh (biology, physiology in German)
 1963 Roussel: 671 (biology, ecology, behavior in French) >> focal species
 1964 Herman: 6 (nomenclature) >> as type species of *Nicrophorus* desig. Latreille (1810)
 1964 Petruška: 162 (biology, ecology in Czech (German summary))
 1964a Roussel: 102 (morphology, larval stages in French) >> focal species
 1964b Roussel: 114 (morphology, larval stages in French)
 1965 Báguena: 51 (checklist in Spanish)
 1966 Korbel: 146 (biology, ecology in German (Czech & Russian summary))
 1967 Schweiger: 547 (checklist in German)
 1968 Hansen: 20 (key, descriptions in Danish)
 1968 Petruška: 168 (biology, ecology in Czech (English summary))
 1968 Schneider & Steinbrecht: 286 (morphology: antennal sensillae) >> sensillum morphology
 1969 Ernst: 75 (morphology: antennal sensillae in German (English summary)) >> misspelled as *N. vespillio*
 1969 Osborne: 558 (fossils) >> fossil remains of 3,330 +/- 90 B. P., England.
 1970 Franz: 215 (checklist, distribution in German)

- 1970 Gersdorf: 366 (morphology: female genitalia in German)
- 1970 Sidor (biology, symbionts: bacteria)
- 1971 Freude: 194 (key in German)
- 1971 Niemitz & Krampe: 368-369 (morphology: stridulation, hearing in German) >> focal species
- 1971 Spicarová: 193-197 (biology, genetics) >> focal species
- 1971 Wilson: 129 (comment)
- 1972b Ernst: 96 (morphology: antennal sensillae in German (English summary))
- 1972 Niemitz: 209-230 (morphology in German) >> focal species
- 1972 Niemitz & Krampe: 457 (biology, behavior in German (English summary))
- 1972 Spicarová (biology, behavior)
- 1973 Blackwelder: 4 (checklist, synonymy)
- 1973 Prokopic & Karapcanski (biology, symbionts: cestodes in English (German, Russian summary))
- 1973 Spicarová: 297-321 (biology, behavior in Czech (English summary))
- 1975 Coope & Angus: 371 (fossils) >> 43,000 year old fossils
- 1975b Emetz: 105 (checklist in Russian)
- 1976 Bils: 118 (morphology: female abdominal musculature in German)
- 1976 Milne & Milne: 87 (popular review)
- 1976 Petruška: 164 (biology, ecology in Czech (English summary))
- 1976 Tischler: 27 (biology, ecology in German)
- 1977 Pope: 20 (checklist)
- 1978 Blas: 51 (key, descriptions in Spanish)
- 1978 Burakowski et al.: 203 (catalog, distribution, synonymy in Polish)
- 1978 Mroczkowski: 239 (biology, ecology in Polish (Russian & German summary))
- 1978 Niemitz (biology, behavior in German)
- 1979 Blum: 536 (morphology: wing folding, abdominal structure in German)
- 1979 Salgado & Régil: 88 (catalog, annotated & figured in Spanish)
- 1979 Silfverberg: 12 (checklist, distribution)
- 1980 Franssen: 46 (morphology: female genitalia in French) >> female genitalia figured
- 1980 Madge: 356 (catalog)
- 1981 Rozner: 104 (checklist in Hungarian)
- 1981 Spriggs: 116 (descriptions, ecology)
- 1981 Šustek: 40 (key, descriptions, regional in Czech)
- 1982c Korn: 207 (biology, symbionts: mites in German (English summary)) >> mite host
- 1983 Korn: 251 (biology, symbionts: mites in German (English summary)) >> mite host
- 1983 Putman: 35, 38-42 (biology, ecology)
- 1984a Bredohl: 11-25 (morphology: stridulatory files in German (English summary))
- 1984 Evans & Forsythe (biology, behavior)
- 1984 Harde: 124 (field guide, brief descriptions, ecology)
- 1985 Zahradník: 123, 372 (catalog, annotated & figured in German) >> figured
- 1986 Erbeling & Erbeling: 234 (biology, ecology in German)
- 1986 Nishikawa: 99 (catalog in Japanese (English summary))
- 1986 Panov: 412 (morphology: cerebral neurosecretory cells)

- 1987 Jensen: 116 (biology, ecology in Danish (English summary))
- 1987 Lucht: 67 (catalog in German)
- 1987 Staines: 16 (key, descriptions) >> not recorded from Maryland
- 1988 Otronen: 191-201 (biology, behavior) >> focal species
- 1988 Palestirini et al.: 543 (biology, behavior)
- 1989 Koch: 165 (biology, ecology in German)
- 1989 Núñez et al.: 441 (checklist in Spanish (English summary))
- 1989 Stresemann et al. (key in German)
- 1990 Břily: 62 (larval descriptions, biology in French) >> adult and larva illustrated in color
- 1990 Erbeling: 116 (biology, ecology in German (English summary))
- 1990 Hyatt: 136 (biology, symbionts: mites)
- 1990 Kentner & Streit: 26 (biology, ecology in English (German summary))
- 1990 Müller & Schwarz: 23-30 (biology, symbionts: mites in English (German summary)) >> focal species
- 1990 Rohner: 453-464 (biology, ecology in German (English summary)) >> focal species
- 1990 Schawaller: 235 (checklist in German)
- 1990 Zahradník: 123 (key in Spanish)
- 1991 Schwarz et al. (biology, symbionts: mites)
- 1992 Kozminykh: 64 (checklist in Russian)
- 1992 Kozminykh & Esjunin: 68 (checklist in Russian)
- 1992 Růžička: 123 (key, descriptions, morphology, larval stages, phylogenetics) >> description of larval instars
- 1992 Silfverberg: 14 (checklist, distribution in English (Finnish & Swedish summaries))
- 1993 Athias-Binche et al.: 76 (biology, symbionts: mites)
- 1993b Kozminykh: 65 (key, descriptions, regional in Russian)
- 1993 Růžička: 34 (checklist, distribution in English & Czech)
- 1993 Sauer: 84 (field guide, brief descriptions, ecology in German) >> photo
- 1994 Bertin & Fallaci: 219 (checklist in Italian (English summary))
- 1994 Blackman & Evans: 223 (biology, symbionts: mites)
- 1994 Kozminykh & Esjunin: 78 (biology, ecology in English (Russian summary))
- 1994 Masan: 9 (biology, symbionts: mites in English (French & German summary))
- 1994 Růžička: 69 (biology, ecology)
- 1995 Angelini et al.: 10 (checklist, distribution in Italian)
- 1995 Bocáková: 24 (biology, ecology in Czech (English summary))
- 1995 Dapsio: 120 (checklist in Lithuanian)
- 1995 Kozminykh: 110 (key in Russian)
- 1995 Kozminykh & Nemkov: 112 (catalog in Russian)
- 1996 Alexandrovich et al.: 17 (checklist, distribution in Russian & English)
- 1996 Bertin & Lebboroni: 154 (checklist in Italian (English summary))
- 1996 Hansen: 93 (checklist, distribution in Danish & English)
- 1996 Pushkin: 33 (biology, ecology in Russian)
- 1996 Růžička & Schneider: 81 (checklist in English (Czech summary))
- 1996 Schwarz: 137 (biology, symbionts: mites)
- 1996 Schwarz & Walzl: 1339 (biology, symbionts: mites)

- 1997 Anderson et al.: 14 (checklist)
 1997 Baker & Schwarz: 180 (biology, symbionts: mites)
 1997 Eggert & Müller: 217 (biology, review of: ecology, behavior)
 1997 Klausnitzer: 44 (morphology, larval stages in German)
 1997 Kozminykh: 65 (checklist in Russian)
 1997 Pushkin: 24 (biology, ecology in Russian)
 1997 Pushkin & Charthenko: 62 (biology, ecology in Russian)
 1997 Telnov et al. (checklist)
 1998 Háva et al.: 179 (distribution note in English (Czech summary))
 1998 Kocárek: 387 (biology, ecology)
 1998 Pushkin & Sigida: 84 (biology, ecology in Russian)
 1998 Schwarz et al.: 164 (biology, symbionts: mites)
 1998 Schwarz & Koulianos: 623 (biology, symbionts: mites)
 1998b Scott: 598+ (biology, review of: ecology, behavior)
 1999 Bertin & Lebboroni: 60 (checklist in Italian)
 1999 Masán: 517 (biology, symbionts: mites)
 1999 Meierhofer et al.: 73-79 (biology, ecology, behavior) >> focal species
 1999 Růžička: 318 (biology, ecology)
 2000 Bahillo de la Puebla & López-Colón: 248 (biology, descriptions, distribution in Spanish)
 2000 Gwiazdowicz: 44 (biology, symbionts: mites) >> mite host
 2000 Koulianos & Schwarz: 836-840 (biology, ecology, behavior)
 2000b Parkhomenko: 164 (morphology, larval stages in Ukrainian (English summary))
 2001 Kocárek: 431-438 (biology, ecology)
 2002 Nikolajev & Kozminykh: 111 (catalog, distribution, descriptions, keys, figures in Russian (English summary))

= *bifasciatus* Hausmann, 1799 NEW SYNONYM of *N. vespillo* (L.)

Type locality: "in America septentrionali"-[probably erroneous; descrip.]

Type depository: unknown

- 1799 Hausmann: 33 (descriptions in German) >> Orig. comb.: *Necrophorus bifasciatus* [!M, S]

= *bohemicus* Roubal, 1939 NEW STATUS as absolute syn. of *N. vespillo* (L.)

Type locality: "Bohemia: Opatovice u Hradce Králové.." [Czech Republic; descrip.]

Type depository: SNMC: Bratislava

- 1939 Roubal: 85 (description of variation in Czech (French summary)) >> Orig. comb.: *Necrophorus vespillo* var. *bohemicus* [!S]
 1942 Hlisnikovsky: 578 (nomenclature in German) >> as syn. of unavailable name
 1942 Roubal: 17 (description of variation in Czech) >> as *N. vespillo* var. *bohemicus*

= *bolsmanni* Westhoff, 1881 NEW STATUS as absolute syn. of *N. vespillo* (L.)

Type locality: "bei Gimbt"[Germany: Westphalia: near Gimbt, village on Ems River, ca. 7 km n of Münster; descrip.]

Type depository: LNMD: Münster

- 1881 Westhoff: 108 (description of variation in German) >> Orig. comb.: *Necrophorus vespillo* var. *Bolsmanni* [!N]
 1898 Everts: 413
 1910 Jakobson: 612 (checklist in Russian)
 1913 Kuhnt: 336 (in German)
 1925 Winkler: 265 (catalog) >> as *N. vespillo* ab. *bolsmanni*
 1926a Portevin: 264 (revision: key, descriptions & catalog in French) >> as *N. vespillo* ab. *Bolsmanni*
 1928 Hatch: 152 (catalog) >> as *N. vespillo* ab. *Bolsmanni*
 1944 Arnett: 4 (morphology: female genitalia) >> as *N. vespillo* ab. *bolsmanni*
 1965 Báguena: 51 (checklist in Spanish) >> as *N. vespillo* ab. *bolsmanni*

= *cadaverinus* Gravenhorst, 1807

Type locality: unknown

Type depository: UWCP: Wrocław

- 1807 Gravenhorst: 118 (descriptions in German) >> Orig. comb.: *Necrophorus cadaverinus*
 1849 Gaubil: 55 (catalog in French) >> as *N. interruptus* var. *cadaverinus* Gravenhorst
 1912 Schulz: 32
 1928 Hatch: 151 (catalog) >> as syn. of *N. vespillo*
 1944 Arnett: 4 (morphology: female genitalia) >> as syn. of *N. vespillo*
 1965 Báguena: 51 (checklist in Spanish) >> as syn. of *N. vespillo*
 1993b Kozminykh: 64 (key, descriptions, regional in Russian) >> as syn. of *N. vespillo*
 1995 Kozminykh & Nemkov: 112 (catalog in Russian) >> as syn. of *N. vespillo*
 2002 Nikolajev & Kozminykh: 111 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as syn. of *N. vespillo*; auth. as “Gravenhal”

= *curvipes* Duftschmid, 1825

Type locality: “Österreich” [Austria; descrip.]

Type depository: : Linz

- 1821 Dejean: 42 (catalog) >> as syn. of *N. vespillo*; auth. attrib. Megerle
 1825 Duftschmid: 112 (descriptions in German) >> Orig. comb.: *Necrophorus curvipes*; auth. attrib. Megerle [!M, S]
 1833 Dejean: 117 (catalog in French) >> as syn. of *N. vespillo*; auth. attrib. Megerle
 1858 Calwer: 106 (checklist, brief descriptions in German) >> as syn. of *N. vespillo*
 1926a Portevin: 260 (revision: key, descriptions & catalog in French) >> as syn. of *N. vespillo*; auth. attr. Megerle (ex. Dej. catalog 1837)
 1928 Hatch: 151 (catalog) >> as syn. of *N. vespillo*; auth. attr. Dufts. 1825
 1933a Shchegoleva-Barovskaya: 180 (revision: key, descriptions & catalog in Russian) >> as syn. of *N. vespillo*; auth. attr. Dufts. 1825
 1944 Arnett: 4 (morphology: female genitalia) >> as syn. of *N. vespillo*
 1965 Báguena: 51 (checklist in Spanish) >> as syn. of *N. vespillo*
 1993b Kozminykh: 65 (key, descriptions, regional in Russian) >> as syn. of *N. vespillo*
 1995 Kozminykh & Nemkov: 112 (catalog in Russian) >> as syn. of *N. vespillo*
 2002 Nikolajev & Kozminykh: 111 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as syn. of *N. vespillo*

- = *faueveli* Fauconnet, 1893 NEW STATUS as absolute syn. of *N. vespillo* (L.)
 Type locality: “Pontarlier” [France: Doubs: 46.9°N, 6.33°E; label]
 Type depository: MNHN: Paris [!] holotype female
- 1893 Fauconnet: 255 (description of variation) >> Orig. comb.: *Necrophorus vespillo*
 var. *faueveli* [!S]
 1898 Everts: 413
 1906 Heyden et al.: 247 (checklist) >> as *N. vespillo* var. *faueveli*
 1910 Jakobson: 612 (checklist in Russian)
 1916 Pasquet: 165 (description of variation in French)
 1925 Portevin: 166 (description of variation in French) >> as *N. vespillo* ab. *Fauveli*
 1925 Winkler: 265 (catalog) >> as *N. vespillo* ab. *faueveli*
 1926a Portevin: 244 (revision: key, descriptions & catalog in French) >> as *N. vespillo*
 ab. *Fauveli*
 1928 Hatch: 152 (catalog) >> as *N. vespillo* ab. *Fauveli*
 1933a Shchegoleva-Barovskaya: 180 (revision: key, descriptions & catalog in Russian)
 >> as *N. vespillo* ab. *faueveli*
 1944 Arnett: 4 (morphology: female genitalia) >> misspelled as *N. vespillo* ab. *faureli*
 1965 Báguena: 51 (checklist in Spanish) >> as *N. vespillo* ab. *faueveli*
- = *hadenius* Gistel, 1857 NEW SYNONYM of *N. vespillo* (L.)
 Type locality: “Tirol” [Austria: 47.25°N, 11.33°E; descrip.]
 Type depository: ZSMC: München?
- 1857b Gistel: 575 (in German) >> Orig. comb.: *Necrophorus hadenius* [!N]
 1917 Strand: 84 (descriptions in German)
 1928 Hatch: 153 (catalog) >> *Incertae sedis*
- = *hauseri* Hlisnikovsky, 1932 CONFIRMED as SYNONYM of *N. vespillo* (L.)
 Type locality: “Thian-Shan bei Musart” [Tian Shan, Muzart; village near Muzart Pass
 and source of Muzart, or Musuerh Ho, River flowing east from Mt. Pebody, high-
 est point in the Tian Shan mts, Xinjiang Prov., nw China; label]
 Type depository: NMPC: Praha [!] holotype male
- 1932 Hlisnikovsky: 23 (key, descriptions in German) >> Orig. comb.: *Necrophorus*
 Hauseri [!N, S]
 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin) >> as valid species
 1933a Shchegoleva-Barovskaya: 181 (revision: key, descriptions & catalog in Russian)
 >> as valid species
 1986 Nishikawa: 98 (catalog in Japanese (English summary)) >> as doubtfully valid
 species
 1992 Kozminykh: 64 (checklist in Russian) >> as syn. of *N. vespillo*
 1993b Kozminykh: 65 (key, descriptions, regional in Russian) >> as syn. of *N. vespillo*
 1995 Kozminykh & Nemkov: 112 (catalog in Russian) >> as syn. of *N. vespillo*
 2002 Nikolajev & Kozminykh: 111 (catalog, distribution, descriptions, keys, figures in
 Russian (English summary)) >> as syn. of *N. vespillo*
- = *minor* Westhoff, 1881 NEW STATUS as absolute syn. of *N. vespillo* (L.)
 Type locality: “bei Gimberte” [Germany: Westphalia: near Gimberte, village on Ems
 River, ca. 7 km n of Münster; descrip.]

Type depository: LNMD: Münster

- 1881 Westhoff: 108 (description of variation in German) >> Orig. comb.: *Necrophorus vespillo* var. *minor* [!N]
 1913 Kuhnt: 336 (in German)
 1922 Everts: 182
 1928 Hatch: 152 (catalog) >> as *N. vespillo* ab. *minor*
 1944 Arnett: 4 (morphology: female genitalia) >> as *N. vespillo* ab. *minor*
 1965 Báguena: 51 (checklist in Spanish) >> as *N. vespillo* ab. *minor*

= *spinipes* Leach, 1815

Type locality: unknown

Type depository: unknown

- 1815 Leach: 88 (descriptions) >> Orig. comb.: *Necrophagus spinipes* [!N]
 1829b Stephens: 75 (catalog) >> as syn. of *N. vespillo*

= *varendorffi* Westhoff, 1881:108 NEW STATUS as absolute syn. of *N. vespillo* (L.)

Type locality: “von Mü”, [Münster, Westphalia, Germany; descrip.]

Type depository: LNMD: Münster

- 1881 Westhoff: 108 (description of variation in German) >> Orig. comb.: *Necrophorus vespillo* var. *varendorffi* [!N]
 1898 Everts: 413
 1910 Jakobson: 612 (checklist in Russian)
 1913 Kuhnt: 336 (in German)
 1925 Winkler: 265 (catalog) >> as *N. vespillo* ab. *varendorffi*
 1926a Portevin: 264 (revision: key, descriptions & catalog in French) >> as *N. vespillo* ab. *Varendorffi*
 1928 Hatch: 152 (catalog) >> as *N. vespillo* ab. *Varendorffi*
 1944 Arnett: 4 (morphology: female genitalia) >> as *N. vespillo* ab. *varendorffi*

= *vulgaris* Fabricius, 1775

Type locality: “Habitat in Europae, Americae cadaveribus, quae sepelit” [descrip.]

Type depository: ZMUC: Kobenhavn (Kiel?)

- 1775 Fabricius: 72 (descriptions) >> Orig comb.: *Nicrophorus vulgaris* [sic] [!N, S]
 1790 Preyssl: 12 (in German)
 1868 Gemminger & Harold: 719 (catalog) >> as syn. of *N. vespillo*, auth. attrib. Preyssl.
 1884 Marseul: 186 (key, descriptions in French) >> as syn. of *N. vespillo*
 1885 Marseul: 169 (catalog in French) >> auth. attrib. Preyssl.; as syn. of *N. vespillo*
 1906 Heyden et al.: 247 (checklist) >> as syn. of *N. vespillo*
 1910 Jakobson: 612 (checklist in Russian) >> as syn. of *N. vespillo*
 1926a Portevin: 260 (revision: key, descriptions & catalog in French) >> as syn. of *N. vespillo*
 1928 Hatch: 151 (catalog) >> as syn. of *N. vespillo*
 1933a Shchegoleva-Barovskaya: 180 (revision: key, descriptions & catalog in Russian) >> as syn. of *N. vespillo*

- 1944 Arnett: 4 (morphology: female genitalia) >> as syn. of *N. vespillo*
 1964 Herman: 5 (nomenclature) >> as syn. of *N. vespillo*
 1965 Báguena: 51 (checklist in Spanish) >> as syn. of *N. vespillo*
 1993b Kozminykh: 65 (key, descriptions, regional in Russian) >> as syn. of *N. vespillo*
 1995 Kozminykh & Nemkov: 112 (catalog in Russian) >> as syn. of *N. vespillo*
 2002 Nikolajev & Kozminykh: 111 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as syn. of *N. vespillo*

Comments: The forgotten name *N. bifasciatus* Hausmann (1799) was described as being a "delightful cross of *N. vespillo* and *N. mortuorum*" (= *N. vespilloides*), but with a type locality of North America where *N. vespillo* does not occur. The description also included the following key characters: the antennal club is orange and the pronotum has golden hairs anteriorly. This description matches *N. vespillo* but suggests the type locality is erroneous.

See comments for *N. germanicus* and *N. interruptus* regarding the names of Gistel. We herein synonymyze *N. hadenius* Gistel, 1857 under *N. vespillo*.

Nicrophorus vespilloides Herbst, 1783

Type locality: "Berlin" [Germany; descrip.]

Type depository: ZMHB: Berlin?

Distribution: Holarctic: northern North America, all Europe, Asia: Siberia, Korea, Japan, Mongolia, China, Iran, Kazakhstan, Turkey

- 1783 Herbst: 32 (descriptions in German) >> Orig. comb.: *Nicrophorus Vespilloides* [!M, S]
 1790 Scriba: 168 (in German)
 1829b Stephens: 75 (catalog) >> as syn. of *N. mortuorum*
 1853 Mannerheim: 172 (descriptions in German) >> as syn. of *N. mortuorum*
 1855 Fairmaire &
 1858 Calwer: 106 (checklist, brief descriptions in German) >> as syn. of *N. mortuorum*
 1859a Motschulsky (catalog)
 1868 Gemminger & Harold: 719 (catalog) >> as syn. of *N. mortuorum*
 1873 Crotch: 37 (checklist) >> as *Silpha vespilloides*
 1877 Stein & Weise: 61 (catalog in Latin)
 1878a Hubbard & Schwarz: 632 (checklist)
 1878b Hubbard & Schwarz: 650 (checklist)
 1880 Heyden: 87 (checklist in German) >> as valid species
 1880 Horn: 314 (revision: key, descriptions & catalog) >> as valid species
 1883 Heyden et al.: 73 (checklist) >> as valid species
 1884 Marseul: 192 (key, descriptions in French) >> as *Nicrophorus vespilloides*; as syn. of *N. mortuorum*
 1884 Reitter: 87 (descriptions in German) >> as *Silpha vespilloides*; as valid species
 1885 Henshaw: 26 (checklist) >> as *Nicrophorus vespilloides*; as valid species
 1885 Marseul: 169 (catalog in French) >> as syn. of *N. mortuorum*
 1885 Reitter: 321 (in German)

- 1888 Seidlitz: 313 (key in German) >> misspelled as *Necrophagus vespilloides*
 1889 Sahlberg: 20 (checklist in Swedish)
 1889 Seidlitz: 329 (key in German) >> misspelled as *Necrophagus vespilloides*
 1890 Flach: 109 (descriptions in German) >> as valid species; figured
 1891 Heyden et al.: 139 (checklist) >> as valid species
 1893 Heyden: 51 (checklist in German) >> as valid species
 1894 Hamilton: 15 (checklist)
 1895 Keen: 168 (checklist)
 1895b Reitter: 328 (description of variation in German) >> as valid species
 1896 Heyden: 38 (checklist in German) >> as valid species
 1898 Everts: 413
 1899 Ganglbauer: 71, 165 (key, descriptions, morphology, larval stages in German) >>
 as valid species; "Larva" - Hatch 1928
 1899 Poppius: 58 (checklist in Swedish)
 1900 Bordas: 283 (morphology: testes in French) >> as valid species; "Morphology:
 testes" - Hatch 1928
 1901 Carret: 331 (description of variation in French) >> as syn. of *N. mortuorum*
 1905b Portevin: 418 (distribution note in French) >> as valid species; record from
 Laponie [Lapland]: Finmark [Co. of Norway], Kirkeness
 1905 Weber (biology, ecology, behavior in German)
 1906 Heyden et al.: 247 (checklist) >> as valid species
 1908 Smirnov: 42 (description of variation in Russian) >> description of variation: 1
 unavailable name
 1909 Reitter: 240 (in German)
 1910 Barkowski: 80 (key, descriptions, regional in German)
 1910 Jakobson: 612 (checklist in Russian) >> as valid species
 1910 Smith: 229 (checklist)
 1913 Kuhnt: 335 (in German)
 1913 Roubal (biology, ecology in Czech & German)
 1914b Portevin: 224 (description of variation in French) >> as valid species
 1916 Frost: 381 (biology, ecology)
 1916 Pasquet: 143 (description of variation in French)
 1916 Schaufuss: 273 (checklist in German)
 1917b Pic: 21 (description of variation in French)
 1920 Britton: 224 (checklist)
 1920 Leng: 86 (catalog)
 1922 Everts: 182
 1922 Hansen: 114,116 (key, descriptions, morphology, larval stages in Danish)
 1922 Henriksen: 256 (key) >> "Larva" - Hatch 1928
 1923 Bernet Kempers: 78-79 (morphology: wing venation in German)
 1923 Portevin: 67 (key, descriptions in French) >> comment that this sp. can be found
 on *Boletus edulis*
 1924 Hatch: 560 (checklist)
 1924 Portevin: 375 (key, descriptions in French) >> description of variation: 1 unavail-
 able name
 1925 Weber: 124 >> "Biology" - Hatch 1928
 1925 Winkler: 265 (catalog)

- 1926 Porta: 333 (key, checklist in Italian)
- 1926a Portevin: 234 (revision: key, descriptions & catalog in French) >> description of variation: 1 unavailable name
- 1927b Hatch: 355 (revision: key, descriptions & catalog) >> description of variation: 1 unavailable name
- 1928 Hatch: 136 (catalog)
- 1928 Leonard: 271 (checklist)
- 1929 Kôno: 161, 164 (checklist, annotated)
- 1929 Portevin: 539 (key, intraspecific variation in French)
- 1930 Roubal: 241 (catalog in Czech)
- 1931 Walsh (biology)
- 1932 Hlisnikovsky: 30 (key, descriptions in German)
- 1932 Joy: 466 (key)
- 1932 Poll : 53 (morphology: malpighian tubules in French)
- 1933 Kano: 101 (checklist in Japanese (English summary))
- 1933 Pukowski: 518-586 (biology, ecology in German)
- 1933 Rapp: 537 (biology, ecology, distribution in German)
- 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin)
- 1933a Shchegoleva-Barovskaya: 182 (revision: key, descriptions & catalog in Russian)
- 1933 Walsh: 28 (biology, ecology)
- 1934 Brundin: 257 (biology, ecology in German)
- 1934b Pukowski: 53-60 (morphology, larval stages in German) >> description of larva
- 1934 Roubal: 323 (description of variation in German) >> description of variation: 1 unavailable name
- 1935 Balduf: 70 (biology, ecology, behavior)
- 1936 Cho: 157 (checklist in Korean) >> new record for Korea
- 1937 Leech: 156 (nomenclature)
- 1937 Mochizuki & Tsunekawa (checklist)
- 1937 Wu (catalog)
- 1938 Brimley: 135 (checklist)
- 1938 Mori & Cho (checklist)
- 1939 Lengerken: 263 (biology in German)
- 1939 Masui (checklist)
- 1939 Roubal: 85 (description of variation in Czech (French summary))
- 1940 Hatch: 234 (description of variation)
- 1940 Šulc: 162 (morphology in Czech (German summary))
- 1943 Cooreman (biology, symbionts: mites in French)
- 1944 Arnett: 4, 20 (morphology: female genitalia) >> female genitalia figured, pl. 2, fig. 10
- 1944 Blackwelder: 100 (catalog)
- 1944 Kôno: 84 (checklist in Japanese (German title))
- 1944 Milne & Milne: 327 (biology, behavior)
- 1945 Kloet & Hincks: 155 (checklist)
- 1946 Procter: 121 (checklist, ecology)
- 1947 Arnett: 111 (catalog)
- 1947 Cantonnet & Lecordier: 134 (biology, ecology in French)
- 1947 Dethier: 287 (biology, behavior)

- 1948 Clark: 27 (checklist)
- 1948 Scheerpeltz & Höfler: 247 (biology, ecology in German)
- 1949 Bliss: 201 (morphology: sexual dimorphism)
- 1949 Horion: 77 (biology, ecology, distribution in German)
- 1949 Horion: 77 (biology, ecology, distribution in German)
- 1949 Mroczkowski: 196 (biology, ecology in Polish (English summary))
- 1949 Roehrich: 44 (biology, ecology in French)
- 1950 Smith: 62 (biology, cytology)
- 1950b Théodoridès: 5 (biology, ecology, morphology in French)
- 1952 Benick: 33 (biology, ecology in German)
- 1953 Mazokhin-Porshnyakov: 236 (descriptions, catalog in Russian)
- 1953 Smith: 35 (biology, cytology) >> chromosome number
- 1955 Moore: 294 (biology, ecology)
- 1955 Mroczkowski: 21 (key, descriptions in Polish)
- 1955 Rehous (biology, ecology in French)
- 1955 Théodoridès (biology, symbionts: mites in French)
- 1955 Wachek (biology, parasites in German)
- 1956 Esaki et al.: 1028 (checklist, descriptions in Japanese)
- 1957 Cho (catalog in Korean)
- 1958 Madge: 17 (revision: key, descriptions, ecology, distributions) >> as *N. vespilloides* subsp. *vespilloides*
- 1959 Hicks: 94 (biology, ecology)
- 1959 Linssen: 162 (catalog)
- 1960 Hansen et al.: 72 (checklist in Danish)
- 1960 Kauffmann: fig. 27, 30 (morphology in German)
- 1960 Merkushev (biology, parasites)
- 1961 Dollfus (biology, symbionts: mites in French)
- 1961 Székessy: 333 (description of variation in German) >> description of variation: 1 unavailable name
- 1962 Boeckh: 214 (morphology: antennal in German)
- 1962 Pearson: 133, 146 (fossils) >> fossils from 10,500 B.P., England
- 1963 Busnel (biology, behavior, physiology)
- 1963 Eisfelder (biology, ecology in German)
- 1963 Nakane: 75 (checklist, brief descriptions in Japanese)
- 1964 Kamimura et al.: A21 (biology, ecology)
- 1965 Báguena: 52 (checklist in Spanish)
- 1966 Korbel: 146 (biology, ecology in German (Czech & Russian summary))
- 1966 Payne & Crossley: 56 (biology, ecology)
- 1967 Schweiger: 547 (checklist in German)
- 1967 Welch (biology, ecology)
- 1968 Hansen: 20 (key, descriptions in Danish)
- 1968 Petruška: 168 (biology, ecology in Czech (English summary))
- 1969 Ernst: 75 (morphology: antennal sensillae in German (English summary))
- 1969 Evans (biology, ecology)
- 1969 Fjellberg (biology, ecology)
- 1969 Lindroth & Ball: 149
- 1969 Medvedev & Vysotskaya: 500 (biology, ecology)

- 1970 Franz: 214 (checklist, distribution in German)
 1970 Gersdorf: 367 (morphology: female genitalia in German)
 1970 Kirk: 25 (checklist)
 1970 Payne & King: 230 (biology, ecology)
 1971 Freude: 194 (key in German)
 1971 Mroczkowski: 214 (biology, ecology in Polish (Russian & English summary))
 1971 Obrtel (biology, ecology)
 1971 Wilson: 130 (comment)
 1972a Ernst: 218 (morphology: antennal sensillae in German (English summary))
 1972b Ernst: 96 (morphology: antennal sensillae in German (English summary))
 1972 Swan & Papp: 356 (description)
 1973 Blackwelder: 3 (checklist, synonymy)
 1973 Krivolutskaya: 71 (checklist in Russian (with electronic english translation))
 1973 Nabaglo (biology, ecology)
 1973 Schumacher: 65-75 (morphology: stridulatory files in German (English summary)) >> focal species
 1973 Waldow: 415-424 (morphology: olfactory receptors in German (English summary)) >> focal species
 1975 Baldwin: 23 (key, description, distribution, ecology)
 1975a Emetz: 61 (checklist in German)
 1975b Emetz: 106 (checklist in Russian)
 1975 Emetz & Schawaller: 231 (checklist in German (English summary)) >> compared to *N. encaustus*
 1975 Hågvar (biology, ecology)
 1975 Katakura & Fukuda: 78 (biology, ecology)
 1975 Schneider: 223 (morphology, behavior: wing motion in German)
 1976 Tischler: 100 (biology, ecology in German)
 1977 Baert & Maelfait (biology, ecology)
 1977 Bockeler: 45 (biology, parasites in German (English summary))
 1977 Pope: 20 (checklist)
 1978 Burakowski et al.: 204 (catalog, distribution, synonymy in Polish)
 1978 Klausnitzer & Zerche: 89 (morphology, larval stages) >> larva figured
 1978 Mroczkowski: 239 (biology, ecology in Polish (Russian & German summary))
 1978 Putman: 136 (biology, ecology)
 1978 Smith & Virkki: 240 (biology, cytology)
 1979 Blum: 536 (morphology: wing folding, abdominal structure in German)
 1979 Hammond: 123 (morphology: wing folding) >> wing folding diagrammatic figure
 1979 Salgado & Régil: 86 (catalog, annotated & figured in Spanish)
 1979 Silfverberg: 12 (checklist, distribution)
 1980 Easton: 121-123 (morphology: sexual dimorphism)
 1980 Franssen: 46 (morphology: female genitalia in French) >> female genitalia figured
 1981 Matis: 11 (distributional atlas in Russian) >> dot map of distribution in Russia
 1981 Spriggs: 116 (descriptions, ecology)
 1981 Šustek: 40 (key, descriptions, regional in Czech)
 1982c Anderson: 1316 (biology, ecology)
 1982c Korn: 207 (biology, symbionts: mites in German (English summary))

- 1982 Wisiniewski (biology, symbionts: mites in German)
- 1983 Christie (biology, symbionts: mites in English (German summary))
- 1983 Korn: 251 (biology, symbionts: mites in German (English summary))
- 1983 Putman: 17, 38-42 (biology, ecology)
- 1984a Bredohl: 11-25 (morphology: stridulatory files in German (English summary))
- 1984b Bredohl (biology, genetics in German)
- 1984 Denman: 201 (biology, behavior)
- 1984 Papp: 70 (descriptions)
- 1985 Anderson & Peck: 72 (revision: key, descriptions & catalog in English (& keys in French also))
- 1985 Katakura & Ueno: 463 (biology, ecology) >> "more abundant in grassland habitat"
- 1985a Kurosawa: 248 (checklist) >> color habitus figure pl. 44
- 1985 Peck & Anderson: 275 (key, descriptions, phylogenetics)
- 1985 Zahradník: 122, 372 (catalog, annotated & figured in German) >> figured
- 1986 Erbeling & Erbeling: 234 (biology, ecology in German)
- 1986 Katakura et al.: 43-55 (biology, ecology)
- 1986 Müller: 180 (biology, behavior in German)
- 1986 Nishikawa: 99 (catalog in Japanese (English summary))
- 1986 Panov: 412 (morphology: cerebral neurosecretory cells)
- 1987a Bartlett: 471-472 (biology, behavior) >> focal species
- 1987b Bartlett: 179-183 (biology, behavior) >> focal species
- 1987 Dressel (biology, behavior in German)
- 1987 Eggert & Müller (biology, behavior in German)
- 1987 Jensen: 116 (biology, ecology in Danish (English summary))
- 1987 Lucht: 67 (catalog in German)
- 1987 Müller: 74-80 (biology, behavior) >> focal species
- 1987 Müller & Eggert: 297-304 (biology, behavior) >> focal species
- 1987 Müller & Cordes: 321 (biology, behavior in German)
- 1987 Peck & Kaulbars: 52 (checklist)
- 1987 Peschke et al.: 246 (biology, ecology)
- 1987 Ryabukhin & Matis: 10 (key, descriptions, distributions in Russian)
- 1987 Staines: 16 (key, descriptions) >> Maryland record
- 1988b Bartlett: 297-303 (biology, behavior) >> focal species
- 1988 Bartlett & Ashworth: 429-434 (biology, behavior) >> focal species
- 1988 Biström & Väisänen: 33 (biology, ecology)
- 1988 Cordes et al. (biology, behavior in German)
- 1988 Dressel & Müller: 342 (biology, behavior)
- 1988 Eggert & Müller (biology, behavior)
- 1988 Müller & Eggert: 31 (biology, behavior in German)
- 1988 Müller et al. (biology, behavior)
- 1988 Otronen: 191-201 (biology, behavior) >> focal species
- 1988 Reinking (biology, ecology, behavior)
- 1989a Eggert & Müller (biology, behavior in English (German summary))
- 1989b Eggert & Müller (biology, behavior)
- 1989c Eggert & Müller: 318 (biology, behavior in German)
- 1989 Koch: 164 (biology, ecology in German)

- 1989 Lafer: 338 (key, descriptions, description of variation in Russian)
- 1989 Martin: 876-879 (biology, ecology)
- 1989 Müller & Eggert: 245-249 (biology, behavior) >> focal species
- 1989 Núñez et al.: 443 (checklist in Spanish (English summary)) >> also found on dung & fungi: *Boletus edulis* & *Russula* sp.
- 1989 Stresemann et al. (key in German)
- 1990 Erbeling: 116 (biology, ecology in German (English summary))
- 1990 Hyatt: 136 (biology, symbionts: mites)
- 1990 Kentner & Streit: 26 (biology, ecology in English (German summary))
- 1990 Müller & Eggert: 11-16 (biology, behavior) >> focal species
- 1990 Müller et al.: 265-270 (biology, behavior) >> focal species
- 1990 Müller et al.: 491-499 (biology, behavior) >> focal species
- 1990 Müller & Schwarz: 23-30 (biology, symbionts: mites in English (German summary)) >> focal species
- 1990 Peck: 1122 (key)
- 1990 Reinking & Müller: 655-656 (biology, behavior) >> focal species
- 1990 Rohner: 453-464 (biology, ecology in German (English summary)) >> focal species
- 1990 Schwarz & Müller: 323-324 (biology, symbionts: mites)
- 1990 Zahradník: 123 (key in Spanish)
- 1991 Campbell: 86 (catalog, distribution)
- 1991 Laplante et al.: 29 (checklist in French)
- 1991 Ohkawara: 463-467 (biology, ecology in Japanese (English summary)) >> focal species
- 1991 Richter (biology, symbionts: nematodes in German)
- 1991 Schwarz et al. (biology, symbionts: mites)
- 1991 Schwarz & Schürmann (popular review in German)
- 1992 Beninger & Peck: 79-86 (biology, ecology)
- 1992 Cho & Lee: 22 (revision: key, descriptions & catalog)
- 1992 Eggert (biology, behavior)
- 1992 Eggert & Müller: 237-242 (biology, behavior) >> focal species
- 1992 Huerta: 13-21 (morphology: sternal glands in Spanish (English summary)) >> focal species
- 1992 Kozminykh: 64 (checklist in Russian)
- 1992 Kozminykh & Esjunin: 68 (checklist in Russian)
- 1992 Růžička: 125 (key, descriptions, morphology, larval stages, phylogenetics) >> description of larval instars
- 1992 Schmitt: 272 (morphology: stridulatory files)
- 1992 Schwarz & Müller: 488 (biology, symbionts: mites)
- 1992 Silfverberg: 14 (checklist, distribution in English (Finnish & Swedish summaries))
- 1993 Athias-Binche et al.: 76 (biology, symbionts: mites)
- 1993 Beninger: 766-769 (biology, symbionts: mites)
- 1993b Kozminykh: 65 (key, descriptions, regional in Russian)
- 1993 Peck & Miller: 9 (species-group catalog)
- 1993 Richter: 346-355 (biology, symbionts: mites in English (German summary)) >> focal species

- 1993 Růžička: 34 (checklist, distribution in English & Czech)
- 1993 Sauer: 84 (field guide, brief descriptions, ecology in German)
- 1994 Beninger: 135-143 (biology, ecology in English (French summary))
- 1994 Bertin & Fallaci: 219 (checklist in Italian (English summary))
- 1994 Blackman & Evans: 217-227 (biology, symbionts: mites) >> focal species
- 1994 Brown & Wilson: 3 (biology, symbionts: mites)
- 1994 Dunn (biology, behavior)
- 1994 Kozminykh & Esjunin: 78 (biology, ecology in English (Russian summary))
- 1994 Růžička: 69 (biology, ecology)
- 1995 Angelini et al.: 10 (checklist, distribution in Italian)
- 1995 Bocáková: 24 (biology, ecology in Czech (English summary))
- 1995 Dapsio: 120 (checklist in Lithuanian)
- 1995 Kozminykh: 110 (key in Russian)
- 1995 Kozminykh & Nemkov: 113 (catalog in Russian)
- 1996 Alexandrovich et al.: 17 (checklist, distribution in Russian & English)
- 1996 Benken et al.: 237 (biology, behavior)
- 1996 Bertin & Lebboroni: 153 (checklist in Italian (English summary))
- 1996 Downie & Arnett: 357 (key, descriptions, regional)
- 1996 Hansen: 93 (checklist, distribution in Danish & English)
- 1996 Hoferer et al.: 246 (biology, behavior)
- 1996 Růžička: 74 (checklist) >> first reliable record from Iran
- 1996 Růžička & Schneider: 81 (checklist in English (Czech summary))
- 1996 Schwarz: 137 (biology, symbionts: mites)
- 1996 Schwarz & Walzl: 1339 (biology, symbionts: mites)
- 1997 Anderson et al.: 14 (checklist)
- 1997 Baker & Schwarz: 180 (biology, symbionts: mites)
- 1997 Blackman: 63-67 (biology, symbionts: mites) >> focal species
- 1997 Eggert & Müller: 217 (biology, review of: ecology, behavior)
- 1997 Klausnitzer: 44 (morphology, larval stages in German)
- 1997 Kozminykh: 65 (checklist in Russian)
- 1997 Krivolutskaya: 3 (checklist) >> (translation of Krivolutskaya 1973)
- 1997 Pennington (distribution note) >> First record of *N. vespilloides* in Scotland
- 1997 Telnov et al. (checklist)
- 1998 Benken et al.: 158-163 (biology, behavior)
- 1998 Eggert et al.: 97-107 (biology, behavior) >> focal species
- 1998 Harusawa: 34 (key in Japanese)
- 1998 Háva et al.: 180 (distribution note in English (Czech summary)) >> Turkey; Nemrut Mountains; First confirmed record for Turkey
- 1998 Kocárek: 387 (biology, ecology)
- 1998 Müller et al.: 195-200 (biology, behavior) >> focal species
- 1998 Ohkawara et al.: 551-559 (biology, ecology) >> focal species
- 1998 Perreau: 85 (biology, ecology in French (English summary))
- 1998 Sakaluk et al.: 553-564 (biology, behavior) >> focal species
- 1998 Schwarz et al.: 164 (biology, symbionts: mites)
- 1998 Schwarz & Koulianos: 623 (biology, symbionts: mites)
- 1998b Scott: 598+ (biology, review of: ecology, behavior)
- 1998 Trumbo & Thomas: 85-95 (biology, ecology) >> focal species

- 1999 Bertin & Lebboroni: 58 (checklist in Italian)
 1999 Háva et al.: 78 (key, descriptions)
 1999 Růžička: 318 (biology, ecology)
 1999 Suzuki: 205-208 (biology, ecology, behavior) >> focal species
 2000 Bahillo de la Puebla & López-Colón: 245 (biology, descriptions, distribution in Spanish)
 2000 Bertin et al.: 130 (biology, ecology in Italian (English summary))
 2000 Dobler & Müller: 392 (phylogenetics) >> CO1 based phylogeny
 2000 Eggert & Müller (biology, behavior)
 2000 Gwiazdowicz: 44 (biology, symbionts: mites) >> mite host
 2000 Jenkins et al.: 443 (biology, ecology, behavior) >> focal species
 2000 Koulianos & Schwarz: 836-840 (biology, ecology, behavior)
 2000 Nishikawa: 116 (checklist in English (Japanese summary))
 2000b Parkhomenko: 164 (morphology, larval stages in Ukrainian (English summary))
 2000 Purrington & Davidson: 355-358 (distribution note)
 2000 Sikes & Peck: 395 (descriptions, phylogenetics)
 2000a Suzuki: 269-272 (biology, ecology, behavior) >> focal species
 2000b Suzuki: 25-28 (biology, behavior) >> focal species
 2000c Suzuki: 38 (biology, ecology, behavior in Japanese with English abstract)
 2000 Szalanski et al.: 590 (biology, conservation, phylogenetics, genetics)
 2000 Werner & Raffa: 145 (comment: ecology)
 2001 Kocárek: 431-438 (biology, ecology)
 2001 Nishikawa: 81 (larval descriptions, phylogenetics in English (Japanese summary)) >> larva compared to *N. maculifrons*
 2002 Nikolajev & Kozminykh: 118 (catalog, distribution, descriptions, keys, figures in Russian (English summary))

= *altumi* Westhoff, 1881 NEW STATUS as absolute syn. of *N. vespilloides* Herbst

Type locality: "bei Mü." [Münster, Westphalia, Germany; descrip.]

Type depository: LNMD: Münster

- 1881 Westhoff: 108 (description of variation in German) >> Orig. comb.: *Necrophorus vespilloides* var. *Altumi* [!N]
 1898 Everts: 413
 1908 Smirnov: 42 (description of variation in Russian)
 1910 Jakobson: 612 (checklist in Russian) >> misspelled as *N. vespilloides* ab. *althumi* West.
 1913 Kuhnt: 335 (in German)
 1922 Everts: 182
 1925 Winkler: 265 (catalog) >> as *N. vespilloides* ab. *altumi*; misspelled *N. Althumi*
 1926a Portevin: 258 (revision: key, descriptions & catalog in French) >> misspelled as *N. vespilloides* ab. *Althumi*
 1928 Hatch: 138 (catalog) >> as *N. vespilloides* ab. *Altumi*
 1933a Shchegoleva-Barovskaya: 182 (revision: key, descriptions & catalog in Russian) >> as *N. vespilloides* ab. *altumi*
 1934 Roubal: 323 (description of variation in German) >> as *N. vespilloides* form *Altumi*

= *aurora* Motschulsky, 1860 NEW STATUS as absolute syn. of *N. vespilloides*

Herbst

Type locality: “de la Russie septentrionale” [Russia; descrip.]

Type depository: ZMUM: Moscow

- 1860 Motschulsky: 126 (descriptions in French) >> Orig. comb.: *Necrophorus aurora* [!N, S]
 1868 Gemminger & Harold: 717 (catalog) >> as valid species
 1884 Marseul: 193 (key, descriptions in French) >> as valid species
 1885 Marseul: 169 (catalog in French) >> as valid species
 1895b Reitter: 328 (description of variation in German) >> as syn. of *N. vespilloides*
 1906 Heyden et al.: 247 (checklist) >> as syn. of *N. vespilloides*
 1910 Jakobson: 612 (checklist in Russian) >> as syn. of *N. vespilloides*
 1916 Pasquet: 147 (description of variation in French)
 1924 Portevin: 375 (key, descriptions in French) >> as *N. vespilloides* ab. *aurora*
 1926a Portevin: 258 (revision: key, descriptions & catalog in French) >> as *N. vespilloides* ab. *Aurora*
 1928 Hatch: 138 (catalog) >> as *N. vespilloides* ab. *aurora*
 1933a Shchegoleva-Barovskaya: 182 (revision: key, descriptions & catalog in Russian) >> as *N. vespilloides* ab. *aurora*
 1944 Arnett: 4 (morphology: female genitalia) >> as *N. vespilloides* ab. *aurora*
 1965 Báguena: 52 (checklist in Spanish) >> as *N. vespilloides* ab. *aurora*
 1979 Salgado & Régil: 87 (catalog, annotated & figured in Spanish) >> as *N. vespilloides* var. *aurora*
 1989 Núñez et al.: 443 (checklist in Spanish (English summary)) >> as *N. vespilloides* var. *aurora*; most freq. var. observed behind typical form

= *borealis* Portevin, 1914 CONFIRMED as SYNONYM of *N. vespilloides* Herbst

Type locality: “Laponie : Kirkeness. Ile Sakhaline” [Norway?; descrip.]

Type depository: MNHN: Paris [!] holotype

- 1914a Portevin: 195 (description of variation in French) >> Orig. comb.: *Necrophorus vespilloides* var. *borealis* [!N, S]
 1924 Portevin: 375 (key, descriptions in French) >> noted as ‘nov’ *N. vespilloides* var. *borealis*
 1925 Winkler: 265 (catalog) >> as *N. vespilloides* ab. *borealis*
 1926a Portevin: 259 (revision: key, descriptions & catalog in French) >> as *N. vespilloides* var. *borealis*
 1928 Hatch: 138 (catalog) >> as *N. vespilloides* var. *borealis*
 1929 Kôno: 161, 164 (checklist, annotated) >> as *N. vespilloides* f. *borealis*
 1933 Kano: 101 (checklist in Japanese (English summary)) >> as *N. vespilloides* var. *borealis*
 1933a Shchegoleva-Barovskaya: 182 (revision: key, descriptions & catalog in Russian) >> as *N. vespilloides* ab. *borealis*
 1940 Hatch: 235 (description of variation) >> as *N. vespilloides* var. *borealis*
 1944 Arnett: 4 (morphology: female genitalia) >> as *N. vespilloides* var. *borealis*
 1967 Kuwayama (checklist in Russian)
 1973 Krivolutskaya: 71 (checklist in Russian (with electronic english translation)) >> as *N. vespilloides* var. *borealis* (cites Kano 1933-1934 usage)

- 1997 Krivolutskaya: 3 (checklist) >> as *N. vespilloides* var. *borealis* (cites Kano 1933-1934 usage); (Krivolutskaya 1973)
- 2000 Nishikawa: 116 (checklist in English (Japanese summary)) >> as absolute syn. of *N. vespilloides*

= *fractus* Portevin, 1914

Type locality: not mentioned

Type depository: DEIC: Eberswalde holotype?

- 1914a Portevin: 195 (description of variation in French) >> Orig. comb.: *Necrophorus vespilloides* var. *fractus* [!N, S]
- 1925 Winkler: 265 (catalog) >> as *N. vespilloides* ab. *fractus*
- 1926a Portevin: 258 (revision: key, descriptions & catalog in French) >> as syn. of *N. vespilloides*
- 1928 Hatch: 137 (catalog) >> as syn. of *N. vespilloides*
- 1933a Shchegoleva-Barovskaya: 182 (revision: key, descriptions & catalog in Russian) >> as syn. of *N. vespilloides*
- 1944 Arnett: 4 (morphology: female genitalia) >> as syn. of *N. vespilloides*
- 1965 Báguena: 52 (checklist in Spanish) >> as *N. vespilloides* ab. *fractus*
- 1992 Cho & Lee: 24 (revision: key, descriptions & catalog) >> as syn. of *N. vespilloides*
- 1993b Kozminykh: 65 (key, descriptions, regional in Russian) >> as syn. of *N. vespilloides*
- 1995 Kozminykh & Nemkov: 113 (catalog in Russian) >> as syn. of *N. vespilloides*
- 2002 Nikolajev & Kozminykh: 118 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as syn. of *N. vespilloides*

= *hebes* Kirby, 1837:96 CONFIRMED as SYNONYM of *N. vespilloides* Herbst

Type locality: "Nova Scotia" [Canada; label]

Type depository: BMNH: London [!] holotype male

- 1837 Kirby: 96 (descriptions) >> Orig. comb.: *Necrophorus hebes* [!N, S]
- 1853 LeConte: 278 (descriptions) >> as valid species
- 1853 Melsheimer: 39 (catalog) >> as valid species
- 1854 Lacordaire: 200 (biology, catalog in French) >> as valid species
- 1866a LeConte: 367 (nomenclature) >> as valid species
- 1868 Gemminger & Harold: 718 (catalog) >> as valid species
- 1870 LeConte: 398 (nomenclature) >> as senior syn. of *N. maritimus*
- 1873 Crotch: 37 (checklist) >> as *Silpha vespilloides* var. *hebes*
- 1873 LeConte: 326 (nomenclature) >> as *N. vespilloides* var. *hebes*
- 1880 Horn: 314 (revision: key, descriptions & catalog) >> as syn. of *N. vespilloides*
- 1885 Henshaw: 26 (checklist) >> as syn. of *N. vespilloides*
- 1910 Barkowski: 80 (key, descriptions, regional in German) >> as syn. of *N. defodiens*
- 1910 Jakobson: 612 (checklist in Russian) >> as syn. of *N. vespilloides*
- 1920 Leng: 86 (catalog) >> as syn. of *N. vespilloides*
- 1926a Portevin: 258 (revision: key, descriptions & catalog in French) >> as syn. of *N. defodiens*
- 1928 Hatch: 138 (catalog) >> as syn. of *N. defodiens*

- 1937 Leech: 156 (nomenclature) >> as syn. of *N. vespilloides*
 1940 Hatch: 234 (description of variation) >> as syn. of *N. vespilloides*
 1944 Arnett: 4 (morphology: female genitalia) >> as syn. of *N. vespilloides*
 1985 Anderson & Peck: 72 (revision: key, descriptions & catalog) >> as syn. of *N. vespilloides*
 1993b Kozminykh: 65 (key, descriptions, regional in Russian) >> as syn. of *N. vespilloides*
 1993 Peck & Miller: 9 (species-group catalog) >> as syn. of *N. vespilloides*
 2002 Nikolajev & Kozminykh: 118 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as syn. of *N. vespilloides*

= *mortuorum* Fabricius, 1792

Type locality: "in Germaniae" [Germany; descrip.]

Type depository: ZMUC: Kiel

- 1792 Fabricius: 248 (descriptions) >> Orig. comb.: *Nicrophorus mortuorum* [!N, S]
 1793 Herbst: 163 (catalog in German)
 1795 Panzer: 118 (catalog in German)
 1797 Panzer: 3 (catalog in German)
 1798 Illiger: 354 (catalog in German)
 1798 Paykull: 325
 1799 Hausmann: 33 (descriptions in German) >> compared to *N. bifasciatus*
 1801 Fabricius: 335 (descriptions) >> as valid species
 1802 Marsham: 115 >> as valid species; as *Silpha mortuorum*
 1807 Herschel: 274 (descriptions in German) >> as valid species
 1808 Gyllenhal: 260 (descriptions, catalog)
 1808 Schönherr: 121 (in German)
 1821 Dejean: 42 (catalog) >> as valid species
 1825 Charpentier: 201 (descriptions) >> as valid species, compared to *N. sepultor*
 1825 Curtis: Pl. 71 (checklist) >> text accompanying Plate 71; as valid species
 1825 Duftschmid: 112 (descriptions in German) >> as valid species
 1825 Say: 178 (description) >> as valid species; compared to *N. orbicollis*
 1827 Gyllenhal: 309 (descriptions) >> as valid species
 1829b Stephens: 75 (catalog) >> as valid species
 1830 Gebler: 94 (in German)
 1830 Stephens: 19 (biology, descriptions) >> as valid species
 1832 Ménétrés: 167 (checklist in French) >> as valid species
 1833 Dejean: 117 (catalog in French) >> as valid species
 1836 Dejean: 131 (catalog in French) >> as valid species
 1837 Erichson: 226 (species-group catalog in German) >> as valid species
 1838 Sturm: 72 (in German)
 1838 Zetterstedt: 109 (description)
 1839 Matzek: 23 (morphology: internal & external anatomy in Latin) >> as valid species
 1839 Stephens: 114 (descriptions) >> as valid species
 1840 Laporte: 2 (descriptions in French) >> as valid species
 1841a Heer: 388 (descriptions in German) >> as valid species

- 1841b Heer: 9 (checklist in German) >> as valid species
 1846b Küster: nr. 40 (catalog in German (English summary))
 1846 Mannerheim: 514 (descriptions in German) >> compared to *N. defodiens*
 1847a Gebler: 439
 1847 Rosenhauer: 105 (checklist in German) >> as valid species
 1849 Bach: 154 (checklist, brief descriptions in German) >> as valid species
 1849 Gaubil: 55 (catalog in French) >> as valid species
 1849 Ménétriés: 52 (checklist in French) >> as valid species
 1849 Redtenbacher: 140 (catalog in German)
 1853 Mannerheim: 172 (descriptions in German) >> as valid species
 1854 Lacordaire: 199 (biology, catalog in French) >> as valid species
 1855 Fairmaire & : 292
 1858 Calwer: 106 (checklist, brief descriptions in German) >> as valid species
 1858 Redtenbacher: 289 (catalog in German) >> as valid species
 1859 Gutfleisch & Bose: 202 (key, descriptions in German) >> as valid species
 1859a Motschulsky: 231 (catalog)
 1859c Motschulsky: 491 (catalog in French) >> as valid species
 1859 Schaum: 36 (catalog in German) >> as valid species
 1860 Motschulsky: 126 (descriptions in French) >> as valid species
 1862 Schaum: 38 (catalog in German) >> as valid species
 1862 Schiødte: 226 (morphology, larval stages in Danish)
 1862 Thomson: 10 (descriptions) >> as valid species
 1863 Grenier: 13 (checklist in French) >> as valid species
 1863 Marseul: 88 (catalog in French) >> as valid species
 1865 Power: 198 (revision: key, descriptions & catalog) >> as valid species
 1866a LeConte: 367 (nomenclature) >> as valid species; removes *N. pygmaeus* from
 synonymy under *N. mortuorum*
 1866 Marseul: 38 (catalog in French) >> as valid species
 1868 Gemminger & Harold: 718 (catalog) >> as valid species
 1868 Stein: 42 (catalog in Latin) >> as valid species
 1869 Stierlin & Gautard: 116 (checklist in German) >> as valid species
 1870 Vollenhoven et al.: 54 (checklist in Dutch) >> as valid species
 1873 Crotch: 37 (checklist) >> as *Silpha mortuorum*, as syn. of *Silpha vespilloides*
 1873 Klika: 127 (checklist in Czech)
 1873 Michow: 14, 23 (in German)
 1873 Wood: 90 (biology, ecology) >> as valid species
 1874 Cox: 407 (key, descriptions (brief)) >> as valid species
 1874 Seidlitz: 217 (key in German) >> as valid species
 1875 Siebke: 163 (checklist in Norwegian) >> as valid species
 1876b Kraatz: 395 (morphology: clypeus in German) >> as valid species
 1877 Hickel & Dragicsevics: 28 (checklist in French)
 1877 Stein & Weise: 61 (catalog in Latin) >> as syn. of *N. vespilloides*
 1880 Heyden: 87 (checklist in German) >> as syn. of *N. vespilloides*
 1880 Horn: 314 (revision: key, descriptions & catalog) >> as syn. of *N. vespilloides*
 1883 Heyden et al.: 73 (checklist) >> as syn. of *N. vespilloides*
 1884 Marseul: 192 (key, descriptions in French) >> as valid species
 1884 Reitter: 87 (descriptions in German) >> as syn. of *Silpha vespilloides*

- 1885 Marseul: 169 (catalog in French) >> as valid species
 1885 Thomson: 66 (key, checklist in Swedish) >> as valid species
 1887 Lewis: 341 (description) >> as valid species; as *Necrophorus mortuorum*
 1888 Matthews: 94 (description) >> as valid species; compared to *N. quadrimaculatus*
 1888 Seidlitz: 313 (key in German) >> as syn. of *N. vespilloides*; misspelled as
Necrophagus mortuorum
 1888 Sparre Schneider: 177 (checklist in Norwegian (German summary)) >> as valid
 species
 1889 Fowler: 43 (descriptions, catalog)
 1889 Seidlitz: 329 (key in German) >> as syn. of *N. vespilloides*; misspelled as
Necrophagus mortuorum
 1890 Fauvel: 348 (descriptions in French) >> as valid species
 1891 Heyden et al.: 139 (checklist) >> as syn. of *N. vespilloides*
 1893 Heyden: 51 (checklist in German) >> as syn. of *N. vespilloides*
 1895b Reitter: 328 (description of variation in German) >> as syn. of *N. vespilloides*
 1896 Acloque: 241 (key in French) >> as valid species
 1896 Fairmaire: 82 (descriptions in French) >> as valid species; compared to *N.*
encaustus
 1901 Carret: 328 (description of variation in French) >> as valid species
 1902 Johnson & Halbert: 690 (checklist) >> as valid species
 1902 Morley: 249 (biology, behavior) >> as valid species; stridulation
 1906 Heyden et al.: 247 (checklist) >> as syn. of *N. vespilloides*
 1907 Sharp: xvi (morphology: micromorphism)
 1910 Jakobson: 612 (checklist in Russian) >> as syn. of *N. vespilloides*
 1912 Sharp & Muir: 504 (morphology: male genitalia) >> as valid species; “Morphol-
 ogy: male genitalia” - Hatch 1928
 1914 Gorka: 235 (morphology: malpighian tubules in German) >> as valid species
 1920 Leng: 86 (catalog) >> as syn. of *N. vespilloides*
 1925 Winkler: 265 (catalog) >> as syn. of *N. vespilloides*
 1926a Portevin: 258 (revision: key, descriptions & catalog in French) >> as syn. of *N.*
vespilloides
 1926 Willoughby-Ellis: 3 (description of variation) >> description of variation: 2
 unavailable names
 1928 Hatch: 137 (catalog) >> as syn. of *N. vespilloides*
 1930 Baier: 155 (biology, behavior, physiology) >> as valid species
 1930 Vitzthum: 389 (biology, symbionts: mites in German) >> mite host; as valid spe-
 cies
 1932 Joy: 466 (key) >> as syn. of *N. vespilloides*
 1933a Shchegoleva-Barovskaya: 182 (revision: key, descriptions & catalog in Russian)
 >> as syn. of *N. vespilloides*
 1934b Pukowski: 54 (morphology, larval stages in German) >> as syn. of *N. vespil-*
loides
 1937 Leech: 156 (nomenclature) >> as syn. of *N. vespilloides*
 1944 Arnett: 4 (morphology: female genitalia) >> as syn. of *N. vespilloides*
 1944 Milne & Milne: 327 (biology, behavior) >> as syn. of *N. vespilloides*; misspelled
 as *N. moratorium*
 1945 Kloet & Hincks: 155 (checklist) >> as syn. of *N. vespilloides*

- 1959 Linssen: 162 (catalog) >> as syn. of *N. vespilloides*
 1965 Báguena: 52 (checklist in Spanish) >> as syn. of *N. vespilloides*
 1992 Cho & Lee: 24 (revision: key, descriptions & catalog) >> as syn. of *N. vespilloides*; misspelled as *N. morturum*
 1993b Kozminykh: 65 (key, descriptions, regional in Russian) >> as syn. of *N. vespilloides*
 1995 Kozminykh & Nemkov: 113 (catalog in Russian) >> as syn. of *N. vespilloides*
 1997 Kozminykh: 65 (checklist in Russian) >> as syn. of *N. vespilloides*
 2002 Nikolajev & Kozminykh: 118 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as syn. of *N. vespilloides*

= *oregonensis* Swann & Papp, 1972 NEW SYNONYM of *N. vespilloides* Herbst

Type locality: none mentioned [Swan & Papp 1972] “Baker City, Oregon” [USA; Hatch 1927b]

Type depository: NMNH: Washington D. C. [!] holotype

- 1927b Hatch: 356 (revision: key, descriptions & catalog) >> described in key, as *N. defodiens* ab. *oregonensis*; unavailable name
 1957 Hatch: 12 (description of variation) >> as *N. vespilloides vespilloides* ab. *oregonensis*; unavailable name
 1972 Swan & Papp: 357 (description) >> Orig. comb.: *N. vespilloides* subsp. *oregonensis*; no attribution, not indicated as new [!N]
 1984 Papp: 71 (descriptions) >> as valid species

= *pygmaeus* Kirby, 1837 CONFIRMED as SYNONYM of *N. vespilloides* Herbst

Type locality: “N. Amer. Rocky Mountains” [label]

Type depository: BMNH: London [!] holotype female

- 1837 Kirby: 98 (descriptions) >> Orig. comb.: *Necrophorus pygmaeus* [!N, S]
 1853 LeConte: 277 (descriptions) >> as valid species
 1853 Melsheimer: 39 (catalog) >> as valid species
 1854 Emmons: 57 (descriptions) >> as *N. pygmaeus* (Rich.)
 1854 Lacordaire: 200 (biology, catalog in French) >> as valid species
 1866a LeConte: 367 (nomenclature) >> as valid species
 1866b LeConte: 347 (checklist) >> as valid species
 1868 Gemminger & Harold: 719 (catalog) >> as valid species
 1870 LeConte: 398 (nomenclature) >> as senior syn. of *N. defodiens*
 1873 Crotch: 37 (checklist) >> as syn. of *Silpha vespilloides*
 1880 Horn: 314 (revision: key, descriptions & catalog) >> as syn. of *N. vespilloides*
 1891 Heyden et al.: 139 (checklist) >> as syn. of *N. vespilloides*
 1895b Reitter: 328 (description of variation in German) >> as syn. of *N. vespilloides*
 1906 Heyden et al.: 247 (checklist) >> as syn. of *N. vespilloides*
 1910 Barkowski: 80 (key, descriptions, regional in German) >> as syn. of *N. defodiens*
 1910 Jakobson: 612 (checklist in Russian) >> as syn. of *N. vespilloides*
 1920 Leng: 86 (catalog) >> as syn. of *N. vespilloides*
 1926a Portevin: 258 (revision: key, descriptions & catalog in French) >> as syn. of *N. defodiens*
 1928 Hatch: 138 (catalog) >> as syn. of *N. defodiens*

- 1937 Leech: 156 (nomenclature) >> as syn. of *N. vespilloides*
 1940 Hatch: 234 (description of variation) >> as syn. of *N. vespilloides*
 1944 Arnett: 4 (morphology: female genitalia) >> as syn. of *N. vespilloides*
 1985 Anderson & Peck: 72 (revision: key, descriptions & catalog in English (& keys in French also)) >> as syn. of *N. vespilloides*; misspelled as *N. pigmaeus*
 1993b Kozminykh: 65 (key, descriptions, regional in Russian) >> as syn. of *N. vespilloides*
 1993 Peck & Miller: 9 (species-group catalog) >> as syn. of *N. vespilloides*
 1995 Kozminykh & Nemkov: 113 (catalog in Russian) >> as syn. of *N. vespilloides*
 2002 Nikolajev & Kozminykh: 118 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as syn. of *N. vespilloides*

= *subfasciatus* Portevin, 1914 NEW STATUS as absolute syn. of *N. vespilloides* Herbst

Type locality: "Allemagne. France." [descrip.]

Type depository: MNHN: Paris [not found]

- 1914a Portevin: 195 (description of variation in French) >> Orig. comb.: *Necrophorus vespilloides* var. *subfasciatus* [!N, S]
 1924 Portevin: 376 (key, descriptions in French) >> as *N. vespilloides* ab. *subfasciatus*
 1925 Winkler: 265 (catalog) >> as *N. vespilloides* ab. *subfasciatus*
 1926a Portevin: 235 (revision: key, descriptions & catalog in French) >> as *N. vespilloides* ab. *subfasciatus*
 1928 Hatch: 138 (catalog) >> as *N. vespilloides* ab. *subfasciatus*
 1933a Shchegoleva-Barovskaya: 182 (revision: key, descriptions & catalog in Russian) >> as *N. vespilloides* ab. *subfasciatus*
 1944 Arnett: 4 (morphology: female genitalia) >> as *N. vespilloides* ab. *subfasciatus*
 1965 Báguena: 52 (checklist in Spanish) >> as *N. vespilloides* ab. *subfasciatus*
 1989 Núñez et al.: 443 (checklist in Spanish (English summary)) >> as *N. vespilloides* var. *subfasciatus*

= *subinterruptus* Pic, 1917 NEW STATUS as absolute syn. of *N. vespilloides* Herbst

Type locality: unknown

Type depository: MNHN: Paris. [not found]

- 1917b Pic: 21 (description of variation in French) >> Orig. comb.: *Necrophorus vespilloides* var. *subinterruptus*
 1925 Winkler: 265 (catalog) >> as *N. vespilloides* ab. *subinterruptus*
 1926b Portevin: 258 (descriptions in French) >> as syn. of *N. vespilloides* ab. *subfasciatus*
 1928 Hatch: 138 (catalog) >> as syn. of *N. vespilloides* ab. *subfasciatus*
 1933a Shchegoleva-Barovskaya: 182 (revision: key, descriptions & catalog in Russian) >> as *N. vespilloides* ab. *subinterruptus*
 1934 Roubal: 323 (description of variation in German) >> as *N. vespilloides* form *subinterrupta*
 1944 Arnett: 4 (morphology: female genitalia) >> as *N. vespilloides* ab. *subinterruptus*
 1965 Báguena: 52 (checklist in Spanish) >> as syn. of *N. vespilloides* ab. *subfasciatus*

- = *sylvaticus* Reitter, 1895 CONFIRMED as SYNONYM of *N. vespilloides* Herbst
 Type locality: “Transbaikalien & Quellgebiet des Irkut” [syntype labels]
 Type depository: HNHM: Budapest [!] 5 syntypes [HNHM, SMTD]
- 1895b Reitter: 328 (description of variation in German) >> Orig. comb.: *Necrophorus vespilloides* var. *sylvaticus* [!N, S]
 1896 Heyden: 38 (checklist in German) >> as *N. vespilloides* var. *sylvaticus*
 1897 Reitter: 48 (description of variation in German) >> as *N. vespilloides* var. *sylvaticus*; compared to *N. vespilloides* var. *sylvivagus*
 1899 Ganglbauer: 165 (descriptions, in German) >> as *N. vespilloides* var. *sylvaticus*
 1910 Jakobson: 612 (checklist in Russian) >> as *N. vespilloides* var. *sylvaticus*
 1914a Portevin: 195 (description of variation in French) >> compared to *N. vespilloides* var. *borealis*
 1916 Pasquet: 146 (description of variation in French)
 1924 Portevin: 375 (key, descriptions in French) >> as *N. vespilloides* var. *sylvaticus*
 1925 Winkler: 265 (catalog) >> as *N. vespilloides* ab. *sylvaticus*
 1926a Portevin: 235 (revision: key, descriptions & catalog in French) >> as *N. vespilloides* var. *sylvaticus*
 1928 Hatch: 138 (catalog) >> as *N. vespilloides* var. *sylvaticus*
 1933a Shchegoleva-Barovskaya: 182 (revision: key, descriptions & catalog in Russian) >> as *N. vespilloides* ab. *sylvaticus*
 1940 Hatch: 235 (description of variation) >> as *N. vespilloides* var. *sylvaticus*
 1944 Arnett: 4 (morphology: female genitalia) >> as *N. vespilloides* var. *sylvaticus*
 1967 Kuwayama (checklist in Russian)
 1973 Krivolutskaya: 71 (checklist in Russian (with electronic english translation)) >> as *N. vespilloides* var. *sylvaticus* (cites Kuwayama 1967 usage)
 1997 Krivolutskaya: 3 (checklist) >> as *N. vespilloides* var. *sylvaticus* (cites Kuwayama 1967 usage); (Krivolutskaya 1973)
 2000 Nishikawa: 116 (checklist in English (Japanese summary)) >> as syn. of *N. vespilloides*

- = *sylvivagus* Reitter, 1897 NEW STATUS as absolute syn. of *N. vespilloides* Herbst
 Type locality: “Japan” [from syntype labels]
 Type depository: HNHM: Budapest [!] 3 syntypes
- 1897 Reitter: 48 (description of variation in German) >> Orig. comb.: *Necrophorus vespilloides* var. *sylvivagus* [!S]
 1910 Jakobson: 612 (checklist in Russian) >> as *N. vespilloides* var. *sylvivagus*
 1916 Pasquet: 147 (description of variation in French)
 1924 Portevin: 375 (key, descriptions in French) >> as *N. vespilloides* var. *sylvivagus*
 1925 Winkler: 265 (catalog) >> as *N. vespilloides* ab. *sylvivagus*
 1926a Portevin: 235 (revision: key, descriptions & catalog in French) >> as *N. vespilloides* ab. *sylvivagus*
 1928 Hatch: 138 (catalog) >> as *N. vespilloides* var. *sylvivagus*
 1933a Shchegoleva-Barovskaya: 182 (revision: key, descriptions & catalog in Russian) >> as *N. vespilloides* ab. *sylvivagus*
 1940 Hatch: 235 (description of variation) >> as *N. vespilloides* ab. *sylvivagus*
 1944 Arnett: 4 (morphology: female genitalia) >> as *N. vespilloides* ab. *sylvivagus*
 1965 Báguena: 52 (checklist in Spanish) >> as *N. vespilloides* ab. *sylvivagus*

Nicrophorus vestigator Herschel, 1807

Type locality: unknown

Type depository: ZMHB: Berlin ?

Distribution: Palearctic & Oriental: Europe to Israel*, Transcaucasia, w. Siberia, Turkey, Pakistan with rare records from India:Kashmir

- 1807 Herschel: 274 (descriptions in German) >> Orig. comb.: *Nicrophorus Vestigator* [!N, S]
- 1825 Charpentier: 201 (descriptions) >> compared to *N. sepultor*
- 1825 Curtis: Pl. 71 (checklist) >> text accompanying Plate 71
- 1827 Gyllenhal: 308 (descriptions) >> misidentified as *N. sepultor*
- 1829b Stephens: 75 (catalog)
- 1830 Stephens: 18 (biology, descriptions)
- 1833 Dejean: 117 (catalog in French) >> auth. attrib. Illiger
- 1837 Erichson: 224 (species-group catalog in German)
- 1838 Sturm: 65 (in German)
- 1839 Matzek: 19 (morphology: internal & external anatomy in Latin) >> as *N. Vestigatore*
- 1839 Stephens: 114 (descriptions)
- 1840 Mareuse (description of variation in French)
- 1841a Heer: 387 (descriptions in German)
- 1841b Heer: 9 (checklist in German)
- 1846 Kolenati: 50 (catalog) >> spec. 203 in list
- 1847 Colin: 110-111 (morphology, larval stages in French) >> "Biology" - Hatch 1928
- 1847 Rosenhauer: 105 (checklist in German)
- 1849 Bach: 153 (checklist, brief descriptions in German)
- 1849 Gaubil: 55 (catalog in French)
- 1849 Redtenbacher: 140 (catalog in German)
- 1854 Lacordaire: 199 (biology, catalog in French)
- 1855 Fairmaire & : 291
- 1857 Jacquelin du Val: pl. 33 (in French)
- 1858 Calwer: 106 (checklist, brief descriptions in German)
- 1858 Redtenbacher: 289 (catalog in German)
- 1859 Gutfleisch & Bose: 202 (key, descriptions in German)
- 1859 Schaum: 36 (catalog in German)
- 1862 Schaum: 38 (catalog in German)
- 1862 Thomson: 8 (descriptions)
- 1863 Grenier: 13 (checklist in French)
- 1863 Marseul: 88 (catalog in French)
- 1865 Power: 198 (revision: key, descriptions & catalog)
- 1866 Marseul: 38 (catalog in French)
- 1868 Gemminger & Harold: 719 (catalog)
- 1868 Stein: 42 (catalog in Latin)
- 1869 Stierlin & Gautard: 116 (checklist in German)
- 1870 Vollenhoven et al.: 54 (checklist in Dutch)
- 1873 Michow: 13, 21 (in German)
- 1874 Cox: 407 (key, descriptions (brief))

- 1874 Seidlitz: 216 (key in German)
- 1876b Kraatz: 395 (morphology: clypeus in German)
- 1877 Hickel & Dragicsevics: 27 (checklist in French)
- 1877 Stein & Weise: 61 (catalog in Latin)
- 1883 Heyden et al.: 73 (checklist)
- 1884 Marseul: 187 (key, descriptions in French)
- 1884 Reitter: 88 (descriptions in German) >> as *Silpha vestigator*
- 1885 Marseul: 169 (catalog in French)
- 1885 Reitter: 323 (in German)
- 1885 Thomson: 66 (key, checklist in Swedish)
- 1888 Seidlitz: 312 (key in German) >> misspelled as *Necrophagus vestigator*
- 1889 Fowler: 44 (descriptions, catalog)
- 1889 Sahlberg: 19 (checklist in Swedish)
- 1889 Seidlitz: 329 (key in German) >> misspelled as *Necrophagus vestigator*
- 1891 Heyden et al.: 139 (checklist) >> as *Necrophorus vestigator*
- 1893 Heyden: 51 (checklist in German)
- 1895b Reitter: 329 (description of variation in German)
- 1896 Acloque: 241 (key in French)
- 1898 Everts: 413
- 1899 Fabre (biology, larval stages in French) >> "Larva" - Hatch 1928
- 1899 Ganglbauer: 166 (key, descriptions, in German)
- 1900 Bordas: 297 (morphology: testes in French) >> "Morphology- testes" -Hatch 1928
- 1900 Reitter: 82 (description of variation in German)
- 1901 Carret: 329 (description of variation in French)
- 1902 Heyden: 12 (nomenclature in French)
- 1905 Weber (biology, ecology, behavior in German)
- 1906 Heyden et al.: 247 (checklist)
- 1909 Reitter: 241 (in German)
- 1910 Jakobson: 612 (checklist in Russian)
- 1911 Reitter: 106 (description of variation in German) >> description of variation: 1 unavailable name
- 1912 Benick: 197-203 (morphology, larval & pupal stages in German) >>
- 1912 Fleischer: 250 (description of variation in German) >> description of variation: 1 unavailable name
- 1913 Kniephof: 187 (in German)
- 1913 Kuhnt: 336 (in German)
- 1913 Lucas: 241
- 1914a Portevin: 195 (description of variation in French) >> description of variation: 1 unavailable name
- 1916 Pasquet: 168 (description of variation in French)
- 1916 Schaufuss: 274 (checklist in German)
- 1917b Pic (description of variation in French)
- 1918 Fabre (biology)
- 1919 Fabre: 294-351 (biology, ecology, behavior) >> "Biology" -Hatch 1928
- 1920 Portevin: 400 (descriptions in French)
- 1922 Everts: 182

- 1922 Sherborn: 6882 (catalog - index) >> auth. attrib. Ill.
- 1925 Fuente y Morales: 120 (checklist in Spanish)
- 1925 Portevin: 168 (description of variation in French) >> description of variation: 1 unavailable name
- 1925 Winkler: 265 (catalog)
- 1926 Porta: 333 (key, checklist in Italian)
- 1926a Portevin: 247 (revision: key, descriptions & catalog in French)
- 1927b Hatch: 362 (revision: key, descriptions & catalog) >> description of variation: 1 unavailable name
- 1928 Hatch: 148 (catalog) >> description of variation: 1 unavailable name
- 1929 Hlisnikovsky: 119, 120 (in German) >> description of variation: 2 unavailable names
- 1929 Portevin: 540 (key, intraspecific variation in French)
- 1930 Kieseritzky: 61 (descriptions in Russian (German summary)) >> in footnote
- 1930 Roubal: 241 (catalog in Czech)
- 1932 Hlisnikovsky: 30 (key, descriptions in German)
- 1932 Joy: 466 (key)
- 1933a Pic (description of variation in French)
- 1933 Pukowski: 518-586 (biology, ecology in German)
- 1933 Rapp: 538 (biology, ecology, distribution in German)
- 1933 Semenov-Tian-Shanskij: 156 (catalog in Russian & Latin)
- 1933a Shchegoleva-Barovskaya: 180 (revision: key, descriptions & catalog in Russian)
- 1933 Walsh: 30 (biology, ecology)
- 1934 Peyerimhoff: 334 (distribution note in French)
- 1934b Pukowski: 54 (morphology, larval stages in German) >> cites Benick (1912)
- 1939 Roubal: 85 (description of variation in Czech (French summary))
- 1945 Kloet & Hincks: 155 (checklist)
- 1946 Paulian: 95 (biology, ecology in French)
- 1947 Cantonnet & Lecordier: 134 (biology, ecology in French)
- 1949 Fabre: 235 (biology) >> observations of nest making behavioral repertoire
- 1949 Horion: 77 (biology, ecology, distribution in German)
- 1949 Mroczkowski: 196 (biology, ecology in Polish (English summary))
- 1949 Roehrich: 44 (biology, ecology in French)
- 1949 Théodoridès (biology, ecology in French)
- 1950b Théodoridès: 5 (biology, ecology, morphology in French)
- 1952 Benick: 33 (biology, ecology in German)
- 1955 Moore: 294 (biology, ecology)
- 1955 Mroczkowski: 23 (key, descriptions in Polish)
- 1959 Hicks: 94 (biology, ecology)
- 1959 Linszen: 163 (catalog)
- 1960 Hansen et al.: 72 (checklist in Danish)
- 1965 Báguena: 51 (checklist in Spanish) >> description of variation: 1 new unavailable name
- 1968 Hansen: 20 (key, descriptions in Danish)
- 1968 Petruška: 168 (biology, ecology in Czech (English summary))
- 1969 Ernst: 75 (morphology: antennal sensillae in German (English summary))
- 1969 Krzelj: 89 (morphology: elytra in French)

- 1971 Freude: 194 (key in German)
- 1972b Ernst: 96 (morphology: antennal sensillae in German (English summary))
- 1975b Emetz: 106 (checklist in Russian)
- 1977 Pope: 20 (checklist)
- 1978 Blas: 50 (key, descriptions in Spanish)
- 1978 Burakowski et al.: 205 (catalog, distribution, synonymy in Polish)
- 1979 Salgado & Régil: 87 (catalog, annotated & figured in Spanish)
- 1979 Silfverberg: 12 (checklist, distribution)
- 1980 Franssen: 46 (morphology: female genitalia in French) >> female genitalia figured
- 1981 Spriggs: 116 (descriptions, ecology)
- 1981 Šustek: 40 (key, descriptions, regional in Czech)
- 1982 Schawaller: 256 (checklist in German (English summary))
- 1983 Putman: 38-42 (biology, ecology)
- 1984a Bredohl: 11-25 (morphology: stridulatory files in German (English summary))
- 1985 Zahradník: 123 (catalog, annotated & figured in German)
- 1986 Nishikawa: 99 (catalog in Japanese (English summary))
- 1987 Lucht: 67 (catalog in German)
- 1989 Koch: 165 (biology, ecology in German)
- 1989 Núñez et al.: 443 (checklist in Spanish (English summary))
- 1990 Erbeling: 116 (biology, ecology in German (English summary))
- 1990 Zahradník: 123 (key in Spanish)
- 1992 Kozminykh: 64 (checklist in Russian)
- 1992 Kozminykh & Esjunin: 68 (checklist in Russian)
- 1992 Silfverberg: 14 (checklist, distribution in English (Finnish & Swedish summaries))
- 1993b Kozminykh: 65 (key, descriptions, regional in Russian)
- 1993 Růžička: 34 (checklist, distribution in English & Czech)
- 1994 Bertin & Fallaci: 219 (checklist in Italian (English summary))
- 1994 Kozminykh & Esjunin: 78 (biology, ecology in English (Russian summary))
- 1994 Madge: 545 (comment)
- 1995 Angelini et al.: 10 (checklist, distribution in Italian)
- 1995 Dapsio: 120 (checklist in Lithuanian)
- 1995 Kozminykh: 110 (key in Russian)
- 1995 Kozminykh & Nemkov: 112 (catalog in Russian)
- 1996 Alexandrovich et al.: 17 (checklist, distribution in Russian & English)
- 1996 Bertin & Lebboroni: 155 (checklist in Italian (English summary))
- 1996 Hansen: 93 (checklist, distribution in Danish & English)
- 1996 Růžička & Schneider: 81 (checklist in English (Czech summary))
- 1997 Kozminykh: 65 (checklist in Russian)
- 1997 Pushkin: 24 (biology, ecology in Russian)
- 1997 Pushkin & Charthenko: 62 (biology, ecology in Russian)
- 1998 Háva et al.: 180 (distribution note in English (Czech summary)) >> Turkey; Abant; First confirmed record for Turkey
- 1998 Pushkin & Sigida: 84 (biology, ecology in Russian)
- 1999 Bertin & Lebboroni: 61 (checklist in Italian)
- 2000 Bahillo de la Puebla & López-Colón: 246 (biology, descriptions, distribution in

Spanish)

- 2002 Nikolajev & Kozminykh: 113 (catalog, distribution, descriptions, keys, figures in Russian (English summary))

= *anglicus* Stephens, 1830

Type locality: not mentioned

Type depository: unknown

- 1825 Curtis: pl. 71 (checklist) >> text accompanying Plate 71; as “Leach’s MSS”; no description, nomen nudum
- 1829a Stephens: 7 (checklist) >> no description, nomen nudum
- 1829b Stephens: 74 (catalog) >> no description; nomen nudum; “Leach MSS--(Curtis l. c. supra)”
- 1830 Stephens: 17 (biology, descriptions) >> Orig. comb.: *Necrophorus anglicus* as syn. of *N. sepultor* Gyllenhal [!N, S]
- 1833 Samouelle: 4-2 (descriptions) >> first use as valid
- 1868 Gemminger & Harold: 719 (catalog) >> as syn. of *N. sepultor* (misspelled as *N. sepulchralis*)
- 1926a Portevin: 261 (revision: key, descriptions & catalog in French) >> as syn. of *N. vestigator*
- 1928 Hatch: 148 (catalog) >> as syn. of *N. vestigator*
- 1933a Shchegoleva-Barovskaya: 180 (revision: key, descriptions & catalog in Russian) >> as syn. of *N. vestigator*
- 1965 Báguena: 51 (checklist in Spanish) >> as syn. of *N. vestigator*
- 1993b Kozminykh: 65 (key, descriptions, regional in Russian) >> as syn. of *N. vestigator*
- 1995 Kozminykh & Nemkov: 112 (catalog in Russian) >> as syn. of *N. vestigator*
- 2002 Nikolajev & Kozminykh: 113 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as syn. of *N. vestigator*

= *bipunctatus* Portevin, 1914 (junior primary homonym, not Kraatz 1880) NEW STATUS as absolute syn. of *N. vestigator* Herschel

Type locality: “Andalousie” [descrip.]

Type depository: unknown; not DEIC: Eberswalde [L. Zerche, in litt.]

- 1914a Portevin: 195 (description of variation in French) >> Orig. comb.: *Necrophorus vestigator* var. *bipunctatus* [!N, S]
- 1925 Winkler: 265 (catalog) >> as *N. vestigator* ab. *bipunctatus*
- 1926a Portevin: 261 (revision: key, descriptions & catalog in French) >> as syn. of *N. vestigator* ab. *Brullei*
- 1928 Hatch: 148 (catalog) >> as syn. of *N. vestigator* ab. *interruptus* Br.
- 1933a Shchegoleva-Barovskaya: 180 (revision: key, descriptions & catalog in Russian) >> as *N. vestigator* ab. *bipunctatus*
- 1965 Báguena: 51 (checklist in Spanish) >> as syn. of *N. vestigator* ab. *interruptus* Br.

= *brullei* Jacobson, 1910 (nomen novum for *N. interruptus* Brullé) NEW STATUS as absolute syn. of *N. vestigator*

Type locality: see *N. interruptus* Brullé

Type depository: see *N. interruptus* Brullé

- 1910 Jakobson: 612 (checklist in Russian) >> Orig. comb.: *Necrophorus vestigator* var. *brullei* [nomen novum] created replacement name for *N. interruptus* Brulle [preocc.] [!N, S]
- 1916 Pasquet: 167 (description of variation in French)
- 1925 Fuente y Morales: 120 (checklist in Spanish) >> as var. of *vestigator*
- 1925 Winkler: 265 (catalog) >> as syn. of *N. vestigator*
- 1926a Portevin: 261 (revision: key, descriptions & catalog in French) >> as *N. vestigator* ab. *brullei*
- 1928 Hatch: 148 (catalog) >> as syn. of *N. vestigator* ab. *interruptus*
- 1933a Shchegoleva-Barovskaya: 180 (revision: key, descriptions & catalog in Russian) >> as *N. vestigator* ab. *brullei*
- 1965 Báguena: 51 (checklist in Spanish) >> as syn. of *N. vestigator* ab. *interruptus*
- 1979 Salgado & Régil: 88 (catalog, annotated & figured in Spanish) >> as *N. vestigator* var. *brullei*
- 1989 Núñez et al.: 445 (checklist in Spanish (English summary)) >> as *N. vestigator* var. *brullei*; most common var. observed

= *cadaverinus* Mareuse, 1840 (junior primary homonym, not Gravenhorst, 1807)

Type locality: unknown

Type depository: unknown

- 1840 Mareuse: 40 (description of variation in French) >> Orig. comb.: *Necrophorus sepultor cadaverinus*; New junior primary homonym, not Gravenhorst 1807]
- 1925 Portevin: 168 (description of variation in French) >> as *N. vestigator* ab. *cadaverinus*
- 1926a Portevin: 247 (revision: key, descriptions & catalog in French) >> as *N. vestigator* ab. *cadaverinus*
- 1928 Hatch: 148 (catalog) >> Orig. comb.: *N. vestigator* ab. *Mareusei* (nomen novum for *N. sepultor cadaverinus*)
- 1933a Shchegoleva-Barovskaya: 180 (revision: key, descriptions & catalog in Russian) >> as syn. of *N. vestigator* ab. *Mareusei*, syn. of *N. vestigator*

= *carreti* Pic, 1933 NEW STATUS as absolute syn. of *N. vestigator* Herschel

Type locality: unknown

Type depository: MNHN: Paris [not found]

- 1933a Pic: 5 (description of variation in French) >> Orig. comb.: *Necrophorus vestigator* var. *Carreti*

= *degener* Carret, 1901 NEW STATUS as absolute syn. of *N. vestigator* Herschel

Type locality: “Haute-Savoie: Mègeve; Orléans; Remiremont” [France: Mègeve 45.51°N, 6.37°E; Orelans: 47.54°N, 1.54°E; Remiremont: 48.01°N, 6.35°E; descrip.]

Type depository: MNHN: Paris [not found]

- 1901 Carret: 330 (description of variation in French) >> Orig. comb.: *Necrophorus vestigator* var. *degener* [!S]

- 1902 Heyden: 12 (nomenclature in French) >> as syn. of *N. vestigator* var. *rautenbergi*
 1906 Heyden et al.: 247 (checklist) >> as syn. of *N. vestigator* var. *rautenbergi*
 1910 Jakobson: 612 (checklist in Russian) >> as syn. of *N. vestigator* var. *rautenbergi*
 1925 Winkler: 265 (catalog) >> as syn. of *N. vestigator* ab. *rautenbergi*
 1926a Portevin: 261 (revision: key, descriptions & catalog in French) >> as syn. of *N. vestigartor* ab. *cadaverinus*
 1928 Hatch: 148 (catalog) >> as syn. of *N. vestigator* ab. *Rauterbergi*
 1965 Báguena: 51 (checklist in Spanish) >> as syn. of *N. vestigator* ab. *rauterbergi*

= *interruptiolus* Strand, 1917 (nomen novum for *interruptus* Gistel) REVISSED SYNONYM of *N. vestigator* Herschel

Type locality: see *N. interruptus* Gistel

Type depository: see *N. interruptus* Gistel

- 1917 Strand: 83 (descriptions in German) >> Orig. comb.: *Necrophorus interruptiolus*; (new name for *N. interruptus* Gistel; nomen dubium) [!N, S]
 1928 Hatch: 153 (catalog) >> *Incertae sedis*

= *interruptus* Gistel, 1857 (junior primary homonym, not Stephens 1830)

Type locality: "Hispania" [Spain; descrip.]

Type depository: ZSMC: München?

- 1857b Gistel: 565 (in German) >> Orig. comb.: *Necrophorus interruptus*; New junior primary homonym, not *N. interruptus* Stephens 1830 or *N. interruptus* Brullé 1832 [!N]
 1917 Strand: 83 (descriptions in German) >> notes that this name is preoccupied & creates nomen novum
 1928 Hatch: 153 (catalog) >> *Incertae sedis*

= *interruptus* Brullé, 1832 (junior primary homonym, not Stephens 1830) REVISSED SYNONYM of *N. brullei* Jakobson, syn. of *N. vestigator*

Type locality: not mentioned

Type depository: MNHN: Paris [not found]

- 1832 Brullé: 160 (descriptions) >> Orig. comb.: *Necrophorus interruptus*; New junior primary homonym, not Stephens 1830 [!N, S]
 1840 Laporte: 2 (descriptions in French) >> as *N. interruptus* Steph. var. *interruptus* Brullé
 1854 Lacordaire: 200 (biology, catalog in French) >> as valid species
 1859 Schaum: 36 (catalog in German) >> as *N. vestigator* var. *interruptus* Brullé
 1862 Schaum: 38 (catalog in German) >> as *N. vestigator* var. *interruptus* Brullé
 1863 Grenier: 13 (checklist in French) >> as *N. vestigator* var. *interruptus* Brullé
 1863 Marseul: 88 (catalog in French) >> as *N. vestigator* var. *interruptus* Brullé
 1868 Gemminger & Harold: 719 (catalog) >> as *N. vestigator* var. *interruptus* Brullé
 1868 Stein: 42 (catalog in Latin) >> as *N. vestigator* var. *interruptus* Brullé
 1877 Stein & Weise: 61 (catalog in Latin) >> as *N. vestigator* var. *interruptus* Brullé
 1883 Heyden et al.: 73 (checklist) >> as syn. of *N. vestigator* var. *trimaculatus* Gradl
 1884 Marseul: 187 (key, descriptions in French) >> as *N. vestigator* var. *interruptus* Brul.

- 1884 Reitter: 88 (descriptions in German) >> as *Silpha interruptus* Br.; as syn. of *N. vestigator*
- 1885 Marseul: 169 (catalog in French) >> as *N. vestigator* var. *interruptus* Brullé
- 1885 Reitter: 323 (in German)
- 1891 Heyden et al.: 139 (checklist) >> as *N. vestigator* var. *interruptus* Br.
- 1895b Reitter: 329 (description of variation in German) >> as absolute syn. of *N. vestigator*
- 1898 Everts: 413
- 1901 Carret: 329 (description of variation in French) >> as *N. vestigator* var. *interruptus* Br.
- 1906 Heyden et al.: 247 (checklist) >> as *N. vestigator* var. *interruptus* Br.
- 1910 Jakobson: 612 (checklist in Russian) >> Orig. comb.: *N. Brullei* (nomen novum for *N. interruptus* Brullé).
- 1911 Reitter: 106 (description of variation in German) >> as *N. vestigator* ab. *interruptus* Br.
- 1913 Kniephof: 187 (in German) >> as *N. vestigator* ab. *interruptus* Br.
- 1913 Kuhnt: 336 (in German)
- 1916 Schaufuss: 274 (checklist in German)
- 1922 Everts: 182
- 1922 Sherborn: 3229 (catalog - index)
- 1925 Portevin: 168 (description of variation in French) >> as *N. vestigator* ab. *interruptus* Br.
- 1925 Winkler: 265 (catalog) >> as absolute syn. of *N. vestigator*
- 1926a Portevin: 261 (revision: key, descriptions & catalog in French) >> as syn of *N. vestigator* ab. *Brullei* Jakobson
- 1928 Hatch: 148 (catalog) >> as *N. vestigator* ab. *interruptus* Br. [incorrect date Brullé 1822, should be 1832]
- 1933a Shchegoleva-Barovskaya: 180 (revision: key, descriptions & catalog in Russian) >> as syn of *N. vestigator* ab. *Brullei* Jacobs
- 1965 Báguena: 51 (checklist in Spanish) >> as *N. vestigator* ab. *interruptus* Br.
- 1965 Báguena: 51 (checklist in Spanish) >> as *N. vestigator* ab. *interruptus* Br.
- 1979 Salgado & Régil: 88 (catalog, annotated & figured in Spanish) >> as *N. vestigator* var. *interruptus* Br.

= *obscuripennis* Portevin, 1914 NEW STATUS as absolute syn. of *N. vestigator*
Herschel

Type locality: "Allemagne bork." [Germany: Nordrhein-Westfalen: 51.65N, 7.47E; label]

Type depository: MNHN: Paris [!] holotype female

- 1914a Portevin: 195 (description of variation in French) >> Orig. comb.: *Necrophorus vestigator* var. *obscuripennis* [!N, S]
- 1925 Winkler: 265 (catalog) >> as *N. vestigator* ab. *obscuripennis*
- 1926a Portevin: 261 (revision: key, descriptions & catalog in French) >> as syn. of *N. vestigator* ab. *cadaverinus*
- 1928 Hatch: 149 (catalog) >> as syn. of *N. vestigator* ab. *reductor*

= olfactor Gistel, 1848 NEW SYNONYM of *N. vestigator* Herschel

Type locality: "Spain" [descrip.]

Type depository: ZSMC: München?

- 1848 Gistel: 190 (descriptions in German) >> Orig. comb.: *Necrophorus Olfactor* [!N]
 1917 Strand: 84 (descriptions in German)
 1928 Hatch: 153 (catalog) >> *Incertae sedis*

= rautenbergi Reitter, 1900 [corrected spelling] NEW STATUS as absolute syn. of
N. vestigator Herschel

Type locality: "Hildesheim" [nw Germany: 52.15°N, 9.97°E; label]

Type depository: HNHM: Budapest [!] holotype female

- 1900 Reitter: 82 (description of variation in German) >> Orig. comb.: *Necrophorus vestigator* var. *Rautenbergi* [!S]
 1902 Heyden: 12 (nomenclature in French) >> as senior syn. of *N. vestigator* var. *degener*
 1906 Heyden et al.: 247 (checklist) >> as *N. vestigator* var. *rautenbergi*
 1909 Reitter: 241 (in German)
 1910 Jakobson: 612 (checklist in Russian) >> as *N. vestigator* var. *rautenbergi*
 1911 Reitter: 106 (description of variation in German) >> as *N. vestigator* ab. *Rautenbergi*
 1913 Kuhnt: 336 (in German)
 1914a Portevin: 195 (description of variation in French) >> compared to *N. vestigator* var. *obscuripennis*
 1916 Schaufuss: 274 (checklist in German)
 1922 Everts: 182
 1925 Portevin: 168 (description of variation in French) >> as *N. vestigator* ab. *Rautenbergi*
 1925 Winkler: 265 (catalog) >> as *N. vestigator* ab. *rautenbergi*
 1926a Portevin: 247 (revision: key, descriptions & catalog in French) >> as syn. of *N. vestigator* ab. *cadaverinus*
 1928 Hatch: 148 (catalog) >> as *N. vestigator* ab. *Rautenbergi*
 1933a Shchegoleva-Barovskaya: 180 (revision: key, descriptions & catalog in Russian) >> as *N. vestigator* ab. *rautenbergi*
 1965 Báguena: 51 (checklist in Spanish) >> as *N. vestigator* ab. *rautenbergi*

= sepultor Gyllenhal, 1827 (junior primary homonym, not Charpentier, 1825)

Type locality: "Scania" [Skåne; descrip.]

Type depository: unknown

- 1827 Gyllenhal: 308 (descriptions) >> Orig. comb.: *Necrophorus sepultor* [!N, S]
 1821 Dejean: 42 (catalog) >> nomen nudum, no descriptions
 1829a Stephens: 7 (checklist) >> attrib. "DeJ."
 1829b Stephens: 75 (catalog) >> attrib. "DeJean C. 42, Gyll. iv.308"
 1830 Stephens: 17 (biology, descriptions) >> attrib. Gyllenhal
 1832 Ménétrés: 167 (checklist in French) >> as valid species, attrib. "Dej. Gyll."
 1833 Dejean: 117 (catalog in French) >> auth. attrib. Dejean

- 1837 Erichson: 224 (species-group catalog in German) >> as syn. of *N. vestigator* Herschel
- 1839 Stephens: 113 (descriptions) >> attrib. Gyllenhal
- 1841a Heer: 387 (descriptions in German) >> as syn. of *N. vestigator*
- 1849 Gaubil: 55 (catalog in French) >> as syn. of *N. vestigator*
- 1862 Thomson: 9 (descriptions) >> as syn. of *N. vestigator*
- 1874 Seidlitz: 216 (key in German) >> as syn. of *N. vestigator*
- 1885 Marseul: 169 (catalog in French) >> as syn. of *N. vestigator*
- 1888 Seidlitz: 312 (key in German) >> as syn. of *N. vestigator*, misspelled as *Necrophagus sepultor* Gyll.
- 1889 Seidlitz: 329 (key in German) >> as syn. of *N. vestigator*; misspelled as *Necrophagus sepultor* Gyll.

= *viturati* Pic, 1917 NEW STATUS as absolute syn. of *N. vestigator* Herschel

Type locality: unknown

Type depository: MNHN: Paris [!] holotype male

- 1917b Pic: 21 (description of variation in French) >> Orig. comb.: *Necrophorus vestigator* var. *Viturati*
- 1925 Portevin: 168 (description of variation in French) >> as *N. vestigator* ab. *Viturati*
- 1926a Portevin: 247 (revision: key, descriptions & catalog in French) >> as *N. vestigator* ab. *Viturati*
- 1933a Shchegoleva-Barovskaya: 180 (revision: key, descriptions & catalog in Russian) >> as *N. vestigator* ab. *viturati*
- 1965 Báguena: 51 (checklist in Spanish) >> as *N. vestigator* ab. *viturati*

Comments: The name *N. interruptus* Brullé (1832) is a junior primary homonym of *N. interruptus* Stephens (1830). The *nomen novum* *N. brullei* Jacobson (1910) was introduced to replace Brullé's homonym. Despite this action, many subsequent authors continued to use *N. interruptus* Brullé, based primarily on confusion wrought by Portevin (1926a) and Hatch (1928) over the date of *N. interruptus* Brullé (see comments under *N. interruptus* Stephens), so we are herein synonymizing this name under its replacement name. Both names are synonyms of *N. vestigator*.

See comments for *N. germanicus* and *N. interruptus* regarding the names of Gistel. We herein synonymize *N. interruptus* Gistel, 1857 and *N. olfactor* Gistel, 1848 under *N. vestigator*. Gistel described *N. olfactor* from Spain as being like “*sepultor*” and with yellow hairs on the pronotum; the only species matching this description from Spain is *N. vestigator* (which was misidentified as *N. sepultor* by Gyllenhal). The name *N. interruptiolus* Strand was introduced as a *nomen novum* for Gistel's junior primary homonym, *N. interruptus*, and thus also is a synonym of *N. vestigator*.

PTOMASCOPUS Kraatz, 1876: 396

[correct original spelling, first reviser Kraatz 1877)

Type species: *Ptomascopus morio* Kraatz, 1877 (designated by Hatch, 1928: 154)

- 1876a Kraatz: 395 >> original misspelling as *Tomascopus*
 1877 Kraatz: 102 >> first reviser; *Ptomascopus* described as new
 1879 Rye: 31 >> unjustified emendation as *Ptomatoscopus*

***Ptomascopus morio* Kraatz, 1877**

Type locality: "Japan" [descrip.]

Type depository: unknown; not DEIC: Eberswalde [L. Zerche, in litt.]

Distribution: Palearctic: Japan, nChina, Korea, Russia- Amur & Ussuri reg.

- 1877 Kraatz: 104 (descriptions in German) >> Orig. comb.: *Ptomascopus morio* [!N, S]
 1879 Lewis: 460 (descriptions) >> compared to *P. plagiaticipennis*
 1887 Lewis: 341 (description)
 1890 Flach: 106 (descriptions in German) >> figured
 1904 Jakobson: 33 (in Russian)
 1909 Arrow: 190 (redescriptions)
 1910 Jakobson: 613 (checklist in Russian) >> as *Ptomascopus plagiatus* var. *morio*
 1914b Portevin: 223 (description of variation in French) >> as valid species
 1916 Bodemeyer: 112 (descriptions in German)
 1923 Portevin: 70 (key, descriptions in French)
 1925 Winkler: 265 (catalog)
 1926a Portevin: 184 (revision: key, descriptions & catalog in French)
 1927b Hatch: 364 (revision: key, descriptions & catalog)
 1928 Hatch: 154 (catalog)
 1929 Kōno: 164 (checklist, annotated)
 1930 Yokoyama: 121 (descriptions in Japanese)
 1931 Miwa: 47 (catalog)
 1932 Esaki et al. (catalog)
 1933 Semenov-Tian-Shanskij: 151 (catalog in Russian & Latin) >> as type sp. of genus *Ptomascopus* Kraatz
 1933a Shchegoleva-Barovskaya: 170 (revision: key, descriptions & catalog in Russian)
 1936 Cho: 155 (checklist in Korean)
 1937 Mochizuki & Tsunekawa (checklist)
 1937 Wu (catalog)
 1939 Masui (checklist)
 1953 Mazokhin-Porshnyakov: 235 (descriptions, catalog in Russian)
 1955a Nakane: 48 (checklist in Japanese)
 1956 Esaki et al.: 1029 (checklist, descriptions in Japanese)
 1957 Cho (catalog in Korean)
 1960 Kawada: 427 (morphology, larval stages) >> larvae figured
 1963 Cho (catalog in Korean)
 1963 Nakane: 76 (checklist, brief descriptions in Japanese)
 1964 Kamimura et al.: A19 (biology, ecology)

- 1966c Mroczkowski: 435 (checklist)
 1969 Gersdorf: 304 (fossils, descriptions in German)
 1970 Gersdorf: 364 (morphology: female genitalia in German) >> female genitalia figured
 1978 Kim: 62 (catalog, distribution)
 1979 Nakane & Baba: 10 (checklist, distribution in Japanese)
 1980 Madge: 358 (catalog)
 1980 Schwallier: 152 (checklist in German (English summary))
 1982a Anderson: 255 (key, descriptions, morphology, larval stages)
 1982 Peck: 107-111 (biology, behavior) >> focal species
 1985 Katakura & Ueno: 463 (biology, ecology)
 1985a Kurosawa: 248 (checklist) >> color habitus figure pl. 44
 1985 Lee et al. (checklist in Korean)
 1985 Paik: 2-12
 1985 Peck & Anderson: 275 (key, descriptions, phylogenetics)
 1986 Cho & Lee: 21 (phylogenetics)
 1986 Katakura et al.: 43-55 (biology, ecology)
 1986 Nishikawa: 99 (catalog in Japanese (English summary))
 1989 Lafer: 336 (key, descriptions, description of variation in Russian)
 1992 Cho & Lee: 20 (revision: key, descriptions & catalog)
 1992 Nomura & Lee: 81 (catalog)
 1992b Ôhara: 9 (checklist in Japanese (English summary))
 1993b Kozminykh: 61 (key, descriptions, regional in Russian)
 1993 Leschen: 78 (morphology: mandibles) >> genus name only in text
 1995a Ôhara: 25 (checklist in Japanese (English summary))
 1996 Palestini et al.: 442 (larval descriptions, phylogenetics)
 1997 Eggert & Müller: 222 (biology, review of: ecology, behavior)
 1997 Hansen: 334 (phylogenetics) >> larva figured
 1998 Harusawa: 34 (key in Japanese)
 1998b Scott: 602 (biology, review of: ecology, behavior)
 1998 Suzuki: 156 (biology, behavior in Japanese)
 1999 Háva et al.: 73 (key, descriptions) >> compared to *P. zhangla*
 2000 Dobler & Müller: 392 (phylogenetics) >> CO1 based phylogeny
 2000 Nomura et al.: 268
 2000 Szalanski et al.: 590 (biology, conservation, phylogenetics, genetics)
 2000 Trumbo & Sikes: 585-589 >> focal species
 2001 Nagano & Hoshina: 1-5 (description of variation in Japanese) >> focal species, description of elytral color variation
 2001 Trumbo et al.: 543-560 (biology, ecology, behavior) >> focal species; brood parasite of *N. concolor*
 2002 Nikolajev & Kozminykh: 96 (catalog, distribution, descriptions, keys, figures in Russian (English summary))

= *carbunculus* Lewis, 1879 CONFIRMED as SYNONYM of *Ptomascopus morio*
 Kraatz
 Type locality: "Amazon River" [erroneous locality; label]

Type depository: BMNH: London [!] holotype female

- 1879 Lewis: 460 (descriptions) >> Orig. comb.: *Ptomascopus carbunculus* [!N, S]
 1909 Arrow: 190 (redescriptions) >> as syn. of *P. morio*; states type locality of “Amazons” is incorrect
 1914b Portevin: 223 (description of variation in French) >> suggest might be syn. of *P. morio*
 1926a Portevin: 249 (revision: key, descriptions & catalog in French) >> as syn. of *P. morio*
 1928 Hatch: 154 (catalog) >> as syn. of *P. morio*
 1933a Shchegoleva-Barovskaya: 170 (revision: key, descriptions & catalog in Russian) >> as syn. of *P. morio*
 1993b Kozminykh: 61 (key, descriptions, regional in Russian) >> as syn. of *P. morio*

= *lewisi* Portevin, 1914 NEW STATUS as absolute syn. of *P. morio* Kraatz

Type locality: not mentioned

Type depository: MNHN: Paris [not found]

- 1914b Portevin: 223 (description of variation in French) >> Orig. comb.: *Ptomascopus morio* var. *Lewisi* [!N, S]
 1923 Portevin: 70 (key, descriptions in French) >> as *P. morio* ab. *Lewisi*
 1925 Winkler: 265 (catalog) >> as *P. morio* ab. *lewisi*
 1926a Portevin: 184 (revision: key, descriptions & catalog in French) >> as *P. morio* ab. *Lewisi*
 1928 Hatch: 154 (catalog) >> as *P. morio* ab. *Lewisi*
 1933a Shchegoleva-Barovskaya: 170 (revision: key, descriptions & catalog in Russian) >> as *P. morio* ab. *lewisi*
 2001 Nagano & Hoshina: 3 (description of variation in Japanese) >> demonstration that this variety does not deserve subspecific rank

= *villosus* Portevin, 1923 NEW STATUS as absolute syn. of *P. morio* Kraatz

Type locality: “Corée” [Korea; label]

Type depository: MNHN: Paris [!] holotype

- 1923 Portevin: 70 (key, descriptions in French) >> Orig. comb.: *Ptomascopus morio* var. *villosus* [!N, S]
 1925 Winkler: 265 (catalog) >> as *P. morio* var. *villosus*
 1926a Portevin: 249 (revision: key, descriptions & catalog in French) >> as *P. morio* var. *villosus*
 1928 Hatch: 154 (catalog) >> as *P. morio* var. *villosus*
 1933a Shchegoleva-Barovskaya: 170 (revision: key, descriptions & catalog in Russian) >> as *P. morio* ab. *villosus*

***Ptomascopus plagiatus* (Ménétriés, 1854)**

Type locality: “mongolie chinoise et aux environs de Pékin” [ne China; descrip.]

Type depository: MNHN: Paris? [not found]

Distribution: Palearctic: neChina, Korea, Japan?, Russia: Ussuri reg.

- 1854 Ménétriés: 27 (descriptions in French) >> Orig. comb.: *Necrophorus plagiatus* [!N, S]

- 1868 Gemminger & Harold: 719 (catalog) >> as *Necrophorus plagiatus*
 1887 Lewis: 341 (description) >> as *Ptomascopus plagiatus*
 1888 Lewis: 9
 1891 Fairmaire: 192 (checklist in French)
 1904 Jakobson: 33 (in Russian)
 1910 Jakobson: 613 (checklist in Russian) >> as senior syn. of *P. morio*
 1914b Portevin: 223 (description of variation in French)
 1923 Portevin: 71 (key, descriptions in French)
 1925 Winkler: 265 (catalog)
 1926a Portevin: 185 (revision: key, descriptions & catalog in French)
 1927b Hatch: 364 (revision: key, descriptions & catalog)
 1928 Hatch: 154 (catalog)
 1929 Kôno: 164 (checklist, annotated)
 1933 Semenov-Tian-Shanskij: 154 (catalog in Russian & Latin)
 1933a Shchegoleva-Barovskaya: 170 (revision: key, descriptions & catalog in Russian)
 1936 Cho: 157 (checklist in Korean) >> new record for Korea
 1937 Mochizuki & Tsunekawa (checklist)
 1937 Wu (catalog)
 1938 Mori & Cho (checklist)
 1939 Masui (checklist)
 1942 Hlisenkovsky: 578 (nomenclature in German)
 1953 Mazokhin-Porshnyakov: 235 (descriptions, catalog in Russian)
 1956 Esaki et al.: 1028 (checklist, descriptions in Japanese)
 1957 Cho (catalog in Korean)
 1963 Nakane: 76 (checklist, brief descriptions in Japanese)
 1966c Mroczkowski: 435 (checklist)
 1980 Schawaller: 153 (checklist in German (English summary))
 1982 Peck: 108 (biology, behavior)
 1986 Nishikawa: 99 (catalog in Japanese (English summary))
 1989 Lafer: 336 (key, descriptions, description of variation in Russian)
 1992 Cho & Lee: 20 (revision: key, descriptions & catalog)
 1993b Kozminykh: 61 (key, descriptions, regional in Russian)
 1996 Růžička & Schneider: 80 (checklist in English (Czech summary))
 1997 Hansen: 17, 222 (phylogenetics) >> stridulatory files figured
 1999 Háva et al.: 73 (key, descriptions) >> compared to *P. zhangla*
 2001 Nagano & Hoshina: 1-2 (description of variation in Japanese) >> elytral pattern compared to variation in *P. morio*
 2002 Nikolajev & Kozminykh: 96 (catalog, distribution, descriptions, keys, figures in Russian (English summary))

= *daavidis* Deyrolle & Fairmaire, 1878 CONFIRMED as SYNONYM of *Ptomascopus plagiatus* (Ménétriés)

Type locality: "Nord Pekin" [China; label]

Type depository: MNHN: Paris [!] 2 syntype males

- 1878 Deyrolle & Fairmaire: 91 (descriptions in French) >> Orig. comb.: *Ptomascopus Davidis* [!S]

- 1925 Winkler: 265 (catalog) >> as syn. of *P. morio*
 1926a Portevin: 249 (revision: key, descriptions & catalog in French) >> as syn. of *P. plagiatus*
 1928 Hatch: 154 (catalog) >> as syn. of *P. plagiatus*
 1933a Shchegoleva-Barovskaya: 170 (revision: key, descriptions & catalog in Russian)
 >> as syn. of *P. plagiatus*
 1993b Kozminykh: 61 (key, descriptions, regional in Russian) >> as syn. of *P. plagiatus*
 2002 Nikolajev & Kozminykh: 96 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as syn. of *P. plagiatus*

= *plagiatiennis* Lewis, 1879 CONFIRMED as SYNONYM of *Ptomascopus plagiatus* (Ménétriés)

Type locality: “Kagoshima” [Kyushu, Japan; label; probably erroneous (Nagano & Hoshina 2001)]

Type depository: BMNH: London [!] holotype female

- 1879 Lewis: 460 (descriptions) >> Orig. comb.: *Ptomascopus plagiatiennis* [!N, S]
 1910 Jakobson: 613 (checklist in Russian) >> as syn. of *P. plagiatus*
 1925 Winkler: 265 (catalog) >> as syn. of *P. morio*
 1926a Portevin: 249 (revision: key, descriptions & catalog in French) >> as syn. of *P. plagiatus*
 1928 Hatch: 154 (catalog) >> as syn. of *P. plagiatus*
 1933a Shchegoleva-Barovskaya: 170 (revision: key, descriptions & catalog in Russian)
 >> as syn. of *P. plagiatus*
 1993b Kozminykh: 61 (key, descriptions, regional in Russian) >> as syn. of *P. plagiatus*
 2001 Nagano & Hoshina: 2 (description of variation in Japanese) >> as only Japanese record of *P. plagiatus*- probably erroneous label data
 2002 Nikolajev & Kozminykh: 96 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as syn. of *P. plagiatus*

= *quadrifasciatus* Kraatz, 1877

Type locality: “Japan” [from title of paper] and “in China”

Type depository: MNHN: Paris? [not found]; not DEIC: Eberswalde [L. Zerche, in litt.]

- 1877 Kraatz: 104 (descriptions in German) >> Orig. comb.: *Ptomascopus 4-maculatus* [!N, S]
 1878 Deyrolle & Fairmaire: 92 (descriptions in French) >> compared to *P. davidis*
 1910 Jakobson: 613 (checklist in Russian) >> as syn. of *P. plagiatus*
 1914b Portevin: 223 (description of variation in French) >> as syn. of *P. plagiatus*
 1926a Portevin: 249 (revision: key, descriptions & catalog in French) >> as syn. of *P. plagiatus*
 1928 Hatch: 154 (catalog) >> as syn. of *P. plagiatus*
 1933a Shchegoleva-Barovskaya: 170 (revision: key, descriptions & catalog in Russian)
 >> as syn. of *P. plagiatus*
 1992 Cho & Lee: 20 (revision: key, descriptions & catalog) >> as syn. of *P. plagiatus*; misspelled as *P. maculatus*

- 1993b Kozminykh: 61 (key, descriptions, regional in Russian) >> as syn. of *P. plagiatus*
 2002 Nikolajev & Kozminykh: 96 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as syn. of *P. plagiatus*

= *weberi* Bodemeyer, 1916 REVISSED SYNONYM of *Ptomascopus plagiatus* (Ménétriés)

Type locality: "Chitaitzki-Sterana [Strana], Ost-Sibirien, rechtes Amur-Ufer" [China, Heilongjian Prov., Kitaiskaya starana - Chinese side of the Amur River; descrip.]

Type depository: Hamburg [destroyed?]

- 1916 Bodemeyer: 112 (descriptions in German) >> Orig. comb.: *Ptomascopus Weberi* [!M, S]
 1923 Portevin: 71 (key, descriptions in French) >> as valid species
 1925 Winkler: 265 (catalog) >> as valid species
 1926a Portevin: 185 (revision: key, descriptions & catalog in French) >> as valid species
 1927b Hatch: 364 (revision: key, descriptions & catalog) >> as valid species; specimens not seen by Hatch
 1928 Hatch: 154 (catalog) >> as valid species
 1933 Semenov-Tian-Shanskij: 154 (catalog in Russian & Latin) >> as valid species
 1933a Shchegoleva-Barovskaya: 171 (revision: key, descriptions & catalog in Russian) >> as valid species
 1942 Hlisnikovsky: 578 (nomenclature in German) >> as syn. of *P. plagiatus*
 1986 Nishikawa: 99 (catalog in Japanese (English summary)) >> as syn. of *P. plagiatus*
 1993b Kozminykh: 61 (key, descriptions, regional in Russian) >> as syn. of *P. morio*
 2002 Nikolajev & Kozminykh: 96 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as syn. of *P. morio*

Comments: Bodemeyer (1916) described *Ptomascopus Weberi* as "like the Japanese [*Ptomascopus morio*"]; which is an all-black species, but noted among other differences that his new species had red markings. *Ptomascopus plagiatus* occurs in the type locality of Bodemeyer's species and is primarily differentiated from *P. morio* by the presence of red maculae on the elytra. Hlisnikovsky (1942) first synonymized Bodemeyer's name under *P. plagiatus*, but Kozminykh (1993) considered *P. morio* to be the senior synonym. Although *P. morio* also occurs in the type locality of Bodemeyer's *P. weberi*, based on the original description we agree with Hlisnikovsky (1942) and return *P. weberi* to synonymy under *P. plagiatus*.

The only specimen of *P. plagiatus* collected from Japan is the type of *Ptomascopus plagiatiennis* Lewis (1879), which DSS has studied and confirmed is conspecific with *P. plagiatus*. Nagano & Hoshina (2001) pointed out, however, that no corroboration of a Japanese population of this species has been demonstrated and therefore suggests that the type locality data might be erroneous for Lewis' name. This notion is supported by the fact that although the holotype of *P. plagiatiennis* bears a single locality label from Japan, Lewis included in the original description an additional locality of Pekin, China, where *P. plagiatus* occurs.

Ptomascopus zhangla Háva, Schneider & Růžička, 1999

Type locality: “China, N. Sichuan, Zhangla” [32.8°N, 103.67°E; label]

Type depository: SMNS: Stuttgart [!] holotype male, allotype female [SMNS], 4 paratypes [JHC, JSC, JRC]

Distribution: Oriental: China: Sichuan, Shaanxi, & Gansu provinces

1999 Háva et al.: 70 (key, descriptions) >> Orig. comb.: *Ptomascopus zhangla* [!S]

2001 Nagano & Hoshina: 2 (description of variation in Japanese) >> elytral pattern compared to variation in *P. morio*

Fossils

Nicrophorus

Nicrophorus pliozaenicus Gersdorf, 1969 [fossil]

Type locality: “n Germany, Upper Tertiary” [descrip.]

Type depository: unknown, holotype (impression fossil of wing)

1969 Gersdorf: 305 (fossils, descriptions in German) >> Orig. comb.: *Nicrophorus pliozaenicus*; misspelled as *N. plioaenicus* in abstract [!N, S]

PALAEOSILPHA Flach, 1890: 106

Type species: *Palaeosilpha fraasii* Flach, 1890 (monotypy)

Palaeosilpha fraasii Flach, 1890 [fossil]

Type locality: “Aveyron von Caylux” [s. France; descrip]

Type depository: SMFD?: Frankfurt? holotype

1890 Flach: 107 (descriptions in German) >> Orig. comb.: *Paleosilpha Fraasii* [!N, S]

1927b Hatch: 368 (revision: key, descriptions & catalog) >> confirms diagnosis in subfamily Nicrophorinae

1932 Hatch: 391 (nomenclature)

1969 Gersdorf: 303 (fossils, descriptions in German)

1980 Madge: 359 (catalog)

1999 Háva et al.: 73 (key, descriptions) >> compared to *P. zhangla*

Ptomascopus

Ptomascopus aveyronensis Flach, 1890 [fossil]

Type locality: “Aveyron von Caylux” [s. France; descrip]

Type depository: SMFD?: Frankfurt? holotype

1890 Flach: 106 (descriptions in German) >> Orig. comb.: *Ptomascopus Aveyronensis* [!N, S]

- 1927b Hatch: 364 (revision: key, descriptions & catalog) >> specimens not seen by Hatch
 1932 Hatch: 391 (nomenclature)
 1933 Semenov-Tian-Shanskij: 154 (catalog in Russian & Latin)
 1944 Handschin: 9 (fossils; description, discussion in German)
 1969 Gersdorf: 303 (fossils, descriptions in German)
 1993b Kozminykh: 61 (key, descriptions, regional in Russian) >> as valid fossil species
 1999 Háva et al.: 73 (key, descriptions) >> compared to *P. zhangla*
 2001 Nagano & Hoshina: 2 (description of variation in Japanese)

Nomina dubia

Nicrophorus chryseus Mazokhin-Porshnyakov, 1953

Type locality: “Severo-Vostochnij Kitai” [ne China], and “Manchzhuria, Gao-Lintszi” [=Gaoliyingzi 44.46 N, 128.43E, Heilongjiang Prov.; descrip]

Type depository: : not Moscow; Gusarov in litt.; lost? holotype female

- 1953 Mazokhin-Porshnyakov: 236 (descriptions, catalog in Russian) >> Orig. comb.: *Nicrophorus* (*Necropter*) *chryseus* [!N, S]
 1986 Nishikawa: 98 (catalog in Japanese (English summary)) >> as valid species
 2002 Nikolajev & Kozminykh: 126 (catalog, distribution, descriptions, keys, figures in Russian (English summary)) >> as doubtfully valid species

Comments: Inquiries at the St. Petersburg and Moscow collections failed to locate the type specimen of this name. Since the type of this name has apparently been lost, the validity of this name cannot be confirmed. However, the original description states it is a species near *Nicrophorus praedator* which is herein synonymized under *N. investigator*. Thus, *N. chryseus* is likely a synonym of the widespread and polymorphic species *N. investigator*.

Nicrophorus funerarius (Weigel, 1806)

Type locality: Silesia? [descrip.]

Type depository: unknown

- 1806 Weigel (descriptions in German) >> Orig. comb.: *Necroborus funerarius*
 1978 Burakowski et al.: 206 (catalog, in Polish) >> as “Species dubia”

Lapsus calami

Nicrophilus subterraneus (Dahl, 1807: 363) [Agyrtidae]

- 1993 Clavier: 265 (JA: note in French) >> misspelled as *Nicrophorus subterraneus* [Not Silphidae! as *Nicrophorus subterraneus* in Zoological Record Plus (1993-1996) Accession number 13100011732]

References

- Abbott, C.E. (1927a) An aberrant specimen of *Necrophorus tomentosus* (Weber) (Coleop.: Silphidae). *Entomological News*, 38, 39. (description of variation) [*Note of a specimen with fascia joined.*] [!S]
- Abbott, C.E. (1927b) Experimental data on the olfactory sense of Coleoptera, with special reference to the Necrophori. *Annals of the Entomological Society of America*, 20, 207-216. (biology, behavior) [*Various methods (removal of antennae et al.) did not prevent reaction-concluded olfactory sense located all over body.*] [!N, S]
- Abbott, C.E. (1927c) Further observation on the olfactory powers of the Necrophori. *Annals of the Entomological Society of America*, 20, 550-553. (biology, behavior) [*Concluded the palpi have little to do with olfaction.*] [!S]
- Abbott, C.E. (1936) The toxicity of trimethylamine for *Necrophorus orbicollis* (Say). *Psyche*, 43, 37-39. (biology, ecology) [*Plots [] and time required to death of N. orbicollis due to trimethylamine.*] [!S]
- Abbott, C.E. (1937) The necrophilous habit in Coleoptera. *Bulletin of the Brooklyn Entomological Society*, 32, 202-204. (biology, behavior) [*Documents an ecological succession of beetles on carrion.*]
- Abell, D.H., Wasti, S.S. & Hartmann, G.C. (1982) Saprothagous arthropod fauna associated with turtle carrion. *Applied Entomology and Zoology*, 17, 301-307. (biology, ecology) [*Massachusetts- 1 specimen of each of 2 Necrophorus species found.*] [!S]
- Acloque, A. (1896) *Faune de France. Coléoptères*. J.-B. Baillière et Fils, Paris. 466 pp. (key in French) [!N]
- Akopyan, M.M. (1953) [The fate of corpses of ground squirrels (Susliks) on the steppe]. *Zoologicheskii Zhurnal*, 32, 1014-1019. (biology, ecology in Russian)
- Alexandrovich, O.R., Lopatin, I.K., Pisanenko, A.D., Tsinkevich, V.A., & Snitko, S.M. (1996) *A catalogue of Coleoptera (Insecta) of Belarus*. Fund of Fundamental Investigations of the Republic of Belarus, Minsk. 104 pp. (checklist, distribution in Russian & English) [!N]
- Amaral, M. (1992a) Conservation of the endangered American burying beetle *Necrophorus americanus*. *American Association of Zoological Parks and Aquariums, Annual Conference Proceedings*, 1992, 1-8. (biology, conservation) [!N]
- Amaral, M. (1992b) Conservation of the endangered American burying beetle *Necrophorus americanus*. *American Association of Zoological Parks and Aquariums, Annual Conference Proceedings*, pp. 509-516. (Conference report: biology, conservation)
- Amaral, M., Kozol, A., & French, T. (1997) Conservation status and reintroduction of the endangered American burying beetle. *Northeastern Naturalist*, 4(3), 121-132. (biology, conservation) [*Reintroduced ABB pop. on Penikese Isl. healthy 3 years later.*] [!S]
- Amaral, M. & Morse, L. (1990) Reintroducing the American burying beetle. *Endangered Species Technical Bulletin*, 15(10), 3-10. (biology, conservation) [*Notes Bound with Endangered Species Update 8(2).*]
- Amaral, M. & Prospero, M.L.N. (1999) One zoo, two islands, and a beetle. *Endangered Species Bulletin*, 24 (3), 10-11. (biology) [!N]
- Anderson, R., Nash, R. & O'Connor, J.P. (1997) Irish Coleoptera: A revised and annotated list. *The Irish Naturalists' Journal; Special Entomological Supplement*, pp. 1-81 (checklist) [!S]
- Anderson, R.S. (1982a) Burying Beetle Larvae: Nearctic *Necrophorus* and Oriental *Ptomascopus morio* (Silphidae). *Systematic Entomology*, 7(3), 249-264. (key, descriptions, morphology, larval stages) [*Analysis and presentation of larval data (descriptive & phylogenetic) for the Necrophorinae.*] [!S]
- Anderson, R.S. (1982b) On the decreasing abundance of *Necrophorus americanus* Olivier (Coleoptera: Silphidae) in eastern North America. *Coleopterists Bulletin*, 36(2), 362-365.

- (biology, conservation) [*First published hypothesis of decline (loss of old-growth forests) for N. americanus.*]
- Anderson, R.S. (1982c) Resource partitioning in the carrion beetle (Coleoptera: Silphidae) fauna of southern Ontario: ecological and evolutionary considerations. *Canadian Journal of Zoology*, 60, 1314-1325. (biology, ecology) [*No Nicrophorus in traps had eggs; Silphidae have acrotrophic ovarioles.*] [!M, N, S]
- Anderson, R.S. & Peck, S.B. (1985) *The Carrion Beetles of Canada and Alaska (Coleoptera: Silphidae and Agyrtidae)*. The Insects and Arachnids of Canada, Part 13. Publication 1778, Research Branch Agriculture Canada, Ottawa. 121 pp. (revision: key, descriptions & catalog in English (& keys in French also)) [*Revision of North American Silphidae-maps for the US also included.*] [!M, N, S]
- Anderson, R.S. & Peck, S.B. (1986) Geographic patterns of colour variation in North American *Nicrophorus* burying beetles (Coleoptera; Silphidae). *Journal of Natural History*, 20(2), 283-297. (morphology: color variation) [*These 4 species are the only of the 15 NA spp. with extensive variation.*] [!S]
- Andre, A. (1978) Expertises entomologiques en medecine legale. *Coll. Med. Leg. Toxicol. Med. (France)*, 108, 55-91. (biology, ecology in French)
- Andreev, E.A. (1988) [To the ecology of phoretic mites on beetles of genus *Necrophorus* (Silphidae).] *Nauchnye Doklady Vyssei Shkoly Biologicheskie Nauki*, 5, 44-47. (biology, symbionts: mites in Russian (English summary))
- Anduaga, S. & Huerta, C. (2001) Effect of parental care on the duration of larval development and offspring survival in *Nicrophorus mexicanus* Matthews (Coleoptera: Silphidae). *The Coleopterists Bulletin*, 55(3), 264-271. (biology, behavior, physiology) [*In brood mass absent treatments the larvae were fed on raw meat unprepared by parents.*] [!S]
- Angelini, F., Audisio, P., Castellini, G., Poggi, R., Vailati, D., Zanetti, A. & Zoia, S. (1995) *Coleoptera Polyphaga II (Staphylinoidea escl. Staphylinidae)*. In: A. Minelli, S. Ruffo and S. La Posta (eds.). Checklist della specie della fauna italiana, 47. Calderini, Bologna. 39 pp. (checklist, distribution in Italian) [!N]
- Angell, J.W. (1912) Two new North American species of *Necrophorus* (Coleop.). *Entomological News*, 23, 307. (descriptions) [*Original description of N. mysticallis (=N. carolinus); N. grandior (=N. germanicus).*] [!M, N, S]
- Angell, J.W. (1920) *Necrophorus guttula* Motsch. and its color varieties. *Journal of the New York Entomological Society*, 28, 89-90. (description of variation) [*Original description of N. guttula var. vandykei (=N. guttula); N. guttula var. quadriguttata (=N. guttula).*] [!M, N, S]
- Anonymous (1989) Final listing rules approved for 10 species. *Endangered Species Technical Bulletin*, 14(8), 7-8. (biology, conservation)
- Anonymous (1991) [Article on conservation of *Nicrophorus americanus*]. *Wildlife Conservation, 1991 (Nov/Dec.)* (biology, conservation)
- Arellano G.L. (1998) Distribución de Silphidae (Coleoptera: Insecta) en la región central de Veracruz, México. *Dugesiana*, 5 (2), 1-16. (checklist, distribution in Spanish) [!N]
- Arnett, R.H., Jr. (1944) A revision of the Nearctic Silphini and Nicrophorini based upon the female genitalia (Coleoptera, Silphidae). *Journal of the New York Entomological Society*, 52, 1-25. (morphology: female genitalia) [*N. vespilloides listed, assumed to be N. defodiens; First comparative morphology of Nicrophorus female genitalia, well illustrated.*] [!M, N, S]
- Arnett, R.H., Jr. (1946a) Coleoptera notes I: Silphidae. *Canadian Entomologist*, 78, 131-134. (biology) [*Adds a fifth Nearctic species (N. carolinus) to the list documented as buriers of carrion. Documents N. hybridus from New York.*] [!N, S]
- Arnett, R.H., Jr. (1946b) A new species of *Nicrophorus* from the Philippine Islands (Coleoptera, Silphidae). *Proceedings of the Entomological Society of Washington*, 48, 207-209. (descriptions) [*Original description of N. benguetensis (=N. nepalensis). Proposes new species and N.*

- nepalensis* are more closely related to *N. pustulatus* of the Nearctic than any other Nearctic species (based on female genitalia) [!M, N, S]
- Arnett, R.H., Jr. (1947) Coleoptera notes II: Silphidae. *Canadian Entomologist*, 79, 110-113. (catalog) [Synonymizes *N. melsheimeri* under *N. investigator*; raises *N. particeps* Fischer (= *N. investigator*) to specific status; Synonymizes *N. defodiens* ab. *grandior* Port under *N. vespiloides*.] [!N, S]
- Arnett, R.H., Jr. (1950) The Silphidae of the Philippine Islands (Coleoptera). *Proceedings of the Entomological Society of Washington*, 52, 63-69. (description) [Original description of *N. apo*.] [!N, S]
- Arnett, R.H., Jr. (1963) *The beetles of the United States (a manual for identification)*. Catholic University of America Press, Washington, D.C. xi + 1112 pp. (key) [!N]
- Arnett, R.H., Jr., Downie, N.M. & Jaques, H.E. (1980) *How to know the beetles*. Second edition. Wm. C. Brown Co., Dubuque, Iowa. 416 pp. (key, descriptions) [!N]
- Arnett, R.H., Jr. & Jacques, R.L., Jr. (1981) *Simon and Schuster's guide to insects*. Simon & Schuster, New York. 511 pp. (field guide) [!N]
- Arrow, G.J. (1909) Systematic notes on Coleoptera of the clavicorn families. *Annals and Magazine of Natural History*, 8(4), 190-196. (redescriptions) [Synonymized *latifasciatus* Lewis (= *N. "praedator"?*) under *investigator*. Comments of difficulty associated with the synonymization of names first published in Gistel 1848.] [!N, S]
- Ashton, D.E. (1992) *Baited pitfall trap surveys to detect presence of the endangered American burying beetle (Nicrophorus americanus) at four prairie sites in eastern South Dakota*. Report to The Nature Conservancy, Sioux Falls, SD. (unpublished report: biology, conservation)
- Ashton, D.E. (1993) *Survey to detect presence of endangered American burying beetle, Nicrophorus americanus Olivier, at a proposed landfill site in Charles Mix County, South Dakota*. Final Report, Bernhard, Eisenbraun and Associates, Yankton, SD. (unpublished report: biology, conservation)
- Ashton, D.E. (1995) *American burying beetle surveys in eastern South Dakota*. Progress reports to the Nature Conservancy, Sioux Falls, SD. (unpublished report: biology, conservation)
- Athias-Binche, F., Schwarz, H.H., & Meierhofer, I. (1993) Phoretic association of *Neoseius novus* (Quds., 1902) (Acari: Uropodina) with *Nicrophorus* spp. (Coleoptera: Silphidae): A case of sympatric speciation? *International Journal of Acarology*, 19(1), 75-86. (biology, symbionts: mites) [*Neoseius novus* did not reproduce without *Nicrophorus*; *Neosieus* is only recorded from *Nicrophorus* in Europe and Japan.] [!S]
- Audisio, P. (1973) Primo contributo alla conoscenza dei Silfidi d'Italia (Coleoptera: Silphidae). *Bollettino dell'Associazione Romana di Entomologia*, 28, 55-58. (checklist)
- Auel, H. (1909) Der überfallene *Nicrophorus*. *Berliner Entomologische Zeitschrift*, 54, 110. (biology in German)
- Austin, E.P. (1880) *Supplement to the check list of the Coleoptera of America, north of Mexico*. S. E. Cassino, Boston. 67 pp. (checklist) [!N]
- Bach, M. (1849) *Käferfauna für Nord- und Mitteldeutschland mit besonderer Rücksicht auf die preussischen Rheinlande*. Vol. 1, pp. 1-336. Hölscher, Coblenz. (checklist, brief descriptions in German) [!N]
- Backlund, D.C. (1994) *Surveys for the endangered American burying beetle (Nicrophorus americanus) on and near the Lacreek, Lake Andes, and Karl E. Mundt National Wildlife Refuges, South Dakota*. South Dakota Department of Game, Fish and Parks. South Dakota natural Heritage Program, Pierre, SD. GFP Report 94-05. (unpublished report: biology, conservation)
- Backlund, D.C. & Marrone, G.M. (1995) *Surveys for the endangered American burying beetle (Nicrophorus americanus) in Gregory, Tripp, and Todd Counties, South Dakota, August 1995*. Final Report to the U.S. Fish and Wildlife Service, 1995. 11pp. and 49 maps. (unpublished report: biology, conservation)

- Backlund, D.C. & Marrone, G.M. (1997) New records of the endangered American burying beetle, *Nicrophorus americanus* Olivier, (Coleoptera: Silphidae) in South Dakota. *The Coleopterists Bulletin*, 51(1), 53-58. (biology, conservation) [*Ist positive after many negative ABB surveys.*] [!S]
- Backlund, D.C. & Marrone, G.M. (1999) *Monitoring surveys for the American burying beetle (Nicrophorus americanus) in Tripp and Todd Counties, South Dakota and Keya Paha and Cherry Counties, Nebraska*. Report to S.D. Dept. of Game, Fish and Parks Pierre, S.D. 57501. (unpublished report: biology, conservation)
- Baert, L. & Maelfait, J.-P. (1977) Contribution to the knowledge of the arachno- and entomofauna of different woodhabitats. Part II. Influence of the microrelief upon epedafic Coleoptera. *Bulletin et Annales de la Société Royale Belge d'Entomologie*, 113, 101-110. (biology, ecology)
- Báguena, L. (1965) Los grandes Silphidae ibéricos (Coleoptera). *Graellsia*, 21, 41-54. (checklist in Spanish) [!N, S]
- Bahillo de la Puebla, P. & López-Colón, J.I. (2000) Los Coleoptera del país vasco y áreas limítrofes. 8ª nota: fam. Silphidae (Coleoptera, Silphidae). *Estudios del Museo de Ciencias Naturales de Alava*, 15, 243-262. (biology, descriptions, distribution in Spanish) [!N]
- Baier, L.J. (1930) Contribution to the physiology of the stridulation and hearing in Insects. *Zoologische Jahrbücher (Abteilung für Allgemeine Zoologie und Physiologie der Tiere)*, 47, 151-249, pls. 1-4. (biology, behavior, physiology) [*Mentions stridulation in Nicrophorus*]
- Baker, A.S., & H.H. Schwarz. (1997) Morphological differences between sympatric populations of the *Poecilochirus carabi* complex (Acari: Mesostigmata: Parasitidae) associated with burying beetles (Silphidae: *Nicrophorus*). *Systematic Parasitology*, 37(3), 179-185. (biology, symbionts: mites) [*Poecilochirus necrophori resurrected from synonymy as specialist on N. vespillo, P. carabi as specialist on N. vespilloides.*] [!S]
- Balduf, W.V. (1935) *The Bionomics of Entomophagous Coleoptera*. John Swift & Co., New York. 220 pp. (biology, ecology, behavior) [*"An excellent summary of the literature, particularly the work of Pukowski"-Milne & Milne 1944.*] [!N, S]
- Baldwin, B. (1975) *A faunal study of Illinois Silphidae (Coleoptera)*. M.S. Thesis, Eastern Illinois University, Charleston, Illinois. iii + 45 pp. (M.S. Thesis: key, description, distribution, ecology) [*Noted that N. americanus hadn't been collected since 1944.*] [!N]
- Balfour-Browne, J. (1961) The metendosternite in the Coleoptera. *Journal of the Linnean Society (Zoology)*, 44, 337-354. (morphology: metendosternite) [!N]
- Bandermann, F. (1913) Aus den Sitzungen der Entomol. Gesellschaft zu Halle a. S. *Internationale Entomologische Zeitschrift*, 7, 19-20. (comment in German)
- Barkowski, Z. (1910) Nordamerikanische Necrophoren. *Entomologische Rundschau*, 27, 79-80. (key, descriptions, regional in German) [!S]
- Bartlett, J. (1987a) Evidence for a sex attractant in burying beetles. *Ecological Entomology*, 12(4), 471-472. (biology, behavior) [*First documentation of pheromone in Nicrophorus.*] [!S]
- Bartlett, J. (1987b) Filial cannibalism in burying beetles. *Behavioral Ecology and Sociobiology*, 21(3), 179-183. (biology, behavior) [*First documentation of filial cannibalism in Nicrophorus;*] [!S]
- Bartlett, J. (1988a) Friends in need: burying beetles and their mites. *Trends in Ecology and Evolution*, pp. 123-124. (biology, symbionts: mites) [*Good review of Nicrophorus mite ecology; N. orbicollis í without mites had up to six times as many nematodes on their bodies compared with controls!*] [!S]
- Bartlett, J. (1988b) Male mating success and paternal care in *Nicrophorus vespilloides* (Coleoptera: Silphidae). *Behavioral Ecology and Sociobiology*, 23(5), 297-303. (biology, behavior)
- Bartlett, J., & Ashworth, C.M. (1988) Brood size and fitness in *Nicrophorus vespilloides* (Coleoptera: Silphidae). *Behavioral Ecology and Sociobiology*, 22(6), 429-434. (biology, behavior)

- Bedick, J.C. (1997) *Distribution and ecology of the American burying beetle (Nicrophorus americanus Olivier) in south-central Nebraska*. Master's Thesis, Univ. Nebraska, 94 pp. (M.S. Thesis: biology, conservation)
- Bedick, J.C., Ratcliffe, B.C., Hoback, W.W., & Higley, L.G. (1999) Distribution, ecology and population dynamics of the American Burying Beetle *Nicrophorus americanus* Olivier (Coleoptera: Silphidae) in south-central Nebraska. *Journal of Insect Conservation*, 3(3), 171-181. (biology, conservation) [*Perhaps the most thorough bionomics investigation of Nicrophorus americanus to date.*] [!S]
- Beeler, A.E., Rauter, C.M., & Moore, A.J. (1999) Pheromonally mediated mate attraction by males of the burying beetle *Nicrophorus orbicollis*: alternative calling tactics conditional on both intrinsic and extrinsic factors. *Behavioral Ecology*, 10(5), 578-584. (biology, behavior) [*N. orbicollis calling behavior is plastic-(larger males are more likely to search for carrion than call without it) precedent setting study on plasticity of Nicrophorus behavior.*] [!S]
- Bell, J.J. (1873) A glimpse of insect life. *Canadian Entomologist*, 5, 94-95. (biology, behavior) [*“Observed adult Nicrophorus removing maggots from a dead dog.”-Milne & Milne 1944.*]
- Belozero, V.N. (1957) Some data on the biology and anatomy of the mite *Poecilochirus necrophori* Vitzt. (Parasitiformes, Parasitidae). *Zoologicheskii Zhurnal*, 12, 1802-1813. (biology, symbionts: mites, in Russian (English summary)) [!N]
- Benick, L. (1912) Zur Biologie des *Necrophorus vestigator* Herschel nebst Beschreibung der Larve und Nympe. *Entomologische Blätter*, 8, 197-203. (morphology, larval stages in German) [!N]
- Benick, L. (1952) Pilzkäfer und Käferpilze. Ökologische und statistische Untersuchungen. *Acta Zoologica Fennica*, 70, 1-250. (biology, ecology in German) [!N]
- Beninger, C.W. (1993) Egg predation by *Poecilochirus carabi* (Mesostigmata: Parasitidae) and its effect on reproduction of *Nicrophorus vespilloides* (Coleoptera: Silphidae). *Environmental Entomology*, 22(4), 766-769. (biology, symbionts: mites) [*More eggs failed to hatch in presence of mites.*] [!S]
- Beninger, C.W. (1994) Phenology, reproductive biology, and habitat associations of *Nicrophorus* Fab. (Coleoptera, Silphidae) of the Mer Bleue Bog area (Ottawa, Canada). *Memoirs of the Entomological Society of Canada*, 169, 135-143. (biology, ecology in English (French summary)) [*N. sayi- mature forests, N. orbicollis & N. tomentosus generalists, N. defodiens-forests & N. vespilloides- bogs.*] [!S]
- Beninger, C.W. & Peck, S.B. (1992) Temporal and spatial patterns of resource use among *Nicrophorus* carrion beetles (Coleoptera: Silphidae) in a Sphagnum bog and adjacent forest near Ottawa, Canada. *Canadian Entomologist*, 124(1), 79-86. (biology, ecology)
- Benken, T., Müller, J.K., & Peschke, K. (1998) Oligonucleotide DNA fingerprinting optimized to determine parentage in three beetle species. *Electrophoresis*, 19, 158-163. (biology, behavior) [*First DNA fingerprinting to establish parentage of any beetle species.*] [!S]
- Benken, T., Müller, J.K., & Hoferer, S. (1996) Joint breeding and brood parasitism in the burying beetles *Nicrophorus vespilloides* (Coleoptera: Silphidae) in the field demonstrated by DNA fingerprinting. *Verhandlungen der Deutschen Zoologischen Gesellschaft*, 89, 237. (Abstract: biology, behavior)
- Berdela, G., Lustigman, B., & Shubeck, P.P. (1994) A list of bacteria flora residing in the mid and hindgut regions of six species of carrion beetles (Coleoptera: Silphidae). *Entomological News*, 105, 47-58. (biology, symbionts: bacteria) [*53+ especiesí of bacteria, no pattern corresponding to beetle taxa.*] [!S]
- Berg, C. (1881) Entomologisches aus dem Indianergebiet der Pampa. *Stettiner Entomologische Zeitung*, 62, 36-72. (checklist in German)
- Berg, C. (1901) Sífidos argentinos (Coleópteros). *Comunicaciones del Museo Nacional de Buenos Aires*, 1, 325-330. (in Spanish) [!N]

- Bergsträsser, J.A.B. (1778) *Nomenclatur und Beschreibung der Insecten in der Grafschaft Hanau-Münzenberg, wie auch der Wetterau und der angrenzenden Nachbarschaft dies- und jenseits des Mains*. Hanau. 1: (4) + 88 pp., 14 pls. (catalog in German)
- Bernet Kempers, K.J.W. (1923) Abbildungen von Flügelgeäder der Coleopteren. *Entomologische Mitteilungen*, 12, 71-115. (morphology: wing venation in German) ["Wing"-Hatch 1928] [!N]
- Bertin, G., Aloia, A., & Papi, R. (2000) ["1998"] I Silphinae ed i Nicrophorinae (Coleoptera Silphidae) che vivono sul Pratomagno (Arezzo, Toscana): composizione faunistica e ripartizione spazio-temporale. *Redia*, 81, 125-134. (biology, ecology in Italian (English summary)) [!N]
- Bertin, G. & Fallaci, M. (1994) Catalogo critico della collezione dei Silphidae del Museo Zoologico La Specola dell'Università degli studi di Firenze (Coleoptera). *Bollettino della Società Entomologica Italiana*, 125, 211-220. (checklist in Italian (English summary)) [Italian and foreign locality data.] [!S]
- Bertin, G. & Lebboroni, M. (1996) ["1995"] Catalogo critico e distribuzione dei Silfidi italiani. I. Trentino Alto Adige, Veneto, Friuli Venezia Giulia (Coleoptera) *Memorie della Società Entomologica Italiana*, 74, 131-158. (checklist in Italian (English summary)) [Italian locality data for *Nicrophorus*.] [!S]
- Bertin, G. & Lebboroni, M. (1999) Catalogo critico dei Silfidi e Agirtidi italiani. II. Val d'Aosta, Piemonte, Lombardia, Liguria, Emilia-Romagna. *Atti della Società Italiana di Scienze Naturali e del Museo Civico di Storia Naturale in Milano*, 140, 37-63. (checklist in Italian) [!N]
- Bickhardt, H. (1909) Die Varietäten unserer schwarzen Totengräberarten. *Entomologische Blätter*, 5, 73-76. (description of variation in German) [listing of varietal names for *N. germanicus* and *N. humator*] [!S]
- Bils, W. (1976) Das Abdomenende weiblicher, terrestrisch lebender Adephaga (Coleoptera) und seine Bedeutung für die Phylogenie. *Zoomorphologie*, 84, 113-193. (morphology: female abdominal musculature in German) [!N]
- Bily, S. (1990) *Coléoptères*. [adaptation française do Noëlle Akoa] Librairie Gründ, Paris. 224 pp. (larval descriptions, biology in French) [English version published same year by Treasure Press, London.] [!S]
- Biström, O. & Väisänen, R. (1988) Ancient-forest invertebrates of the Pyhän-Häkki national park in central Finland. *Acta Zoologica Fennica*, 185, 1-69. (biology, ecology) [!N]
- Blackith, R.M., Blackith, R.E., & Speight, M.C.D. (1988) Studies on the Murrough, Co. Wicklow, Ireland: 3. Carrion beetles (Coleoptera). *Bulletin of the Irish Biogeographical Society*, 11, 28-34. (in English) [*N. humator* primarily coastal; mention low *Nicrophorus* density.] [!S]
- Blackman, S.W. (1997) Experimental evidence that the mite *Poecilochirus davydovae* (Mesostigmata: Parasitidae) eats the eggs of its beetle host. *Journal of Zoology*, 242(1), 63-67. (biology, symbionts: mites) [Contradicts results of Springett 1968.] [!S]
- Blackman, S.W., & Evans, G.O. (1994) Observations on a mite (*Poecilochirus davydovae*) predatory on the eggs of burying beetles (*Nicrophorus vespilloides*) with a review of its taxonomic status. *Journal of Zoology*, 234(2), 217-227. (biology, symbionts: mites) [New sub-genus, *Physoparasitus*, for *P. davydovae* and *P. subterraneus*; the female of *P. davydovae* is redescribed.] [!S]
- Blackwelder, R.E. (1944) Checklist of the Coleopterous insects of Mexico, Central America, the West Indies, and South America. Part 1. *Bulletin of the United States National Museum*, 185: i-xii +1-188. (catalog) [!N]
- Blackwelder, R.E. (1973) *Checklist of the Silphidae of Canada, United States, Mexico, Central America and the West Indies*. North American Beetle Fauna Project, Family No. 17 (Red Version). Biological Research Institute of America, Inc., Latham, New York. 6 pp. (checklist, synonymy) [!N]
- Blake, I.H. (1945) An ecological reconnaissance in the Medicine Bow Mountains. *Ecological Monographs*, 15(3), 207-242. (checklist) [!S]

- Blanchard, É. (1842) *Insectes*. In: *Insectes de l'Amérique Méridionale, recueillis par Alcide d'Orbigny*. Vol. 6, part 2., P. Bertrand, Paris. pp. 73-88. (descriptions in French) [Original description of *N. scrutator*. According to an editorial note at the beginning of the volume Brullé was responsible for the early part of this work, i.e. text pages 1-56 [1836-1837] and plates 1-5 [1835-1836]; it was completed by Blanchard.] [!N]
- Bland, J.H.B. (1865) Descriptions of several new species of North American Coleoptera. *Proceedings of the Entomological Society of Philadelphia*, 4, 381-384. (descriptions) [Original description of *N. hecate* (= *N. guttula*).] [!M, S]
- Blas, M. (1978) Contribución al conocimiento de los sílfidos (Col.) de la región catalana. *Publicaciones del Departamento de Zoología (Barcelona)*, 3, 49-64. (key, descriptions in Spanish) [!N, S]
- Blatchley, W.S. (1910) *An Illustrated Descriptive Catalog of the Coleoptera or Beetles (exclusive of the Rhynchophora) Known to Occur in Indiana*. The Nature Publishing Co., Indianapolis 1386 pp. (key, descriptions, regional)
- Bliss, R.Q. (1949) Studies on the Silphidae, I. Secondary sexual differences in the genus *Nicrophorus* (Coleoptera). *Entomological News*, 60, 197-204. (morphology: sexual dimorphism) [Documents that most of the secondary sexual characters are variable among species.] [!N, S]
- Blouin-Demers, G. & Weatherhead, P.J. (2000) A novel association between and beetle and a snake: Parasitism of *Elaphe obsoleta* by *Nicrophorus pustulatus*. *Ecoscience*, 7(4), 395-397. (biology, ecology, behavior) [Possibly first scientific report of a vertebrate as a host for an insect parasitoid. Critical discovery regarding ecology of *N. pustulatus*. Should be replicated in other portions of this species' range.] [!S]
- Blum, P. (1979) Zur Phylogenie und ökologischen Bedeutung der Elytrenreduktion und Abdomenbeweglichkeit der Staphylinidae (Coleoptera): Vergleichend- und funktionsmorphologische Untersuchungen. *Zoologische Jahrbücher, Abteilung für Anatomie*, 102, 533-582. (morphology: wing folding, abdominal structure in German) [!N]
- Blumenbach, J.F. (1803) *Handbuch der Naturgeschichte*. 7. Auflage. Mit. Kupf. Gotting.
- Bocáková, M. (1995) Soil surface beetles (Coleoptera) in the proposed nature reserve of Hrubovodské sute near Olomouc. *Casopis Slezského Muzea Opava*, (A) 44, 13-30 . (biology, ecology in Czech (English summary)) [!N]
- Bockeler, W. (1977) Further examinations of beetles as transit-hosts of *Trichinella spiralis* (Owen 1835). *Zoologischer Anzeiger*, 199, 42-76. (biology, parasites in German (English summary)) [!S]
- Bodemeyer, E. v. (1915) Beiträge zur Feststellung von Verbreitungsdaten paläarktischer Coleopteren. *Deutsche Entomologische Zeitschrift*, 1915(4), 437-453. (checklist in German)
- Bodemeyer, E. v. (1916) Neuheiten der paläarktischen Coleopterenfauna. *Deutsche Entomologische Zeitschrift*, 1916, 111-112. (descriptions in German) [Original description of *P. weberi* (= *P. plagiatus*).] [!M, S]
- Boeckh, J. (1962) Elektrophysiologische Untersuchungen an einzelnen Geruchsrezeptoren auf den Antennen des Totengräbers (*Necrophorus*, Coleoptera). *Zeitschrift für Vergleichende Physiologie*, 46, 212-248. (morphology: antennal in German) [!N]
- Böhm, H. (1995) Dynamic properties of orientation to turbulent air current by walking carrion beetles. *Journal of Experimental Biology*, 198(9), 1995-2005. (biology, behavior, physiology) [Rapid changes in wind direction do not immediately affect orientation behaviour.] [!S]
- Böhm, H., Heinzl, H.-G., Scharstein, H., & Wendler, G. (1991) The course control-system of beetles walking in an air-current field. *Journal of Comparative Physiology (A: Sensory Neural and Behavioral Physiology)*, 169 (A)(6), 671-683. (biology, physiology in English) [Technical analysis and comparison of *Nicrophorus* wind stimulus response to other studies.] [!N, S]

- Böhm, H., Heinzl, H.-G. & Wendler, G. (1986) Vergleichende Analyse des Windorientierungssystems und des optomotorischen Systems beim Totengräber (*Necrophorus humator* F.). *Verhandlungen der Deutschen Zoologischen Gesellschaft*, 79, 199-200. (biology, physiology in German) [!N]
- Böhm, H. & Wendler, G. (1987) Der Einfluss von Aasduft auf die Windorientierung laufender Totengräber (*Necrophorus humator* F.) *Verhandlungen der Deutschen Zoologischen Gesellschaft*, 80, 304-305. (biology, physiology in German)
- Böhm, H. & Wendler, G. (1988) Die Windorientierung von Aaskafern. *Mitteilungen der Deutschen Gesellschaft für Allgemeine und Angewandte Entomologie*, 6(1-3), 91-94. (biology, behavior, physiology in German (English summary))
- Bordas, L. (1900) Recherches sur les organes reproducteurs males des Coléoptères (anatomie comparée, histologie, matière fécondante). *Annales des Sciences Naturelles (Zoologie Palaeontologie)*, 11, 283-448. (morphology: testes in French) [“testes” -Hatch 1928.] [!N]
- Brackenbury, J.H. (1994) Wing folding and free-flight kinematics in Coleoptera (Insecta): a comparative study. *Journal of Zoology (London)*, 232, 253-283. (morphology: wing folding) [Description of unique position of elytra during flight- possible synapomorphy of *Nicrophorinae*.] [!N, S]
- Bracket (1866) *Maine Farmer* [not found]
- Brahm, N.J. (1790) *N. J. Brahm ... Insektenkalender für Sammler and Oekonomen. [N.J. Brahm ... Handbuch der ökonomischen Insektengeschichte in Form eines Kalenders bearbeitet]* Th.I & II, abth.1 [in 3 vol], Mainz, 1790-91. [in (3) v]; 8°.
- Bredohl, R. (1984a) Zur Bioakustik mitteleuropäischen Totengräber (Coleoptera: Silphidae: *Necrophorus*). *Entomologia Generalis*, 10(1), 11-25. (morphology: stridulatory files in German (English summary)) [First demonstration of 3 types of calls in *Nicrophorus*; type I: *N. vespilloides*, type II: *N. vespillo*, *N. interruptus*, *N. germanicus*; type III: *N. investigator*, *N. humator*, *N. vestigator*; type IV: *N. sepultor*, *N. nigricornis*, *N. antennatus*. (types III & IV very similar).] [!N, S]
- Bredohl, R. (1984b) Aufzuchtergebnisse bei einer Farb-Aberration des Totengräbers *Necrophorus vespilloides* Herbst 1784 (Coleoptera: Silphidae). *Entomologische Zeitschrift*, 94(4), 43-46. (biology, genetics in German)
- Brimley, C.S. (1938) *The insects of North Carolina, being a list of the insects of North Carolina and their close relatives*. North Carolina Department of Agriculture, Division of Entomology, Raleigh, N. C. 560 pp. (checklist) [!N]
- Britton, W.E. (1920) *Check-list of the insects of Connecticut*. State Geological and Natural History Survey, Hartford. 397 pp. (checklist) [!N]
- Brown, J.M. & Wilson, D.S. (1992) Local specialization of phoretic mites on sympatric carrion beetle hosts. *Ecology (Washington D.C.)*, 73(2), 463-478. (biology, symbionts: mites) [Evidence of reproductive isolation in Nearctic *P. carabi*.] [!S]
- Brown, J.M. & Wilson, D.S. (1994) *Poecilochirus carabi*: Behavioral and life-history adaptations to different hosts and the consequences to geographical shifts in host communities. In: Houck, M. A. (ed.) *Mites: ecological and evolutionary analyses of life history patterns*. New York, Chapman & Hall. pp 1-22 (biology, symbionts: mites) [Evidence of reproductive isolation (cryptic species) & adaptations in Nearctic *P. carabi*.] [!S]
- Bruch, C. (1915) Catálogo sistemático de los coleópteros de la República Argentina. Pars III. *Revista del Museo de la Plata*, 19, 303-339. (catalog, distribution in Spanish) [!N]
- Brullé, A. (1832) *Expédition scientifique de Morée. Section des sciences physiques*, Vol. 3, Part 2, Insectes. F. G. Levrault, Paris. Pp. i-xxix, 64-395, 22 pls. (descriptions) [Original description of *N. interruptus* Brullé nec. Stephens (= *N. vestigator*).] [!N, S]
- Brullé, A. (1836) *Insectes*. In: *Insectes de l'Amérique Méridionale, recueillis par Alcide d'Orbigny*, vol. 6, part 2, plates 2-5. P. Bertrand, Paris. pp. 1-16. (descriptions in French) [Original

- description of *N. didymus*. According to an editorial note at the beginning of the volume Brullé was responsible for the early part of this work, i.e. text pages 1-56 [1836-1837] and plates 1-5 [1835-1836]; it was completed by Blanchard.] [!N]
- Brundin, L. (1934) *Die Coleopteren des Torneträskgebietes. Ein Beitrag zur Ökologie und Geschichte der Käferwelt in Schwedisch-Lappland. Akademische Abhandlung welche zur Erlangung der philosophischen Doktor-würde mit genehmigung der philosophischen Fakultät zu Lund ...* Carl Bloms Boktryckeri, Lund. 436 pp. (biology, ecology in German) [!N]
- Burakowski, B., Mroczkowski, M. & Stefanska, J. (1978) Coleoptera, Tom 5: Histeroidea i Staphylinoidea prócz Staphylinidae. *Katalog Fauny Polski*, 29, 1-356. (catalog, distribution, synonymy in Polish) [!N]
- Burgos Solorio, A. & Trejo-Loyo, A.G. (2001) *Lista preliminar de los Coleópteros registrados para el estado de Morelos, México*, In: Navarrete-Heredia, J.L., Fierros-López, H.E. & Burgos-Solorio, A. (eds.), *Tópicos sobre Coleoptera de México*. Universidad de Guadalajara & Universidad Autónoma del Estado de Morelos, Guadalajara, Mexico. pp. 69-95. (checklist in Spanish) [!N]
- Busnel, R.G. (1963) *Acoustic Behaviour of Animals*. Elsevier Publishing Corp. Amsterdam/ New York (biology, behavior, physiology) [Mentions stridulation in *Nicrophorus*]
- Calwer, C.O. (1858) *Käferbuch. Allgemeine und specielle Naturgeschichte der Käfer Europa's, nebst der Unweitung sie zu sammeln und aufzubewahren*. Kraiss & Hoffman Verlag, Stuttgart. xxvii + 788 pp., 49 pls. (checklist, brief descriptions in German) [!N]
- Campbell, J.M. (1991) *Family Silphidae: carrion beetles*. In: Bousquet, Y. (ed.). *Checklist of beetles of Canada and Alaska*. Publication 1861/E, Research Branch, Agriculture Canada, Ottawa. pp. 84-86. (catalog, distribution) [!N, S]
- Cantonnet, F. & Lecordier, C. (1947) Note biologique sur les nécrophores en forêt d'Andaine (Orne). *Entomologiste*, 3, 134-136. (biology, ecology in French) [!N]
- Carlton, C.E., & Rothwein, F. (1998) The endangered American burying beetle, *Nicrophorus americanus* Olivier, at the edge of its range in Arkansas (Coleoptera: Silphidae). *Coleopterists Bulletin*, 52(2), 179-185. (biology, conservation) [New ABB pop at minimum viable population density.] [!S]
- Carnier, T. (1994) Zwei Winternachweise des Schwarzen Totengrabers (*Nicrophorus humator*) in Nordniedersachsen. *Beitraege Zur Naturkunde Niedersachsens*, 47(3), 124-125. (biology, ecology in German)
- Carret, A. (1901) Contribution à la faune française. *Nicrophorus nigricornis* Fald. dans nos Alpes [Col.]. *Bulletin de la Société Entomologique de France*, 1901, 327-331. (description of variation in French) [Original description of *N. vestigator* var. *degener* (= *N. vestigator*).] [!S]
- Caveney, S. (1986) The phylogenetic significance of ommatidium structure in the compound eyes of polyphagan beetles. *Canadian Journal of Zoology*, 64, 1787-1819. (morphology: ommatidium) [!N]
- Cederhielm, J. (1798) *Faunae Ingricae prodromus exhibens methodicam descriptionem insectorum agri Petropolensis : praemissa mammalium, avium, amphibiorum et piscium enumeratione / auctore Iohanne Cederhielm*. Lipsiae [Leipzig] : Impensis Iohann. Fried. Hartknoch, 1798. xvii, 348 pp. (catalog)
- Chapman, R.F. & Sankey, J.H.P. (1955) The larger invertebrate fauna of three rabbit carcasses. *Journal of Animal Ecology*, 24, 395-402. (biology, ecology) [*N. vespillo* among the more prominent carrion insects; appearing by day 4.] [!S]
- Chapman, T. (1831) *Nicrophorus germanicus*. *Magazine of Natural History*, 4, 187-188. (biology)
- Charpentier, T. de. (1825) *Horae Entomologicae, adjectis tabulis novem coloratis*. Gosohorsky, Wratislaviae. xvi + 255 + (5) pp., 9 pls. (descriptions) [Original description of *N. sepultor*.] [!M, S]

- Chenu, J.C. & Desmarest, E. (1851) *Encyclopedie d'histoire naturelle; ou, Traite complet de cette science d'apres les travaux des naturalistes les plus eminents de tous les pays et de toutes les epoques: Buffon, Daubenton, Lacepede, G. Cuvier, F. Cuvier, Geoffroy Saint-Hilaire, Latreille, De Jussieu, Brongniart, etc. etc. Ouvrage resumant les observations des auteurs anciens et comprenant toutes les decouvertes modernes jusqu'a nos jours*. Paris, Marescq [1850?-1861? v.1, 1860] 5-7 (in French)
- Cho, F. (1936) A list of unrecorded carrion-beetles from Korea. *Kontyû*, 10, 155-158. (checklist in Japanese) [*N. tenuipes* as subsp. of *N. humator*.] [!S]
- Cho, P.S. (1957) A systematic catalogue of Korean Coleoptera. *Humanities and Sciences, Korea Univ.*, 2, 173-338. (catalog in Korean)
- Cho, P.S. (1963) Insects of Querpant Island (Cheju-do). *Humanities and Sciences, Korea Univ.*, 6, 159-242. (catalog in Korean)
- Cho, Y.B., & Kwon, Y.J. (1999) New silphids (Coleoptera: Silphidae) from Korea. *Korean Journal of Entomology*, 29(3), 221-223. (distribution note) [*First record of N. ussuriensis* from Korea.] [!S]
- Cho, Y.B. & Lee, C.E. (1986) Phylogenetic relationships among tribes of Silphidae 1 (Coleoptera). *Nature and Life (Kyungpook Journal of Biological Sciences)*, 16, 19-25. (phylogenetics) [*Pre-computer cladistic analysis of Silphidae tribal relationships based on 5 characters. Found paraphyletic Silphinae with (Agyrini (Silphini (Necrodini + Necrophorini)))*.] [!S]
- Cho, Y.B. & Lee, C.E. (1992) Taxonomic revision of the family Silphidae (Coleoptera) from Korea, Part II. Necrophorinae. *Nature and Life (Kyungpook Journal of Biological Sciences)*, 22(2), 19-31. (revision: key, descriptions & catalog in English) [*Indicates N. vespilloides records of pre 1945 might be misidentified N. dauricus. Subsequent misspellings: Nicrophorus: Nicrophors; P. plagiatus: P. maculatus; N. japonicus: N. japonocus; N. concolor: N. conclor; N. vespilloides: N. morturum.*] [!S]
- Cho, Y.B. & Lee, C.E. (1995) Carrion beetles in Korea (Coleoptera, Silphidae). *Nature and Life (Kyungpook Journal of Biological Sciences)*, 25(1-2), 1-19. (revision: key, descriptions & catalog in English (Korean summary))
- Cho, Y.B., Park, H.C. & Lee, C.E. (1987) Comparison of two species of *Necrophorus* from Korea with scanning electron microscope (Silphidae, Coleoptera). *Nature and Life (Kyungpook Journal of Biological Sciences)*, 17(2), 55-58. (morphology: SEM, external adult) [*Compared female N. "latifasciatus" with male N. "praedator" without noting the sexes and stated the species were diagnosably different. p. 57: "two species are easily separable by the distinct difference of the postocular shape."*] [!S]
- Cho, Y.B., Park, H.C. & Lee, C.E. (1988) A cladistic analysis of genus *Necrophorus* (Coleoptera: Silphidae). *Nature and Life (Kyungpook Journal of Biological Sciences)*, 18(1), 9-13. (phylogenetics) [*One species near N. maculifrons listed as undescribed (?); cladogram poorly built-DSS found 43,021 trees of equal length or shorter.*] [!S]
- Christie, J.E. (1983) A new species of *Alliphis* (Mesostigmata: Eviphididae) from Britain. *Acarologia (Paris)*, 24(3), 231-242. (biology, symbionts: mites in English (German summary))
- Clark, C.U. (1895) On the food habits of certain dung and carrion beetles. *Journal of the New York Entomological Society*, 3, 61. (biology, behavior) [*Mentions Nicrophorus feeding on maggots.*] [!N]
- Clark, M.E. (1948) ["1947"] An annotated list of Coleoptera taken at or near Terrace, British Columbia. Part 1. *Proceedings of the Entomological Society of British Columbia*, 44, 24-27. (checklist) [!N]
- Colin, M. (1847) Sur les moeurs du *Necrophorus cadaverinus*. *Bulletin de la Société Entomologique de France*, 2(5), cx. (morphology, larval stages in French)
- Collett, H.R.P. (1930) The burying of carrion by Coleoptera. *Entomologist's Monthly Magazine*, 66, 257-258. (biology, behavior) [!M, N]

- Conley, M.R. (1982) Carrion Locating Efficiency in Burying Beetles, *Nicrophorus carolinus* (L.) (Silphidae). *Southwestern Naturalist*, 27(1), 11-15. (biology, ecology) [Studied: 1. time required to locate carrion, 2. amount of carrion located, 3. numbers of beetles locating carcasses.] [!S]
- Contarini, N. (1843) *Cataloghi degli uccelli e degli insetti delle provincie di Padova e Venezia compilati dal nobile signor conte Nicolò Contarini del fu Bertucci*. Tip. Baseggio, Bassano (catalog)
- Coope, G.R., & Angus, R.B. (1975) An ecological study of a temperate interlude in the middle of the last glaciation, based on fossil Coleoptera from Isleworth, Middlesex. *Journal of Animal Ecology*, 44(2), 365-391. (fossils) [*N. vespillo* is listed among over 200 species of beetle from an assemblage 43,000 years old.] [!S]
- Cooreman, J. (1943) Note sur la faune des Hautes-Fagnes en Belgique. XI. Acariens Parasitiformes. *Bulletin du Musée Royal d'Histoire Naturelle de Belgique*, 19, 63-91. (biology, symbionts: mites in French) [Found *Neoseius* adult mites free-living in peat and deutonymphs on 4 species of *Nicrophorus*.]
- Cordes, R., Kaschuba, A. & Müller, J.K. (1988) Strategien tageszeitlicher Aktivität von *Nicrophorus vespilloides* (Sil., Col.) und *Pterostichus oblongopunctatus* (Car., Col.) im Vergleich Verhandlungen der Deutschen Zoologischen Gesellschaft, 81, 339-340. (biology, behavior in German)
- Corset, J. (1931) Les coaptations chez les insectes. *Bulletin Biologique de France et de Belgique, Supplément*, 13, 1-337. (morphology: elytral locking in French) [!N, S]
- Cox, H.E. (1874) *A handbook of the Coleoptera, or beetles, of Great Britain and Ireland*. Vol. 1. E. W. Janson, London. viii + 522 pp. (key, descriptions (brief)) [!N]
- Coyle, D.R. & Larsen, K.J. (1998) Carrion beetles (Coleoptera: Silphidae) of northeastern Iowa: A comparison of baits for sampling. *Journal of the Iowa Academy of Science*, 105(4), 161-164. (biology, ecology) [*Chicken* was the most attractive of the baits tested.] [!N]
- Creamer, K.D. (1992a) Natural history, husbandry & display of carrion beetles (Coleoptera: Silphidae). *American Association of Zoological Parks and Aquariums, Regional Conference Proceedings*, 1992, 288-293. (Conference report: biology, conservation)
- Creamer, K.D. (1992b) Observation and culturing techniques of the burying beetle, *Nicrophorus orbicollis*. *Y. E. S. Quarterly*, 9(1), 5-8. (biology)
- Creamer, K.D. (1993) Husbandry and display techniques of the American burying beetle *Nicrophorus americanus* (Coleoptera: Silphidae). *American Association of Zoological Parks and Aquariums, Regional Conference Proceedings*, 1993, 136-141. (Conference report: biology, conservation)
- Creighton, J.C., Lomolino, M.V. & Schnell, G.D. (1993) *Survey methods for the American burying beetle (Nicrophorus americanus) in Oklahoma and Arkansas*. Oklahoma Biological Survey, Norman, OK. (unpublished report: biology, conservation)
- Creighton, J.C., & Schnell, G.D. (1998) Short-term movement patterns of the endangered American burying beetle *Nicrophorus americanus*. *Biological Conservation*, 86(3), 281-287. (biology, conservation) [71% of ABB recaptures were in a different habitat from the first.] [!S]
- Creighton, J.C., Vaughn, C.C. & Chapman, B.R. (1993) Habitat preference of the endangered American Burying Beetle (*Nicrophorus americanus*) in Oklahoma. *The Southwestern Naturalist*, 38(3), 275-277. (biology, conservation) [More ABB were caught in oak-hickory forests than grasslands.] [!N, S]
- Crotch, G.R. (1873) *Check List of the Coleoptera of America, North of Mexico*. Naturalists' Agency, Salem, Mass. 136 pp. (checklist) [!N]
- Crowson, R.A. (1938) The metendosternite in Coleoptera: a comparative study. *Transactions of the Royal Entomological Society of London*, 87, 397-415. (morphology: metendosternite) [!N, S]

- Curtis, J. (1825) *British entomology, being illustrations and descriptions of the genera of insects found in Great Britain and Ireland, ...* Vol. 2, pls. 51-98. L. Reeve & Co., London (checklist) [!N]
- Dapsio, A. (1995) *Silphidae*. In: S. Pileckis & V. Monsevicius (eds.). *Lietuvos Fauna [Fauna of Lithuania]*. Vol. 1. Mokslo ir Enciklopediju Leidykla, Vilnius. pp. 117-121 (checklist in Lithuanian) [!N]
- Davis, C.A. (1904) Instructions for collecting and mounting insects; Also a checklist of the Coleoptera of the state of Rhode Island, U.S.A.. 3rd ed. *Bulletin of the Roger Williams Park Museum, Providence Pilgrim Press*, 1, 1-47. (checklist) [Comment that *N. americanus* was common (in 1890-1904) and *N. marginatus* was abundant (in 1890-1904).] [!S]
- Davis, C.A. (1905) Additions to the check-list of Rhode Island Coleoptera. *Apteryx*, 1, 13-17. (checklist) [!S]
- Davis, L.R., Jr. (1980) Notes on beetle distributions, with a discussion of *Nicrophorus americanus* Olivier and its abundance in collections (Coleoptera: Scarabaeidae, Lampyridae, and Silphidae). *Coleopterists Bulletin*, 34(2), 245-251. (biology, conservation) [Reports on Baldwin (1975) who noted *N. americanus* had not been collected in Ill since 1944; first published account on decline of *N. americanus*.] [!N, S]
- De Jong, G.D. & Chadwick, J.W. (1999) Decomposition and arthropod succession on exposed rabbit carrion during summer at high altitudes in Colorado, USA. *Journal of Medical Entomology*, 36, 833-845. (biology, ecology) [!N]
- DeGeer, Ch. (1774) *Mémoires pour servir à l'histoire des Insects*. Stockholm, 4, 1-456, 12 pls. (biology in French)
- Dejean, P.F.M.A. (1821) *Catalogue de la Collection de Coléoptères de M. le Baron Dejean*. Paris viii + 1- 136 + (2) pp. (catalog) [numerous ms names listed, all unavailable, nomen nuda: *Stygius Dahl*. [nomen nudum ex Dejean 1821]; *Cadaverinus Dejean* 1821. [nomen nudum]; *Basalis Dejean* 1821. [nomen nudum]; *Interruptus Dejean* 1821. [nomen nudum]; *Sepultor Dejean* 1821. [nomen nudum]; *Investigator* Il. [ex Dejean 1821 nomen nudum]] [!S]
- Dejean, P.F.M.A. (1833) *Catalogue des Coléoptères de la collection de M. le Comte Dejean ...* [2nd edition.] Méquignon-Marvis, Paris, pp. 1-176. (catalog in French) [numerous ms names listed, all unavailable nomina nuda of *Nicrophorus*: *Speculifrons Fischer*, Russ. mer. or.; *Megacephalus Eschsch* id; *Stygius Dahl*, Illyria; *Lateralis Eschsch*, California; *Auripilosus Eschsch*, id.; *Lunatus Dej*. Amer. bor.; *Cadaverinus Dej*. Gallia bor.; *Quadrinaculatus Dej*. Amer. bor.; *Sexpustulatus Dej*. Amer. bor.; *Velutinus var. Marginatus Dejean* cat, Amer. bor.; *Nigricornis Dej*, Dauria; *Nigricornis var. Asiaticus*, Faldermann, Persia occid.; *Halseyi Petit*, Amer. bor.] [!S]
- Dejean, P.F.M.A. (1836) *Catalogue des Coléoptères de la collection de M. le Comte Dejean, pair de France, lieutenant général, grand officier de la légion d'honneur, membre de plusieurs sociétés savantes nationales et étrangères. Troisième édition, revue, corrigée et augmentée*. Méquignon-Marvis, Paris, pp. 1-384. (catalog in French) [numerous ms names listed, all unavailable, nomina nuda of *Nicrophorus*: *N. Speculifrons Fischer* [Rus. mer. or.]; *N. megacephalus Eschscholtz* - as sn. of *N. speculifrons* [Rus. mer. or.]; *N. Stygius Dahl*. [Illyria]; *N. Lateralis Eschscholtz* [California]; *N. Auripilosus Eschscholtz* [California]; *N. Lunatus Dej*. [Amer. bor.]; *N. Curvipes Megerle* - as syn. of *N. vespillo* [Austria]; *N. Cadaverinus Dej*. [Gallia bor.]; *N. Investigator Mac Leay* - as syn. of *N. Cadaverinus Dej*. [Anglia]; *N. Basalis Dej*. [Gallia]; *N. Sepultor Dej*. [P.]; *N. Investigator Dej*. Catal. - as syn. of *N. sepultor Dej*. [Austria]; *N. Interruptus Dej*. [Hispania]; *N. Vestigator Illiger*[P.]; *N. sepultor Dej*. catal. - as syn. of *N. vestigator* Ill. [P.]; *N. Corsicus Dej*. [Corsica]; *N. Quadrinaculatus Dej*. [Amer. bor.]; *N. Sexpustulatus Dej*. [Amer. bor.]; *N. Velutinus var. Marginatus Dej*. Catal. [Amer. bor.]; *N. Nigricornis Dej*. [Dauria]; *N. Nigricornis var. Asiaticus Faldermann* [Persia occid.]; *N. Halseyi Petit* [Amer. bor.]] [!S]

- Delahon, P. (1913) Nachträge zum Schilskyschen Verzeichnis der Käfer Deutschlands von 1909 und einige sonstige Bemerkungen über deutsche Käfer. *Deutsche Entomologische Zeitschrift*, 1913, 529-539. (checklist in German)
- Delahon, P. (1925) Nachträge zu "Schilskys Systematischen Verzeichnis der Käfer Deutschlands" von 1909 mit besonderer Berücksichtigung der Formen der Mark Brandenburg, sowie einige sonstige Bemerkungen über Käfer aus Deutschland. *Deutsche Entomologische Zeitschrift*, 1925, 305-308. (comment in German)
- Deloya, C. (1997) ["1996"] Los macro-coleopteros necrófilos de Tepoztlan, Morelos, Mexico (Scarabaeidae, Trogidae, Silphidae). *Folia Entomologica Mexicana*, 97, 39-54. (biology, ecology in Spanish) [*N. olidus* among the most abundant species.]
- Denman, D.J. (1984) The feeding habits of two species of burying beetles: *Necrophorus vespilloides* Herbst and *N. humator* Goeze *Entomologist's Record and Journal of Variation*, 96(9-10), 201. (biology, behavior)
- Dethier, V.G. (1947) The role of the antennae in the orientation of carrion beetles to odors. *Journal of the New York Entomological Society*, 55, 285-293. (biology, behavior) [Controls-87.5% returned; lacking 1 antenna-59% returned; lacking both antennae- 0% returned; lacking clubs of both antennae- 27% returned.] [!M, N, S]
- Deyrolle, H. & Fairmaire, L. (1878) Descriptions de Coléoptères recueillis par M. l'abbé David dans la Chine centrale. *Annales de la Société Entomologique de France*, 5(8), 87-140. (descriptions in French) [Original description of *N. ocellatus* (= *N. nepalensis*); *P. davidis* (= *P. plagiatus*).] [!S]
- Dillon, E.S. & Dillon, L.S. (1961) *A manual of common beetles of eastern North America*. Row, Peterson and Co., Evanston, Illinois. viii + 884 pp. (key, descriptions) [!N]
- Dobler, S. & Müller, J.K. (2000) Resolving phylogeny at the family level by Mitochondrial Cytochrome Oxidase sequences: Phylogeny of carrion beetles (Coleoptera: Silphidae). *Molecular Phylogenetics and Evolution*, 15(3), 390-402. (phylogenetics) [First complete phylogenetic analysis of the family Silphidae. strong support for monophyly of Silphinae & Nicrophorinae.] [!S]
- Dohrn, C.A. (1879) Exotisches. *Entomologische Zeitung[Stettin]*, 60, 456-461. (comment in German)
- Dollfus, R.P. (1961) Contribution to the regional parasitic fauna (Experimental Station of Parasitology of Richelieu). *Annales de Parasitologie Humaine et Comparée*, 36, 169-451. (biology, symbionts: mites in French)
- Downie, N.M. & Arnett, R.H., Jr. (1996) *The Beetles of Northeastern North America. Volume 1: introduction; suborders Archostemata, Adephaga, and Polyphaga, thru superfamily Cantharoidea* Sandhill Crane Press, Gainesville pp. i-xiv, 1-880. (key, descriptions, regional) [!S]
- Dressel, J. (1987) Der Einfluß der Körpergröße und der Anwesenheit von Weibchen auf innerartliche Kämpfe der Männchen des Aaskäfers *Necrophorus vespilloides* (Coleoptera, Silphidae). *Verhandlungen der Deutschen Zoologischen Gesellschaft*, 80, 307. (biology, behavior in German)
- Dressel, J. & Müller, J.K. (1988) Ways of increasing fitness of small and contest-losing individuals in burying beetles (Silphidae, Coleoptera). *Verhandlungen der Deutschen Zoologischen Gesellschaft*, 81, 342. (Abstract: biology, behavior) [Found duration of ontogenetic development is dependent on body size- smaller offspring develop faster than larger, [also found for *N. nigrita*, unpub data- D. Sikes]] [!S]
- Duftschmid, C. (1825) *Fauna Austriae, oder Beschreibung der österreichischen Insecten für angehende Freunde der Entomologie. DritterTheil*. Linz. 289 pp. (descriptions in German) [Original description of *N. curvipes* (= *N. vespillo*).] [!M, S]

- Dunn, G.A. (1994) Interesting beetle observations on Mackinac Island, Michigan. *Y. E. S. Quarterly*, 11(3), 114-116. (biology, behavior)
- Dunn, G.A. (1996) *Silphidae*. In: *Insects of the Great Lakes Region*. The Univ. of Michigan Press, Ann Arbor pp 168-169 (catalog) [!S]
- DuPorte, E.M. (1960) Evolution of cranial structure in adult Coleoptera. *Canadian Journal of Zoology*, 38, 655-675. (morphology) [Species name not mentioned- good figures of *Nicrophorus* cranial structure.] [!N, S]
- Dury, C. (1902) A revised list of the Coleoptera observed near Cincinnati, Ohio, with notes on localities, bibliographical references, and description of new species. *Journal of the Cincinnati Society of Natural History*, 20, 107-196. (checklist) [!N]
- Easton, C. (1980) ["1979"] A method of sexing three species of *Nicrophorus* (Col., Silphidae). *Entomologist's Monthly Magazine*, 115, 121-123. (morphology: sexual dimorphism) [Note that males have 9 visible abdominal segments and females have only 8; good figures.] [!N, S]
- Eggert, A.-K. (1992) Alternative male mate-finding tactics in burying beetles. *Behavioral Ecology*, 3(3), 243-254. (biology, behavior)
- Eggert, A.-K., & Müller, J.K. (1987) Mechanismus und Erfolg der Valerschaftssicherung bei *Nicrophorus vespilloides* (Coleoptera, Silphidae). *Verhandlungen der Deutschen Zoologischen Gesellschaft*, 80, 250-251. (Abstract: biology, behavior in German)
- Eggert, A.-K., & Müller, J.K. (1988) Observations of pheromone-emitting males of *Nicrophorus vespilloides* (Coleoptera, Silphidae): Ontogeny, inter- and intraindividual variation. *Verhandlungen der Deutschen Zoologischen Gesellschaft*, 81, 343. (Abstract: biology, behavior)
- Eggert, A.-K. & Müller, J.K. (1989a) Mating success of pheromone-emitting *Nicrophorus* males: Do attracted females discriminate against resource owners? *Behaviour*, 110(1-4), 248-257. (biology, behavior in English (German summary))
- Eggert, A.-K. & Müller, J.K. (1989b) Pheromone-mediated attraction in burying beetles. *Ecological Entomology*, 14(2), 235-237. (biology, behavior)
- Eggert, A.-K. & Müller, J.K. (1989c) Uni- und biparentale Brutpflege bei *Nicrophorus vespilloides*. *Verhandlungen der Deutschen Zoologischen Gesellschaft*, 82, 318. (biology, behavior in German)
- Eggert, A.-K. & Müller, J.K. (1992) Joint breeding in female burying beetles. *Behavioral Ecology and Sociobiology*, 31(4), 237-242. (biology, behavior) [First documentation that *N. vespilloides* will breed communally.] [!S]
- Eggert, A.-K. & Müller, J.K. (1997) *Biparental care and social evolution in burying beetles: Lessons from the larder*. In: Choe, J.C. & Crespi, B.J. (eds.) *Social Behavior in Insects and Arachnids*. Cambridge University Press, Cambridge, New York & Oakleigh. pp. 216-236 (biology, review of: ecology, behavior) [!S]
- Eggert, A.-K., & Müller, J.K. (2000) Timing of oviposition and reproductive skew in cobreeding female burying beetles (*Nicrophorus vespilloides*). *Behavioral Ecology*, 11(4), 357-366. (biology, behavior)
- Eggert, A.-K., Reinking, M. & Müller, J.K. (1998) Parental care improves offspring survival and growth in burying beetles. *Animal Behaviour*, 55(1), 97-107. (biology, behavior) [Feeding and carcass preparation but not symbiont transfer. Parental regurgitations are not due to endosymbiont transfer. Excellent overview of parental care benefits.] [!S]
- Eggert, A.-K., & Sakaluk, S.K. (1995) Female-coerced monogamy in burying beetles. *Behavioral Ecology and Sociobiology*, 37(3), 147-153. (biology, behavior) [Males on larger carcasses try to attract a second mate.] [!S]
- Eggert, A.-K., & Sakaluk, S.K. (2000) Benefits of communal breeding in burying beetles: a field experiment. *Ecological Entomology*, 25, 262-266. (biology, behavior) [Rejected improved defense hypothesis to explain communal breeding.] [!S]

- Eisfelder, I. (1963) Käfer als Pilzbewohner. *Zeitschrift für Pilzkunde*, 29, 77-97. (biology, ecology in German)
- Emden, F.I. v. (1950) Dipterous parasites of Coleoptera. *Entomologist's Monthly Magazine*, 86, 182-206. (biology, parasites) [!S]
- Emetz, V. (1975a) Ergebnisse der zoologischen Forschungen von Dr. Z. Kaszab in der Mongolei. Nr. 358: Silphidae und Lioididae (Coleoptera). *Folia Entomologica Hungarica*, 28, 57-71. (checklist in German) [N. "praedator" new record for mongolia; N. morio has more collection events than other *Nicrophorus*.] [!N, S]
- Emetz, V.M. (1975b) On the fauna of Silphidae (Coleoptera) of the Mongolian People's Republic. *Nasekomye Mongolii*, 3, 99-107. (checklist in Russian) [!N, S]
- Emetz, V. & Schawaller, W. (1975) Silphidae aus dem Nepal-Himalaya (Ins.: Col.). *Senckenbergiana Biologica*, 56, 221-231. (checklist in German (English summary)) [Original description of *N. nepalensis* ab. *immaculatus* (an infrasubspecific name & homonym of *immaculatus* Portevin)- first recognition of this form.] [!N, S]
- Emmons, E. (1854) *Agriculture of New York, comprising an account of the classification, composition and distribution of the soils and rocks, and of the climate and agricultural productions of the state, together with descriptions of the more common and injurious species of insects*. Volume V. C. Van Benthuysen, Albany. viii + 272 pp., 50 pls. (descriptions) [!N]
- Erbeling, L. (1990) Die Histeridae, Sphaeritidae, Silphidae und Agyrtidae (Coleoptera) des Niederweser- und Niederemsgebietes. *Drosera*, 1990, 105-122. (biology, ecology in German (English summary)) [!N]
- Erbeling, L. & Erbeling, M. (1986) Faunistische und ökologische untersuchungen zur Sukzession aasbesuchender Coleopteren im südlichen Eggegebirge. *Decheniana*, 139, 231-240. (biology, ecology in German) [!N]
- Erichson, W.F. (1837) *Die Käfer der Mark Brandenburg*. Vol. 1, Part 1. Erster Band. Erste Abteilung. F. H. Morin, Berlin. viii + 384 pp. (species-group catalog in German) [Original description of *N. fossor* (= *N. interruptus*); *N. ruspator* (= *N. investigator*); *N. obrutor* (= *N. sepultor*).] [!N, S]
- Ernst, K.D. (1969) Fine structure of olfactory sensilla on the antenna of the carrion beetle *Nicrophorus* (Coleoptera). *Zeitschrift für Zellforschung und Mikroskopische Anatomie*, 94, 72-102. (morphology: antennal sensillae in German (English summary)) [Subsequent misspelling of *N. vespillo*: *N. vespillio*.] [!N, S]
- Ernst, K.D. (1972a) Die ontogenie der basiconischen riechsensillen auf der antenne von *Nicrophorus* (Coleoptera). *Zeitschrift für Zellforschung und Mikroskopische Anatomie*, 129, 217-236. (morphology: antennal sensillae in German (English summary)) [!S]
- Ernst, K.D. (1972b) Sensillum coelosphaericum, die Feinstruktur eines neuen olfaktorischen Sensillentyps. *Zeitschrift für Zellforschung und Mikroskopische Anatomie*, 132, 95-106. (morphology: antennal sensillae in German (English summary)) [!N, S]
- Esaki, T., Hori, H. & Hozawa, S. (1932) *Iconographia Insectorum Japonicorum*. Hokuryukan, Tokyo, 4404 pp. (catalog)
- Esaki, T., Ishi, T., & Kawamura, T. (eds.). (1956) *Iconographia Insectorum Japonicorum. Editio Secunda, Reformata*. Hokuryukan, Tokyo, 1737 + 203 pp. (checklist, descriptions in Japanese) [!N]
- Essig, E.O. (1925) *Insects of western North America; a manual and textbook for students in colleges and universities and a handbook for county, state and federal entomologists and agriculturists as well as for foresters, farmers, gardeners, travelers, and lovers of nature*. New York, The Macmillan company xi + 1035 pp. (comment)
- Evans, M.E.G. (1965) An interpretation of gular size in some adult Coleoptera. *Proceedings of the Zoological Society of London*, 144, 403-413. (morphology: gula) [!N]

- Evans, M.E.G. (1969) The surface activity of beetles in a northern English wood. *Transactions of the Society for British Entomology*, 18, 247-262. (biology, ecology)
- Evans, M.E.G. (1974) Propleural structures in Coleoptera. *International Journal of Insect Morphology & Embryology*, 3, 67-72. (morphology: prothorax, procoxae) [!N]
- Evans, M.E.G. & Forsythe, T.G. (1984) A comparison of adaptations to running, pushing, and burrowing in some adult Coleoptera: especially Carabidae. *Journal of Zoology, London*, 202, 513-534. (biology, behavior)
- Everts, J.E. (1898) *Coleoptera Neerlandica: De Schildvleugelige Insecten van Nederland en het aangrenzend Gebied. Eerste Deel*. Martinus Nijhoff, s'Gravenhage. viii + 676 pp. (in German) [!N]
- Everts, J.E. (1922) *Coleoptera Neerlandica: De Schildvleugelige Insecten van Nederland en het aangrenzend Gebied. Derde Deel*. Martinus Nijhoff, s'Gravenhage. xviii + 670 pp.
- Fabre, J.-H. (1899) Les nécrophores. L'enterrement. *Souvenirs Entomologiques*, 6, 119-162. (biology, larval stages in French) ["Larva" -Hatch 1928]
- Fabre, J.H. (1918) *The wonders of instinct*. (Chap. 5, *The burying-beetles: experiments*. Translated by B. Miall). London: T. Fisher Unwin Ltd. 320 pp. (biology)
- Fabre, J.H. (1919) *The glow-worm and other beetles* (Translated by A. T. de Mattos). (Chap. 11, *The burying-beetles: the burial*; and Chap. 12, *The burying-beetles: experiments*). New York: Dodd, Mead & Co. 488 pp. (biology, ecology, behavior)
- Fabre, J.H. (1949) *The burying-beetle*. In: *The Insect World of J. Henri Fabre*. Dodd, Mead and Company, New York. pp 232-243 (biology) [Classic early account of behaviors of *Nicrophorus*.] [!S]
- Fabricius, J.C. (1775) *Systema entomologiae, sistens insectorum classes, ordines, genera, species, adiectis synonymis, locis, descriptionibus, observationibus*. Libraria Kortii, Flensburgi et Lipsiae. 30 + 832 pp. (descriptions) [Original description of *N. vulgaris* (= *N. vespillo*).] [!N, S]
- Fabricius, J.C. (1781) *Species insectorum, exhibentes eorum differentias specificas, synonyma auctorum, loca natalia, metamorphosin, adiectis observationibus, descriptionibus / Johan Christian Fabricius*. Hamburgi et Kilonii : impensis C.E. Bohnii, 1781. 1 (catalog in Latin)
- Fabricius, J.C. (1787) *Mantissa insectorum : sistens eorum species nuper detectas, adiectis characteribus genericis, differentiis specificis, emendationibus, observationibus*. Hafniae : C. G. Proft, 1787. 1 (catalog)
- Fabricius, J.C. (1792) *Entomologia systematica emendata et aucta, secundum classes, ordines, genera, species, adiectis synonymis, locis, observationibus, descriptionibus*. Vol. 1 (1), xx + 330 pp. C. G. Proft, Hafniae. (descriptions) [Original description of *N. grandis* (= *N. americanus*) & *N. mortuorum* (= *N. vespilloides*).] [!N, S]
- Fabricius, J.C. (1801) *Systema eleutheratorum secundum ordines, genera, species, adiectis synonymis, locis, observationibus, descriptionibus*. Vol. 1, xxiv + 506 pp. Bibliopolii Academici Novi, Kiliae (descriptions) [Original description of *N. marginatus*; *N. medius* (= *N. carolinus*); *N. velutinus* (= *N. tomentosus*).] [!N, S]
- Fairmaire, L. (1888) Notes sur les Coléoptères des environs de Pékin. *Revue d'Entomologie*, 7, 111-160. (checklist, annotated in French) [!S]
- Fairmaire, L. (1891) Coléoptères de l'intérieur de la Chine (7e partie). *Annales de la Société Entomologique de Belgique*, 35, 187-219. (checklist in French) [!S]
- Fairmaire, L. (1896) Coléoptères de l'Inde boréale, Chine et Malaisie. *Notes from the Leyden Museum*, 18, 81-129. (descriptions in French) [Original description of *N. encaustus*.] [!M, S]
- Fairmaire, L. & Laboulbène, J.J.A. (1855) ["1845"] *Faune entomologique française ou description des insectes qui se trouvent en France. Coléoptères*, vol. 1, pp. 181-370. Deyrolle, Paris. (in French) [!N]

- Faldermann, F. (1835a) Additamenta entomologica ad faunam Rossicam in itineribus Jussu Imperatoris Augustissimi annis 1827-1831 a cl. Ménétrés et Szovitz susceptis collecta, in lucem edita. *Nouveaux Mémoires de la Société Impériale des Naturalistes de Moscou*, 4, 1-314. (descriptions) [*Original description of N. nigricornis.*] [!M, S]
- Faldermann, F. (1835b) Coleopterorum ab illustrissimo Bungio in China boreali, Mongolia, et montibus Altaicis collectorum, nec non ab ill. Turczaninoffio et Stchukino e provincia Irkutsk misorum illustrationes. *Mémoires présentées à l'Académie Impériale de Sciences de St.-Pétersbourg*, 2, 337-464. (descriptions) [*Original description of N. basalis.*] [!M, S]
- Fall, H.C. (1897) A list of the Coleoptera of the southern California Islands, with notes and descriptions of new species. *Canadian Entomologist*, 29, 233-244. (checklist)
- Fall, H.C. (1901) List of the Coleoptera of southern California, with notes on habits and distribution and descriptions of new species. *Occasional Papers of the California Academy of Sciences*, 8, 1-282. (checklist) [!N]
- Fall, H.C. (1926) A list of the Coleoptera taken in Alaska and adjacent parts of the Yukon Territory in the summer of 1924. *Pan-Pacific Entomologist*, 2, 127-154. (description) [!N]
- Fall, H.C. & Cockerell, T.D.A. (1907) The Coleoptera of New Mexico. *Transactions of the American Entomological Society*, 33, 145-272 (checklist) [!N]
- Fauconnet, L. (1893) *Necrophorus vespillo* var. *fauveli*. *Revue d'Entomologie*, 12, 255. (description of variation) [*Original description of N. vespillo* var. *fauveli* (= *N. vespillo*).] [!S]
- Fauvel, A. (1890) Bibliographie. Tableaux analytiques des coléoptères d'Europe. Nérophages. Traduits des Bestimmungs-Tabellen de M. Edm. Reitter (Revue scientifique du Bourbonnais, supplément, Moulin, 1890). *Revue d'Entomologie*, 9, 345-348. (descriptions in French) [*Original description of N. funerator* (= *N. investigator*).] [!S]
- Fetherston, I.A., Scott, M.P., & Traniello, J.F.A. (1990) Parental care in burying beetles: The organization of male and female brood-care behavior. *Ethology (Berlin, Hamburg)* 85(3), 177-190. (biology, behavior)
- Fetherston, I.A., Scott, M.P., & Traniello, J.F.A. (1994) Behavioural compensation for mate loss in the burying beetle *Nicrophorus orbicollis*. *Animal Behaviour*, 47(4), 777-785. (biology, behavior) [*This study may represent the first demonstration of compensation for mate loss in an invertebrate.*] [!S]
- Fierros-Lopez, H.E., & Navarrete-Heredia, J.L. (2001) Altitudinal distribution and phenology of three species of carrion beetles (Coleoptera: Silphidae) from Nevado de Colima, Jalisco, Mexico. *Pan Pacific Entomologist*, 77(1), 45-46. (biology, ecology)
- Fischer von Waldheim, G. (1842) *Catalogus coleopterorum in Sibiria Orientali a Cel. Gregorio Silvide Karelin collectorum*. Moscow. 28 pp. (descriptions) [*Original description of N. lunatus.*] [!N, S]
- Fischer von Waldheim, G. (1844) Spicilegium entomographiae Rossicae. *Bulletin de la Société Impériale des Naturalistes de Moscou*, 17(1 & 2), 3-144. (checklist) [*Original description of N. frontalis* (= *N. germanicus*); *N. sulcatus* (= *N. humator*); *N. particeps* (= *N. investigator*).] [!M, N, S]
- Fisher, R.M. & Tuckerman, R.D. (1986) Mimicry of bumble bees and cuckoo bumble bees by carrion beetles (Coleoptera: Silphidae). *Journal of the Kansas Entomological Society*, 59, 20-25. (morphology: mimicry) [!N, S]
- Fjellberg, A. (1969) Notes on Coleoptera in nests of heron (*Ardea cinerea* L.). *Norsk Entomologisk Tidsskrift*, 16, 13-15. (biology, ecology)
- Flach, C. (1890) Ueber zwei fossile Silphiden (Coleoptera) aus den Phosphoriten von Caylux. *Deutsche Entomologische Zeitschrift*, 1890, 105-109. (descriptions in German) [*Original description of P. aveyronensis (fossil); Palaeosilpha fraasii (fossil).*] [!N, S]

- Fleischer, A. (1912) Neue Aberrationen von Coleopteren. *Wiener Entomologische Zeitung*, 31, 250. (description of variation in German)
- Fletcher, J. (1882) ["1881"] Necrophori burying beetles. *Annual Report of the Entomological Society of the Province of Ontario*, 12, 70-73. (biology)
- Foster, R.E. (1941) Insects active throughout the winter at Vancouver, B. C. Part 1: Introduction and lists of the Coleoptera and Neuroptera. *Proceedings of the Entomological Society of British Columbia*, 1941, 19-23. (biology, ecology) [!N]
- Fowler, W.W. (1889) *The Coleoptera of the British Islands. A descriptive account of the families, genera, and species indigenous to Great Britain and Ireland, with notes as to localities, habitats, etc. Vol. III. Clavicornia (Leptinidae-Heteroceridae)*. L. Reeve & Co., London. 399 pp., pls 71-98. (Serial: descriptions, catalog)
- Fowler, W.W. (1912) *Coleoptera -- General Introduction, Cicindelidae and Paussidae. The Fauna of British India including Ceylon and Burma*. Taylor & Francis, London 12: xx +529 pp. (comment) ["Discusses olfactory pits on antennae, and indicates *Nicrophorus* as typical of temperate climates." - Milne & Milne 1944.] [!S]
- Fowler, W.W. & Donisthorpe, H.S. (1913) *The Coleoptera of the British Islands. A descriptive account of the families, genera, and species indigenous to Great Britain and Ireland, with notes as to localities, habitats, etc. Vol. VI (Supplement)*. L. Reeve & Co., London. xiii + 351 pp., supplement pls. A, 1-20. (Serial)
- Frankenberg, G. von (1936) Musizierende Totengräber. *Natur und Volk*, 66, 220-222. (biology, behavior, morphology in German) [! N]
- Franssen, J. (1980) Identification des coléoptères du genre *Nicrophorus* par l'examen de la structure de la valvifère. *Bulletin de la Société Entomologique de Mulhouse*, 1980: 10-12, 45-47. (morphology: female genitalia in French) [!S]
- Franz, H. (1970) *Die nordost-Alpen im Spiegel ihrer Landtierwelt. Eine Gebietsmonographie. Band III. Coleoptera. I. Teil, umfassend die Familien Cicindelidae bis Staphylinidae*. 501 pp. (checklist, distribution in German) [!N]
- Freude, H. (1971) *Familie: Silphidae (Aaskäfer)*. In: Freude, H., Harde, K.W. & Lohse, G.A. (eds.), *Die Käfer Mitteleuropas*. Vol. 3 (Adephaga 2, Palpicornia, Histeroidea, Staphylinoidea 1). Goecke & Evers, Krefeld., pp. 190-201. (key in German) [!N]
- Frölich, J.A. (1792) Bemerkungen über einige seltene Käfer aus der Insectensammlung des Herrn Hofr. und Prof. Rudolph in Erlangen. *Naturforscher*, 26, 68-165. (descriptions in German) [Original description of *N. virginicus* (= *N. americanus*), *N. vespillo* var. "beta" (= *N. marginatus*); *N. vespillo* var. "delta" (= *N. tomentosus*).] [!N, S]
- Frost, C.A. (1915) Remarks on collecting at light, with a list of the Coleoptera taken. *Psyche*, 22, 207-211. (biology, ecology)
- Frost, C.A. (1916) Collecting notes and random observations on Maine Coleoptera. *Canadian Entomologist*, 48, 381. (biology, ecology)
- Frost, S.W. (1964) Insects taken in light traps at the Archibold Biological Station, Highlands County, Florida. *Florida Entomologist*, 47, 129-161. (biology, ecology)
- Frost, S.W. & Dietrich, H. (1929) Coleoptera taken from bait-traps. *Annals of the Entomological Society of America*, 22, 427-437. (biology, ecology)
- Fuente y Morales, J.M. de la. (1925) Catálogo sistemático-geográfico de los coleópteros observados en la península ibérica, Pirineos propiamente dichos y Baleares (continuación). *Boletín de la Sociedad Entomológica de España*, 7, 109-124; 8. (checklist in Spanish) [!N]
- Ganglbauer, L. (1899) *Die Käfer von Mitteleuropa. Die Käfer der österreichisch-ungarischen Monarchie, Deutschlands, der Schweiz, sowie des französischen und italienischen Alpengebietes. Vol. 3, Familienreihe Staphylinoidea, II. Theil: Scydmaenidae, Silphidae, ...* Carl Gerold's Sohn, Vienna. iii + 1046 pp. (key, descriptions, morphology, larval stages in German) ["Larva" - Hatch 1928.] [!N]

- Gaubil, J. (1849) *Catalogue synonymique des Coléoptères d'Europe et d'Algérie*. Maison, Paris. 296 pp. (catalog in French) [!N]
- Gebler, F.A. (1817) *Insecta Sibiriae rariora, descriptis. Decas prima. Mémoires de la Société Impériale des Naturalistes de Moscou*, 5, 315-333. (descriptions in Latin) [Original description of *N. morio*.] [!N, S]
- Gebler, F. (1830) *Bemerkungen über die Insekten Sibiriens, vorzüglich des Altai*. In: C. v. Ledebour. *Reise durch das Altai-Gebirge und die soongorische Kirgisen-Steppe*. Vol. 2, Pars 3, 228 pp. (separate pagination). G. Reimer, Berlin. (in German) [!N]
- Gebler, F.A. (1847) Verzeichniss der im kolywano- Woskresenskischen Hüttenbezirke süd-west sibiriens Beobachteten Käfer mit Bemerkungen und Beschreibungen. *Bulletin de la Société Impériale des Naturalistes de Moscou*, 20, 391-516.
- Gebler, F.A. (1859) Verzeichniss der von Herrn Dr. Schrenk in den Kreisen Ajagus und Kakaraly in der östlichen Kirgisensteppe und in der Songarey in den Jahren 1840 bis 1843 gefundenen Käferarten. *Bulletin de la Société Impériale des Naturalistes de Moscou*, 32, 426-519. (checklist)
- Gemminger, M. & Harold, E. v. (1868) *Catalogus coleopterorum hucusque descriptorum synonymicus et systematicus. Vol. 2. Dytiscidae, ... Scaphidiidae*. E. H. Gummi, Monachii [Munich]. pp. 425-752 + 6 unnumbered [Index]. (catalog) [Unavailable names introduced: *N. quadripunctatus* Cristof. [nomen nudum; not Kraatz], as var. of *N. germanicus*; *N. crispatus* Motsch. as syn. of *N. mortuorum*; *N. asiaticus* Falderm. as syn. of *N. nigricornis*; *N. tibialis* LeC. as var. of *N. orbicollis*; *N. lugubris* Motsch. as syn. of *N. pygmaeus*.] [!N, S]
- Géné, C.G. (1839) De quibusdam insectis Sardiniae novis aut minus cognitis. Fasciculus II. *Memorie, Accademia della Scienze di Torino*, 2(1), 43-84. (descriptions in Latin) [Original description of *N. funereus* (= *N. interruptus*).] [!N]
- Geoffroy, E.L. (1785) In: Fourcroy, A.F. de. *Entomologia Parisiensis; sive catalogus insectorum quae in agro parisiensi reperiuntur; secundum methodum Geoffraeanam in sectiones, genera & species ... Pars prima*. Paris. 1: vii + (1) + 231 pp. (descriptions) [Original description of *Dermestes listerianus* (= *N. germanicus*).] [!S]
- Geoffroy, M. (1764) *Histoire abrégée des insectes : dans laquelle ces animaux sont rangés suivant un ordre méthodique*. Paris, Chez Durand, 1764. 2 v. 1 (in French)
- Germain, P. (1911) Catálogo de los coleopteros chilenos del Museo Nacional. *Boletín del Museo Nacional de Chile*, 3, 47-73. (catalog, distribution in Spanish) [!N]
- Gersdorf, E. (1969) Käfer (Coleoptera) aus dem Jungtertiär Norddeutschlands. *Geologisches Jahrbuch*, 87, 295-331. (fossils, descriptions in German) [Original description of *N. pliozaenicus* (fossil).] [!N, S]
- Gersdorf, E. (1970) Der Ei-Ablage-Apparat der Necrophorini. *Faunistisch-Ökologische Mitteilungen*, 3, 364-368. (morphology: female genitalia in German) [!N, S]
- Gimingham, C.T. (1922) Notes on some parasites of beetles. *Entomologist's Monthly Magazine*, 58, 226-228. (biology, symbionts: mites)
- Gistel, J. (1848) *Naturgeschichte des Thierreichs für höhere Schulen*. Stuttgart. xvi + 216 + (4) pp., pls. 1-32. (descriptions in German) [Original description of *N. olfactor* (nomen dubium); *N. pulsator* (nomen dubium); *N. quadricollis* (nomen dubium); *N. basalis* (= *N. interruptus*); *N. aleuticus* (= *N. investigator*); *N. lunulatus* (= *N. marginatus*); *N. requiescator* (= *N. tomentosus*); *N. olfactor* (= *N. vestigator*).] [!N]
- Gistel, J. (1857a) *Achthundert und zwanzig neue oder unbeschriebene wirbellose Thiere*. Schorner'sche Buchhandlung, Straubing. 94 pp. (descriptions in German) [reprint of Gistel (1857b)] [!N, S]
- Gistel, J. (1857b) *Achthundert und zwanzig neue oder unbeschriebene wirbellose Thiere*. In: J. Gistel, *Vacuna, oder die Geheimnisse aus der organischen und leblosen Welt, ...* Vol. 2. Schorner, Straubing. pp. 513-606 (descriptions in German) [Original description of *N. hadenius* (= *N.*

- vespillo*); *N. interruptus* Gistel nec Stephens (nomen dubium); *N. cadaverinus* (misid of *N. germanicus*); *N. proserpinae* (= *N. germanicus*); *N. lunatus* Gistel nec Fischer (= *N. marginatus*); *N. marginatus* Gistel nec Fabricius (= *N. tomentosus*);] [!N]
- Gleditsch, J. (1767) *Abhandlung von dem Bergräbnisse des Maulwurfer und anberer Kleinen Thiere* In: Vermischte Physicalisch-Botanisch-Oeconomische Abhandlungen. Halle. Vol. 3: (24) pp.200-227 (descriptions in German) [Original description of *N. humator*.] [!S]
- Gleditsch, J.B. (1765) *D.J.G. Gleditschs ... vermischte physicalisch - botanisch - öconomische Abhandlungen* Halle : Johann Jacob first, 1765-1767. 3 v. (in German)
- Gleditsch, J.G. (1752) *Abhandlung von Vertilgung der Zugheuschrecken und den eigentlichen Hilfsmitteln, die sich auf eine richtige Erkenntniss dieser Thiere gründen.* Act. Reg. Soc. Berol., pp. 83-101. (biology in German) [Cited by Pukowski (1933) as one of the earliest published accounts of *Nicrophorus* behaviors]
- Glover, T. (1869) The food and habits of beetles. *Rept. U. S. Comm. Agric.* 1868, Washington, 1869, 78-117. (Government Report: biology, behavior)
- Goeze, J.A. (1777) *Entomologische Beiträge zu des Ritter Linne zwolften Ausgabe des Natursystems.* Erster Theil.- Leipzig, XXI + 736. (in German)
- Gorka, A. v. (1914) Experimentelle und morphologische Beiträge zur Physiologie der Malpighi'schen Gefasse der Käfer. *Zoologische Jahrbücher, Abteilung für Allgemeine Zoologie und Physiologie*, 34, 233-338. (morphology: malpighian tubules in German) [*Nicrophorus* as 1 of 2 main examples.] [!N, S]
- Gradl, H. (1882) Aus der Fauna des Egerlandes. *Entomologische Nachrichten*, 8: 323-332. (description of variation in German) [Original description of *N. interruptus* var. *brunnipes* (= *N. interruptus*); *N. interruptus* var. *trimaculatus* (= *N. interruptus*).] [!S]
- Gravenhorst, J.L.C. (1807) *Vergleichende Uebersicht des Linnéischen und einiger neueren zoologischen Systeme nebst dem eingeschalteten Verzeichniss der zoologischen Sammlung des Verfassers u. den Beschreibungen neuer Thierarten, die in derselben vorhanden sind.* Dieterich, Göttingen. xviii + 476 pp. (descriptions in German) [Original description of *N. cadaverinus* (= *N. vespillo*).]
- Grenier, A. (1863) *Catalogue des Coléoptères de France.* Paris. iv + 79 pp. (checklist in French) [!N, S]
- Grenier, A. (1867) [untitled note on *Necrophorus gallicus* as variety of *N. fossor*.] *Annales de la Société Entomologique de France, Bulletin Entomologique*, x. (in French) [!N]
- Grouvelle, A. (1885) Description d'une espèce nouvelle exotique du genre *Necrophorus*, Fabr. *Notes from the Leyden Museum*, 7, 262. (descriptions in French) [Original description of *N. distinctus*.] [!M, S]
- Grouvelle, A.H. (1893) Espèce nouvelle du genre *Necrophorus* de l'archipel Indo-Néerlandais. *Notes from the Leyden Museum*, 15, 161-162. (descriptions in French) [Original description of *N. insularis*.] [!M, S]
- Gu, Y.-m. & Bai, X.-l. (1997) A new species of *Alliphis* from China (Acari: Eviphididae). *Acta Zootaxonomica Sinica*, 22(3), 249-251. (biology, symbionts: mites in Chinese (English summary))
- Guarisco, H. (1997) Discovery of the federally endangered American burying beetle (*Nicrophorus americanus*) in the Chautauqua Hills of southeastern Kansas. *Transactions of the Kansas Academy of Science*, 100(3-4), 116-122. (biology, conservation)
- Guérin-Méneville, F.E. (1835) ["1829-1844"] *Iconographie du règne animal de G. Cuvier, ou représentation d'après nature de l'une des espèces les plus remarquables, et souvent non encore figurés, de chaque genre d'animaux.* Insects. Vol. 7. Ballière, Paris. 576 pp., 104 pls. (descriptions in French) [Original description of *N. maritimus* (= *N. investigator*).]
- Gutfleisch, V. & Bose, F.C. (1859) *Die Käfer Deutschlands.* J. P. Diehl, Darmstadt. xvi + 661 pp. (key, descriptions in German) [!N]

- Gwiazdowicz, D.J. (2000) Mites (Acari, Gamasida) associated with insects in the Bialowieza National Park. *Acta Parasitologica*, 45, 43-47. (biology, symbionts: mites) [!N]
- Gyllenhal, L. (1808) *Insecta Suecica, Classis I. Coleoptera sive Eleuterata*. Vol. 1, Part 1. Leverentz, Scaris [Skara]. xii + 572 pp. (descriptions, catalog) [!N]
- Gyllenhal, L. (1827) *Insecta Suecica, Classis I. Coleoptera sive Eleuterata*. Vol. 1, Part 4, x + 761 pp. F. Fleischer, Lipsiae [Leipzig]. (descriptions) [*Misidentifications of N. investigator: N. vestigator; N. vestigator: N. sepultor.*] [!N, S]
- Hagen, H.A. (1862) *Bibliotheca entomologica. Die Litteratur über das ganze Gebiet der Entomologie bis zum Jahre 1862*. Vol. 1, A-M.W. Engelmann, Leipzig. xii + 566 pp.
- Hågvar, S. (1975) Coleoptera in nests of birds of prey. *Norwegian Journal of Entomology*, 22, 135-142. (biology, ecology)
- Halffter, G. (1992) ["1991"] *Feeding, bisexual cooperation and subsocial behavior in three groups of Coleoptera*. In: Zunino, M., Bellés, X. & Blas, M. (Eds.). *Advances in Coleopterology*. European Association of Coleopterology, Barcelona. pp. 249-261. (biology, behavior) [*Good contrast of Nicrophorus with dung beetles and Passalidae.*] [!N, S]
- Halffter, G., Anduaga, S. & Huerta, C. (1982) Nidificación en *Nicrophorus* (Coleoptera, Silphidae). *Folia Entomológica Mexicana*, 54, 50-52. (biology, behavior in Spanish) [!N]
- Halffter, G., Anduaga, S. & Huerta, C. (1984) ["1983"] Nidification des *Nicrophorus* (Col., Silphidae). *Bulletin de la Société Entomologique de France*, 88(7-8), 648-666. (biology, behavior in French) [!S]
- Halffter, G., Favila, M.E. & Arellano, L. (1996) ["1995"] Spatial distribution of three groups of Coleoptera along an altitudinal transect in the Mexican Transition Zone and its biogeographical implications. *Elytron*, 9, 151-185. (biology, ecology) [!N]
- Hamilton, J. (1894) Catalogue of the Coleoptera of Alaska, with the synonymy and distribution. *Transactions of the American Entomological Society*, 21, 1-38. (checklist) [!N]
- Hamilton, J. (1895) Catalogue of the Coleoptera of southwestern Pennsylvania, with notes and descriptions. *Transactions of the American Entomological Society*, 22, 317-381. (checklist) [!N]
- Hammond, P.M. (1979) *Wing-folding mechanisms of beetles, with special reference to investigations of Adephagan phylogeny (Coleoptera)*. In: Erwin, T.L., Ball, G.E., Whitehead, D.R. (eds.). *Carabid Beetles: Their Evolution, Natural History, and Classification*. W. Junk, Dordrecht. pp. 113-180. (morphology: wing folding) [!N, S]
- Handschin, E. (1944) Insekten aus den Phosphoriten des Quercy. *Schweizerische Palaeontologische Abhandlungen*, 64(4), 1-23, pls. 1-3. (fossils; description, discussion in German) [!N]
- Hansen, M. (1996) Katalog over Danmarks biller; Catalogue of the Coleoptera of Denmark. *Entomologiske Meddelelser*, 64, 1-231. (checklist, distribution in Danish & English) [!N]
- Hansen, M. (1997) Phylogeny and classification of the staphyliniform beetles families (Coleoptera). *Biologiske Skrifter*, 48, 1-339. (phylogenetics) [*Seminal morphological treatment of staphyliniform higher phylogeny; numerous potential apomorphies and out groups to Silphidae discussed.*] [!S]
- Hansen, V. (1922) Biller V. Aadselbiller, Stumpbiller M. M. Larverne ved K. Henriksen. Med 119 Afbildninger. *Danmarks Fauna*, 26, 1-228. (key, descriptions, morphology, larval stages in Danish) [!N]
- Hansen, V. (1968) Biller XXV. Ådselbiller, Stumpbiller, M. M., med 181 afbildninger. 2. staerkt omarbejdede udgave. *Danmarks Fauna*, 77, 1-353. (key, descriptions in Danish) [!N]
- Hansen, V., Klefbeck, E., Sjöberg, O., Stenius, G., Strand, A., & Lindroth, C. (eds). (1960) *Catalogus Coleopterorum Fennoscandiae et Daniae*. Entomologiska Sällskapet, Lund. 477 pp, 1 map. (checklist in Danish) [!N]
- Hanski, I. & Hammond, P. (1986) Assemblages of carrion and dung Staphylinidae in tropical rain forests in Sarawak, Borneo. *Annales Entomologici Fennici*, 52(1), 1-19. (biology, ecology) [!S]

- Hanski, I. & Krikken, J. (1991) *Dung beetles in tropical forests of south-east Asia*. In: Hanski, I. & Camberfort, Y. (eds.). *Dung Beetle Ecology*. Princeton Univ. Press, Princeton, NJ. pp. 179-197. [!S]
- Hanski, I. & Niemelä, J. (1990) *Elevational distributions of dung and carrion beetles in northern Sulawesi*. In: Knight, W.J. & Holloway, J.D. (eds.) *Insects and the Rainforests of South East Asia (Wallacea)* Royal Entomological Society, London pp. 145-152. [!S]
- Harde, K.W. (1984) *A Field Guide in Colour to Beetles. Edited and with additional introductory material by P. M. Hammond*. Octopus Books, London. 334 pp. [English translation of German edition]. (field guide, brief descriptions, ecology) [!N]
- Harold, E. v. (1868) In Abänderungen vergebener Namen. *Coleopterologische Hefte*, 4, 104. (descriptions in German) [Original description of *N. luniger* (unec. nomen novum for *N. sayi*).] [!M]
- Harold, E. v. (1877) Beiträge zur Käferfauna von Japan (Zweites Stück). Japanische Käfer des Berliner Königl. Museums. *Deutsche Entomologische Zeitschrift*, 21, 337-367. (descriptions in German) [Original description of *N. japonicus*.] [!N, S]
- Harris, T.W. (1835) VIII.-Insects. In: Hitchcock, E. *Catalogues of the Animals and Plants of Massachusetts*. Amherst pp. 33-82.
- Harusawa, K. (1998) Illustrated keys to the species of Japanese Nicrophorini (Coleoptera: Silphidae). *Nature and Insects*, 33 (5), 32-35. (key in Japanese) [!N]
- Hatch, M.H. (1924) A list of Coleoptera from Charlevoix County, Michigan. *Papers of the Michigan Academy of Science, Arts and Letters*, 4, 543-586. (checklist) [!N]
- Hatch, M.H. (1927a) Studies on the carrion beetles of Minnesota, including new species. *Technical Bulletin, University of Minnesota Agricultural Experiment Station*, 48, 1-19. (key, descriptions, description of variation) [Original description of *N. hybridus* var. *minnesotianus*.] [!N, S]
- Hatch, M.H. (1927b) Studies on the Silphinae. *Journal of the New York Entomological Society*, 35, 331-370. (revision: key, descriptions & catalog) [!N, S]
- Hatch, M.H. (1928) *Silphidae II*. In: Schenkling, S. (ed.). *Coleopterorum Catalogus, Pars 95*. W. Junk, Berlin. pp. 63-244. (catalog) [Misidentification of *N. guttula*: *N. ruficornis*, unec. nomen novum for *quadraticollis*: *N. quadraticollis*.] [!N, S]
- Hatch, M.H. (1932) "Necrophorus" or "Nicrophorus". *Journal of the New York Entomological Society*, 40, 391. (nomenclature) [Points out that *Necrophorus* doesn't have priority, but is widespread. Also corrects figure error in 1927 pub.] [!N, S]
- Hatch, M.H. (1938) Report on the Coleoptera collected by Dr. Victor B. Scheffer on the Aleutian Islands in 1937. *Pan-Pacific Entomologist*, 14, 145-149. (checklist) [!N]
- Hatch, M.H. (1940) Observations of Silphinae with a note on intraspecific variations and their designation. *Journal of the New York Entomological Society*, 48, 233-244. (description of variation) [!M, S]
- Hatch, M.H. (1945) Three Silphidae in British Columbia (Coleoptera). *Proceedings of the Entomological Society of British Columbia*, 42, 14. (distribution note) [!S]
- Hatch, M.H. (1946) Mr. Ross H. Arnett's "Revision of the Nearctic Silphini and Nicrophorini". *Journal of the New York Entomological Society*, 54, 99-103. (descriptions) [Original description of *Neonicrophorus* (= *Nicrophorus*), type species = *N. germanicus*.] [!N, S]
- Hatch, M.H. (1957) *The beetles of the Pacific Northwest. Part II. Staphyliniformia*. University of Washington Publications in Biology 16: ix + 1-384 pp. (description of variation) [Original description of *N. hecate immaculosis* (= *N. guttula*).] [!N]
- Hatch, M.H. & Angell, J.W. (1925) A new North American *Necrophorus*. *Journal of the New York Entomological Society*, 33, 216. (descriptions) [Original description of *N. hybridus*.] [!N, S]
- Hatch, M.H. & Rueter, W. Jr. (1934) Coleoptera of Washington: Silphidae. *University of Washington Publications in Biology*, 1, 151-161. (key, distribution, variation, descriptions) [!N]

- Hausmann, J.F.L. (1799) *Entomologische Bemerkungen*. Fleckeisen, Braunschweig and Helmstedt. iv + 3-64 pp. (descriptions in German) [*Original description of N. bifasciatus (=N. vespillo).*] [!M, S]
- Háva, J. (1996) Colour variability of the elytra and distribution of *Nicrophorus lunatus* (Coleoptera: Silphidae: Nicrophorinae). *Klapalekiana*, 32(3-4), 167-170. (description of variation in English (Czech summary)) [*Range from all black to full maculations.*] [!S]
- Háva, J., Růžička, J., & Schneider, J. (1998) Faunistic records of Silphidae (Coleoptera) from Turkey. *Klapalekiana*, 34(3-4), 178-181. (distribution note in English (Czech summary)) [!N, S]
- Háva, J., Schneider, J., & Růžička, J. (1999) Four new species of carrion beetles from China (Coleoptera: Silphidae). *Entomological Problems*, 30(2), 67-83. (key, descriptions) [*Original descriptions of P. zhangla and N. smefarka.*] [!S]
- Haworth, A.H. (1807) A brief account of some rare and interesting insects not hitherto announced as inhabitants of Great Britain. *Transactions of the Entomological Society of London*, 1(1), 75-100. (descriptions) [*Original description of N. bimaculatus (=N. germanicus).*] [!S]
- Hayashi, N. (1986) *Larvae*. In: Morimoto, K. and Hayashi, N. (eds.). *The Coleoptera of Japan in Color*. Vol. 1. Hoikusha Publishing Co., Osaka, Japan. pp. 202-218, pls. 1-113. (morphology, larval stages in Japanese) [!N]
- Headstrom, R. (1977) *The beetles of America*. A. S. Barnes & Co., South Brunswick and New York. 488 pp. (description) [!N]
- Heer, O. (1841a) *Fauna coleopterorum Helvetica*. Pars I, fasc. 3. Orellii, Fuesslini et Sociorum, Turici [Zurich]. pp. 361-652. (descriptions in German) [*Original description of N. sepulchralis.*] [!N, S]
- Heer, O. (1841b) *Die Kaefer der Schweiz, mit besonderer Berücksichtigung ihrer geographischen Verbreitung*. Erster Theil, Dritte Lieferung. Petitpierre, Neuchatel. 79 pp. (checklist in German) [!N]
- Heinzel, H.-G. & Böhm, H. (1984) Wind orientation in walking carrion beetles (*Necrophorus humator* F.) under closed and open loop conditions. In: Varju, D. & Schnitzler, H.-U. *Localization and orientation in biology and engineering*. Springer-Verlag, Berlin, Heidelberg. pp. 173-176 (biology, physiology) [!S]
- Heinzel, H.-G. & Böhm, H. (1989) The wind-orientation of walking carrion beetles. *Journal of Comparative Physiology*, 164(A)(6), 775-786. (biology, physiology) [!S]
- Heller, K.M. (1896) *Necrophorus lunatus* und *particeps* Fischer. *Entomologische Nachrichten*, 22, 23-24. (in German) [!S]
- Heller, K.M. (1916) Philippinische Käfer, gesammelt von Prof. C. Fuller-Baker, los Baños *Deutsche Entomologische Zeitschrift*, 1916, 269-3111. (in German)
- Henriksen, K. (1922) Larver. pp 249-273. In: Hansen, V., Biller V., Aadselbiller, Stumpbiller M. M. Larverne ved K. Henriksen. Med 119 Afbildninger. *Danmarks Fauna*, 26, 1-288. (key) [“Larva” -Hatch 1928]
- Henshaw, S. (1885) *List of the Coleoptera of America, north of Mexico*. American Entomological Society, Philadelphia. 161 pp. (checklist) [!N]
- Herbst, J.F.W. (1783) Kritisches Verzeichniss meiner Insektensammlung. *Archiv der Insectengeschichte*, 4, 1-72. (descriptions in German) [*Original description of N. vespilloides.*] [!M, S]
- Herbst, J.F.W. (1784) *Kurze Einleitung zur Kenntniss der Insekten, für Ungeübte und Anfänger*. Lange, Berlin und Stralsund. Vol. 1: (6) + 278 + (12) pp., pls. 1-43. (descriptions in German) [*Original description of Silpha orientalis (=N. americanus).*] [!M]
- Herbst, J.F.W. (1793) *Natursystem aller bekannten in- und ausländischen Insekten, als eine Fortsetzung der von Büffonschen Naturgeschichte*. Der Käfer, Vol. 5, 230 pp., 21 pls. Pauli, Berlin. (catalog in German) [!N]
- Herman, L.H., Jr. (1964) Nomenclatural consideration of *Nicrophorus* (Coleoptera: Silphidae). *Coleopterists' Bulletin*, 18, 5-6. (nomenclature) [!N, S]

- Hermes, W. (1899) *Necrophorus humator* Goetz. *Illustrierte Zeitschrift für Entomologie*, 4, 316. (in German)
- Herschel, J.D. (1807) Die Europäischen Arten von *Necrophorus* mit Unterscheidung einer neuen Art: *Necrophorus Vestigator*. *Magazin für Insektenkunde*, 6, 268-276. (descriptions in German) [Original description of *N. pustulatus* & *N. vestigator*.] [!N, S]
- Heyden, L. v. (1880) ["1880-1881"] *Catalog der Coleopteren von Sibirien mit Einschluss derjenigen der Turanischen Länder, Turkestans und der chinesischen Grenzgebiete. Mit specieller Angabe der einzelnen Fundorte in Sibirien und genauer Citirung der darauf bezüglichen einzelnen Arbeiten nach eigenem Vergleich, sowie mit besonderer Rücksicht auf die geographische Verbreitung der einzelnen Arten über die Grenzländer, namentlich Europa und Deutschland*. Herausgegeben von der Deutschen Entomologischen Gesellschaft, als besonderes Heft der Deutschen Entomologischen Zeitschrift. Berlin, Schadeís Buchdruckerei, xxiv + 224 pp. (checklist in German) [!S]
- Heyden, L. v. (1893) *Catalog der Coleopteren von Sibirien mit Einschluss derjenigen des östlichen Caspi-Gebietes, von Turmenien, Turkestan, Nord-Thibet und des Amur - Gebietes. Nachtrag I*. Herausgegeben von der Deutschen Entomologischen Gesellschaft, Berlin, Schadeís Buchdruckerei, 217 pp. (checklist in German) [!S]
- Heyden, L. v. (1896) *Catalog der Coleopteren von Sibirien mit Einschluss derjenigen des östlichen Caspi-Gebietes, von Turmenien, Turkestan, Nord-Thibet und des Amur - Gebietes. Nachtrag II*. Herausgegeben von der Deutschen Entomologischen Gesellschaft, Berlin, Schadeís Buchdruckerei, 48 pp. (checklist in German) [!S]
- Heyden, L. v. (1902) Note synonymique. *Bulletin de la Société Entomologique de France*, 1902(1), 12. (nomenclature in French)
- Heyden, L. v., Reitter, E., & Weise, J. (1883) *Catalogus Coleopterorum Europae et Caucasi, editio tertia*. Berolini, London, Paris, 228 pp. (checklist) [!S]
- Heyden, L. v., Reitter, E., & Weise, J. (1891) *Catalogus Coleopterorum Europae, Caucasi et Armeniae rossicae*. Mödling, Berlin & Caen, viii + 420 pp. (checklist) [!S]
- Heyden, L. v., Reitter, E., & Weise, J. (1906) *Catalogus Coleopterorum Europae, Caucasi et Armeniae rossicae, editio secunda*. Paskau (Moravia), Berlin & Caen, 774 pp. (checklist) [!S]
- Heyne, A. & Taschenberg, O. (1908) *Die exotischen Käfer in Wort und Bild*. J. F. Schreiber Verlag, Esslingen und München. 262 + 1 pp., 39 pls. (descriptions in German) [!N]
- Hickel, R. & Dragicsevics, R. (1877) Tableau synoptique des Nécropores de France. *Feuille des Jeunes Naturalistes*, 7, 27-28. (checklist in French)
- Hicks, E.A. (1959) *Check-list and bibliography on the occurrence of insects in birds' nests*. Iowa State College Press, Ames, Iowa. 681 pp. (biology, ecology) [!N]
- Hines, A.M. & Smith, R.J. (1995) Altitudinal variation in estimated population sizes and factors in brood development in the burying beetle, *Nicrophorus investigator* (Silphidae). *Proceedings of the Nebraska Academy of Sciences*, p. 71. (Abstract: biology, ecology)
- Hinton, H.E. (1969) Diffraction gratings in burying beetles (*Nicrophorus*). *Entomologist*, 102, 185-189. (morphology: diffraction gratings) [from Anderson & Peck 1985: "Diffraction gratings in both Silphinae and *Nicrophorus* produce an iridescent color pattern that may also deter or confuse predators."] [!M, N, S]
- Hlavac, T.F. (1973) ["1972"] The prothorax of Coleoptera: origin, major features of variation. *Psyche*, 79, 123-149. (morphology: prothorax; procoxae) [!N]
- Hlisnikovsky, J. (1929) Über die bis jezt bekannten Färbungsabarten des *Necrophorus vestigator* und *antennatus* Reitter. *Entomologisches Nachrichtenblatt [Troppau]*, 3, 119-120. (in German)
- Hlisnikovsky, J. (1932) Zwei neue Arten der Gattung *Necrophorus* Fab. (Col. Necrophorini), nebst einer Bestimmungstabelle der mir bekannten Arten der paläarktischen Fauna. *Coleopterologisches Centralblatt*, 6, 22-30. (key, descriptions in German) [Original description of *N. fasciatus* (= *N. tenuipes*); *N. hauseri* (= *N. vespillo*).] [!N, S]

- Hlisnikovsky, J. (1942) Coleopterologische Notizen. *Mitteilungen der Münchner Entomologischen Gesellschaft*, 32, 578-579. (nomenclature in German) [!S]
- Hlisnikovsky, J. (1964a) 3. Beitrag zur Kenntnis der Gattung *Necrophorus* F. (Coleoptera, Silphidae). *Reichenbachia*, 3, 223-225. (key, descriptions in German) [Original description of *N. burmanicus* (= *N. oberthuri*); *N. unifasciatus* (= *N. oberthuri*).] [!N, S]
- Hlisnikovsky, J. (1964b) 4. Beitrag zur Kenntnis der Gattung *Necrophorus* F. (Coleoptera, Silphidae). *Reichenbachia*, 3, 241-245. (descriptions in German) [Original description of *N. tibetanus* (= *N. argutor*); *N. maculiformis parvulus* (= *N. maculifrons*); *N. mixtus* (= *N. montivagus*).] [!N, S]
- Hlisnikovsky, J. (1964c) Eine neue *Necrophorus*-Art aus Thailand (Coleoptera, Necrophorini). 5. Beitrag zur Kenntnis der Gattung *Necrophorus* F. *Reichenbachia*, 4, 131-132. (descriptions in German) [Original description of *N. ornatus* (= *N. germanicus*).] [!N, S]
- Hodge, P.J. & Jones, R.A. (1995) *New British beetles: Species not in Joy's practical handbook*. British Entomological and Natural History Society, Hurst, Reading, United Kingdom. xvi + 175 pp. (checklist) [!N]
- Hoferer, S., Müller, J.K., & Eggert, A.K. (1996) Variability of the breeding system in the burying beetle *Nicrophorus vespilloides*. *Verhandlungen der Deutschen Zoologischen Gesellschaft*, 89, 246. (Abstract: biology, behavior)
- Hoffmann, C.H., Townes, H.K., Swift, H.H., & Sailer, R.I. (1949) Field studies on the effects of airplane applications of DDT on forest invertebrates. *Ecological Monographs*, 19(1), 1-46. (comment: ecology) [Three of 4 *Nicrophorus* species were eliminated from the area sprayed with DDT (*N. tomentosus* perhaps also eliminated but may have been missed due to it being a fall breeder).] [!S]
- Hoffmann, J. (1853) *Übergibt dem vereine 36 arten, meist seltene österreichische käfer mit folgenden notizen*. Verhandlungen des Zoologisch-Botanischen Vereins in Wien pp. 105-106. (description of variation in German)
- Holloway, A.K., & Schnell, G.D. (1997) Relationship between numbers of the endangered American burying beetle *Nicrophorus americanus* Olivier (Coleoptera: Silphidae) and available food resources. *Biological Conservation*, 81(1-2), 145-152. (biology, conservation) [ABB presence better predicted by small vertebrate biomass than habitat type.] [!S]
- Hope, F.W. (1831) *Synopsis of the new species of Nepal insects in the collection of Major General Hardwicke*. In: J. E. Gray (ed.), *The Zoological Miscellany. Vol. 1. Treuttel, Wurtz & Co., etc., London*. pp. 21-32. (descriptions) [Original description of *N. nepalensis*.] [!N, S]
- Hope, F.W. (1840) *The Coleopterist's Manual, Part the Third, containing various Families, Genera, and Species of Beetles, recorded by Linnaeus and Fabricius. Also, Descriptions of Newly Discovered and Unpublished Insects*. J. C. Bridgewater, and Bowdery and Kerby, London. 191 pp., pls. 1-3 (descriptions) [Original description of *Cyrtoscelis* (= *Necrophorus*); type species = *N. vespillo*] [!N]
- Horion, A. (1949) *Faunistik der mitteleuropäischen Käfer, unter Mitarbeit zahlreicher Koleopterologen. Vol. 2. Palpicornia - Staphylinoidea (ausser Staphylinidae)*. Vittorio Klostermann, Frankfurt am Main. xxiii + 388 pp. (biology, ecology, distribution in German) [!N]
- Horn, D. (2000) Return of the American burying beetle. *Wild Earth*, 10(3), 20-23. (biology, conservation) [!S]
- Horn, G.H. (1880) Synopsis of the Silphidae of the United States with reference to the genera of other countries. *Transactions of the American Entomological Society*, 8, 219-322. (revision: key, descriptions & catalog) [!N, S]
- Houghton, C.O. (1908) Notes on *Necrophorus orbicollis* Say. *Entomological News*, 19, 120-121. (biology, behavior in English) [Note describing behaviors.] [!S]
- Houlbert, C. [ed.] (1922) *Encyclopédie Scientifique; Bibliothèque d'Océanographie Physique / Publiée sous la direction du Dr. Toulouse: Tom 5b Les Coléoptères d'Europe, France et régions*

- voisines *Anatomie générale; classification et tableaux génériques illustrés* 1921, 1922, 3 Tom. [T. Édouard] (in French)
- Howden, H.F. & Peck, S.B. (1972) Collecting in El Salvador, with particular reference to Scarabaeoidea and Silphoidea (Coleoptera). *The Coleopterists Bulletin*, 26, 63-72. (biology, ecology)
- Hubbard, H.G. & Schwarz, E.A. (1878a) List of Coleoptera found in the Lake Superior region. *Proceedings of the American Philosophical Society*, 17, 627-643. (checklist) [!N]
- Hubbard, H.G. & Schwarz, E.A. (1878b) Contribution to a list of the Coleoptera of the lower peninsula of Michigan. *Proceedings of the American Philosophical Society*, 17, 643-666. (checklist) [!N]
- Huerta, C. (1992) ["1991"] Glándulas esternales y comportamiento de nidificación en *Nicrophorus mexicanus* Matthews (Coleoptera: Silphidae). *Elytron*, 5, 13-21. (morphology: sternal glands in Spanish (English summary)) [Subsequent misspelling of *Nicrophorus*: *Microphorus*.] [!S]
- Huerta, C. & Anduaga, S. (1998) ["1997"] Cambios morfofisiológicos en el ovario durante la vida adulta de hembras vírgenes y copuladas de *Nicrophorus mexicanus* Matthews (Coleoptera: Silphidae). *Folia Entomologica Mexicana*, 101, 79-81. (biology, behavior, physiology in Spanish) [!S]
- Huerta, C., Halfpeter, G., & Fresneau, D. (1993) ["1992"] Inhibition of stridulation in *Nicrophorus* (Coleoptera: Silphidae): Consequences for reproduction. *Elytron*, 6, 151-157. (biology, behavior) [small sample sizes w/ 1 sp. but important findings- should be repeated with other species.] [!S]
- Hunter, B.A., Johnson, M.S., & Thompson, D.J. (1987) Ecotoxicology of copper and cadmium in a contaminated grassland ecosystem. II Invertebrates. *Journal of Applied Ecology*, 24(2), 587-599. (comment: ecology) [N. investigator listed among numerous beetles investigated.] [!S]
- Hyatt, K.H. (1990) Mites associated with terrestrial beetles in the British Isles. *Entomologist's Monthly Magazine*, 126, 133-147. (biology, symbionts: mites) [!S]
- Iablokoff-Khznorian, S.M. (1980) Le segment genital male des coléoptères et son importance phylogénique (Coleoptera). *Deutsche Entomologische Zeitschrift, (N.F.)* 27, 251-295. (morphology: male genitalia in French) [!N, S]
- Illiger, J.K.W. (1798) *Verzeichniss der Käfer Preussens*. J. J. Gebauer, Halle. xlii + 510 pp. (catalog in German) [!N]
- Illingworth, J.F. (1927) Insects attracted to carrion in Southern California. *Proceedings of the Hawaiian Entomological Society*, 6, 397-401. (biology, ecology)
- Imms, A.D. (1924) *A general textbook of entomology, including the anatomy, physiology, development and classification of insects*. London, Methuen & Co. Ltd. xii + 698 pp. (comment)
- IUCN (1983) *Giant Carrion Beetle*, *Nicrophorus americanus* Olivier, 1790. *IUCN Invertebrate Red Data Book 1983* pp. 379-381. (biology, conservation) [!N]
- Jacquelin du Val, C. (1857) *Manuel entomologique. Genera des coleopteres d'Europe ...* Tome 1-[4]. Paris, A. Deyrolle, 1854-1861. 1 (in French)
- Jacquelin du Val, C. (1860) *Glanures entomologiques ou recueil de notes monographiques, descriptions, critiques, remarques et synonymies diverses*. Cahier 2. M. A. Deyrolle, Paris. pp. 61-164 pp., 1 pl. (descriptions in French) [Original description of *N. gallicus* (= *N. interruptus*).] [!N]
- Jakobson, G.G. (1904) Tschitschérine Tikhon Sergeevich (ii.IX.1869 - 22.III.1904) *Ezheg. Zool. muz. Imp. Akad. nauk* 9 [Ann. Mus. Petersb.], 9 (in Russian)
- Jakobson, G.G. (1910) *Zhuki Rossii i zapadnoi Evropy* 8. [Beetles of Russia and Western Europe 8.] In: A. F. Devrien, St. Petersburg. pp 561-640 (checklist in Russian) [Novem nomen for *N. interruptus* Brulle (= *N. vestigator*) - *N. Brullei*; many status/rank changes] [!N, S]
- Jakobson, G.G. (1924) Annotationes synonymicae et systematicae de Coleopteris. *Russkoye Entomologicheskoe Obozrenie*, 18(4), 237-244. (catalog)

- Jakovlev, B.E. (1887) Coléoptères nouveaux de l'Asie centrale. *Horae Societatis Entomologicae Rossicae*, 21, 148-159. (descriptions) [*Original description of Silpha stenophthalma* (=N. lunatus); *N. maculiceps* (=N. maculifrons).] [!N, S]
- Jakovlev, B.E. (1890) Coleoptera Asiatica nova. *Horae Societatis Entomologicae Rossicae*, 25, 121-128. (descriptions in Russian) [*Original description of N. argutor*; *N. rugulipennis* (=N. morio); *N. funebris* (=N. morio).] [!N, S]
- Jameson, M.L. (1992) Trying to capture the past. The hunt for the endangered American burying beetle. *Environment West*, 1(3), 18-20. (biology, conservation) [!S]
- Jameson, M.L., & Ratcliffe, B.C. (1991) *A survey to determine the occurrence of Nicrophorus americanus Olivier (the American burying beetle) along the proposed U.S. 14 road projects in South Dakota (Project F 0014 (A3)151)*. Final report to the South Dakota Department of Transportation, Pierre, S. D. (unpublished report: biology, conservation)
- Jaques, H.E. (1915) The fish-feeding Coleoptera of Cedar Point. *Ohio Naturalist*, 15, 525-528. (biology, ecology in English) [“Indicates *Nicrophorus* feeding on fish washed ashore.”—Milne & Milne 1944.] [!S]
- Jaques, H.E. (1951) *How to know the beetles*. Wm. C. Brown Co., Dubuque, Iowa. 372 pp. (key, descriptions) [!N]
- Jenkins, E.V., Morris, C. & Blackman, S. (2000) Delayed benefits of paternal care in the burying beetle *Nicrophorus vespilloides*. *Animal Behaviour*, 60, 443-451. (biology, ecology, behavior) [“male assistance conferred no advantages on the brood for which he was caring” but did increase the reproductive success of the female’s subsequent reproduction event.] [!S]
- Jensen, A.R. (1987) Biller (Coleoptera) indsamlet på udlagte kanin-ådsler [Beetles (Coleoptera) collected from placed rabbit carrions]. *Entomologiske Meddelelser*, 54, 113-123. (biology, ecology in Danish (English summary)) [!N]
- Johnson, C.W. (1930) A list of the insect fauna of Nantucket, Massachusetts. *Publications of the Nantucket Maria Mitchell Association*, 3 (2), 1-174 + xviii pp. (checklist) [!N]
- Johnson, W.F. & Halbert, J.N. (1902) A list of the beetles of Ireland. *Proceedings of the Royal Irish Academy, 3rd Ser*, 6(4), 535-827. (checklist) [*Four Nicrophorus species listed from Ireland.*] [!N]
- Jones, F.M. (1932) Insect coloration and the relative acceptability of insects to birds. *Transactions of the Royal Entomological Society of London*, 80, 345-386. (biology, ecology) [*No Nicrophorus were eaten by birds in choice tests.*] [!N, S]
- Jones, G. (1990) Prey selection by the greater horeshoe bat (*Rhinolophus ferrumequinum*): optimal foraging by echolocation? *Journal of Animal Ecology*, 59, 587-602. (comment: ecology) [*Reports that N. humator was a prey item of the greater horeshoe bat (Rhinolophus ferrumequinum) during April-May in England.*] [!S]
- Joy, N.H. (1932) *A practical handbook of British beetles*. Vol. I (text), Vol. II (plates). H. F. & G. Witherby, London. xxvii + 622 pp., 194 pp. (key) [!N]
- Kamimura, K., Nakane, T., & Koyama, N. (1964) Seasonal and altitudinal distribution of beetles in Mt. Jônen, the Japan Alps, with descriptions of new species, I (Studies on the insects of high mountains, III). *Scientific Reports of the Kyoto Prefectural University (Natural Science, Living Science, Welfare Science)*, (A) 15, 17-38. (biology, ecology) [!S]
- Kanabé, D. (1935) Zwei neue Käferaberrationen. *Entomologisches Nachrichtenblatt[Troppau]*, 9, 64. (in German)
- Kano, T. (1933) [“1933-1934”] Coleopterous insects from the northern Kuriles, with some considerations on the Insect-fauna of the Kurile Islands. *Bulletin of the Biogeographical Society of Japan*, 4(2), 91-121. (checklist in Japanese (English summary)) [*misidentification of N. investigator sensu Kono from the Kuril Islands as N. maculifrons; report also of N. vespilloides from the Kurils.*]

- Katakura, H. & Fukuda, H. (1975) Faunal makeup of ground and carrion beetles in Komiotoineppu, Hokkaido University Nakagawa Experimental Forest, northern Japan, with some notes on related problems. *Research Bulletins of the College Experiment Forests Hokkaido University*, 32, 75-92. (biology, ecology) [Numerous details of Japanese *Nicrophorinae* community in Hokkaido: diel activity, phenology, habitat preference etc.] [!S]
- Katakura, H., Sonoda, M., & Yoshida, N. (1986) Carrion beetle (Coleoptera: Silphidae) fauna of Hokkaido University Tomakomai Experiment Forest, northern Japan, with a note on the habitat preference of a geotrupine species, *Geotrupes laevistriatus* (Coleoptera, Scarabaeidae). *Research Bulletins of the College of Experimental Forests*, 43, 43-55. (biology, ecology) [Comparison of carrion beetle fauna to 2 previously described.] [!S]
- Katakura, H. & Ueno, R. (1985) A preliminary study on the faunal make-up and spatio-temporal distribution of carrion beetles (Coleoptera: Silphidae) on the Ishikari coast, northern Japan. *Japanese Journal of Ecology*, 35, 461-468. (biology, ecology) [!N, S]
- Kaufmann, T. (1960) *Faltungsmechanismen der Flügel bei einigen Coleopteren*. Dissertation an der Naturwissenschaftlichen Fakultät der Albrecht-Maximilians-Universität, München. 73 pp. (Ph.D. Thesis: morphology in German)
- Kaufmann, R.R.U. (1937) Investigations on beetles associated with carrion in Panel Ash, near Harrowgate. *Entomologist's Monthly Magazine*, 73, 78-81, 227-233, 268-272. (biology, ecology) [!S]
- Kawada, T. (ed.). (1960) *Illustrated insect larvae of Japan*. Hokuryukan Co., Tokyo. 712 + 73 + 50 pp., 4 pls. (morphology, larval stages) [!N]
- Keen, J.H. (1895) List of Coleoptera collected at Massett, Queen Charlotte Islands, B. C. *Canadian Entomologist*, 27, 165-172, 217-220. (checklist) [!N]
- Keller, W.L. & Heske, E.J. (2001) An observation of parasitism of black rat snake (*Elaphe obsoleta*) eggs by a beetle (*Nicrophorus pustulatus*) in Illinois *Transactions of the Illinois State Academy of Science*, 94(3), 167-169. (biology, ecology, behavior in English) [Second account of *N. pustulatus* as parasitoid of *Elaphe obsoleta*-- suggesting that this snake species may be a preferred host.] [!S]
- Kentner, E. & Streit, B. (1990) Temporal distribution and habitat preference of congeneric insect species found at rat carrion. *Pedobiologia*, 34(6), 347-359. (biology, ecology in English (German summary)) [table of forest vs field, *N. investigator* and *N. vespilloides* only species not found on field carrion.] [!S]
- Kieseritzky, V. (1930) *Zhuki mertvoedy [Coleoptera Silphidae]*. In: *Trudy Pamirskoy Ekspedichii 1928 g., II, Zoologiya*. Izdatel'stvo Akademii Nauk SSSR, Leningrad. pp. 59-65. (descriptions in Russian (German summary)) [Original description of *N. reichardti*; *N. baeckmanni* (= *N. investigator*).] [!N, S]
- Kikuta, T., Gunsalam, G., Kon, M., & Ochi, T. (1997) Altitudinal change of fauna, diversity and food preference of dung and carrion beetles on Mt. Kinabalu, Borneo. *Tropicos*, 77, 123-132. (biology, ecology) [*N. podagricus* dominates carrion > 1350m.] [!S]
- Kim, C.W. (1978) *Distribution Atlas of Insects of Korea, Ser. 2. Coleoptera*. Korea Univ. Press, Seoul, 414 pp. (catalog, distribution) [Subsequent misspelling of *N. concolor*: *N. concolor*.]
- King, L.M. & Cummings, M.P. (1997) Satellite DNA repeat sequence variation is low in three species of burying beetles in the genus *Nicrophorus* (Coleoptera: Silphidae). *Molecular Biology and Evolution*, 14(11), 1088-1095. (biology, genetics) [Satellite DNA diversity low relative to other studied insects.] [!S]
- Kirby, W. (1837) *The Insects*. In: Richardson, J. (ed.). *Fauna Boreali-Americana, or the Zoology of the Northern Parts of British America, ... Part 4*. J. Fletcher, Norwich. 325 pp., 8 pls. (descriptions) [Original description of *N. obscurus*; *N. melsheimeri* (= *N. investigator*); *N. hallii* (= *N. orbicollis*); *N. hebes* (= *N. vespilloides*); *N. pygmaeus* (= *N. vespilloides*).] [!N, S]

- Kirby, W. & Spence, W. (1859) *An introduction to entomology, or elements of the natural history of insects, comprising an account of noxious and useful insects, ...* Seventh edition. Longman, Green, Longman & Roberts, London. xxvii + 607 pp. (biology, morphology: stridulation) [!N]
- Kirk, V.M. (1969) A list of the beetles of South Carolina. Part 1 - Northern coastal plain. *South Carolina Agricultural Experiment Station, Technical Bulletin*, 1033, 1-124. (checklist) [!N]
- Kirk, V.M. (1970) A list of the beetles of South Carolina. Part 2 - Mountain, piedmont and southern coastal plain. *South Carolina Agricultural Experiment Station, Technical Bulletin*, 1038, 1-117. (checklist) [!N]
- Kirk, V.M. & Balsbaugh, E.U., Jr. (1975) A list of the beetles of South Dakota. *South Dakota State University Agricultural Experiment Station Technical Bulletin*, 42, 1-139. (checklist) [!N]
- Kizeritsky, V.A. (1929) Entomologicheskie zametki [Entomologische Notizen]. *Russkoye Entomologicheskoe Obozrenie*, 23(1-2), 115-123. (in Russian)
- Klausnitzer, B. (1997) *Silphidae* In: *Die Larven der Käfer Mitteleuropas, 4 Band Polyphaga Teil 3 sowie Ergänzungen zum 1. bis 3. Band*. Goecke & Evers - Krefeld, IM Gustav Fischer Verlag - Jena - stuttgart - Lübeck - Ulm, pp 39-65 (morphology, larval stages in German) [*Synthesis of Růžička 1992 and Pukowski 1933; well keyed and illustrated.*] [!S]
- Klausnitzer, B. & Zerche, L. (1978) *Silphidae* In: Klausnitzer, B. (ed.). *Bestimmungsbücher zur Bodenfauna Europas Lief 10, Ordnung Coleoptera (Larven)*, [Berlin: Akademic Verlag] W. Junk, The Hague. pp 87-90. (morphology, larval stages) [!N, S]
- Klika, J. (1873) *Brouci. Soustavný popis brouku ve střední Evropě, zvláste v Cechách zjících., ... [Käfer. Systematische Beschreibung der in Mitteleuropa, besonders in Böhmen lebenden Käfer ...]* I. L. Kober, Praze. xxiv + 448 pp. (checklist in Czech) [!N]
- Klingelhöffer & Schmidt. (1843) In: Klingelhöffer, Mittheilungen aus dem Tagebuche des Hrn. Oberlieut. Klingelhöffer in Darmstadt. *Entomologische Zeitung [Stettin]*, 4, 85-91. (biology in German) [!N]
- Kloet, G.S. & Hincks, W.D. (1945) *A check list of British insects*. Kloet & Hincks, Stockport. lix + 483 pp. (checklist) [!N]
- Kniephof, J. (1913) Neuheiten der pommerschen käferfauna. *Deutsche Entomologische Zeitschrift*, pp. 185-190. (in German) [!S]
- Knorre, D. v. (1996) The record of *Necrophorus germanicus* L., 1758 (Coleoptera, Silphidae) in east Thuringia *Thuringer Faunistische Abhandlungen*, 3, 157-158. (distribution note in German)
- Kocárek, P. (1998) Daily periodicities in arthropods visiting carrion. *Abstract of a communication presented at the VIth European Congress of Entomology, Ceske Budejovice August 23-29 1998*. pp. 387. (Abstract: biology, ecology) [*Crepuscular activity : N. vespillo, N. fossor, N. investigator; dirunal activity: N. vespilloides & N. humator.*] [!S]
- Kocárek, P. (2001) Diurnal activity rhythms and niche differentiation in a carrion beetle assemblage (Coleoptera: Silphidae) in Opava, the Czech Republic. *Biological Rhythm Research*, 32 (4), 431-438. (biology, ecology) [!N]
- Koch, K. (1989) *Die Käfer Mitteleuropas: Ökologie. vol 1*. Goecke and Evers, Krefeld, Germany pp. 1-440 (biology, ecology in German) [*standardized listing of species ecological traits/preferences etc. [all eurytpoic; necrophilic, etc.]*] [!S]
- Kolenati, F.A. (1846) *Insecta Caucasi*. Coleoptera, Dermaptera, Lepidoptera, Neuroptera, Mutillidae, Aphaniptera, Anopleura. *Meletemata Entomologica; Petropoli*, 5, 1-170. (catalog) [*mentions N. frontalis Fisch. (= N. germanicus)*]
- Kon, M. (1995) Reproductive behavior of burying beetles. *Nature & Insects*, 30(2), 20-23. (biology, behavior in Japanese)
- Kôno, H. (1929) Beitrag zur Silphiden-Fauna Japans (Col.). *Insecta Matsumurana*, 3, 157-165. (checklist, annotated) [*Orig. comb.: N. maculifrons form karafutonis [subspecies implied; available name ICZN 45.6.4]*] [!N, S]

- Kôno, H. (1935) *Insects of Jehol [VI] - Order Coleoptera (I). Family Silphidae*. Report of the First Scientific Expedition to Manchoukuo. Section V, Division I, Part X, Article 42. 3 pp., 1 pl. (checklist, distribution in Japanese (English summary)) [!N]
- Kôno, H. (1944) Die Käfer-Fauna der Nord-Kurilen. (XI. Beitrag zur Kenntnis der Käferfauna der Kurilen). *Rep. Sci. Exped. Kuril Is., Tokyo*, 1, 74-92. (checklist in Japanese (German title))
- Korbel, L. (1966) Zur Erkenntnis der bionomischen Gruppen der Coleoptera im Boden des gemischten Karpatenwaldes. *Acta Facultatis Rerum Naturalium Universitatis Comenianae ñ Zoologia*, 13, 141-149. (biology, ecology in German (Czech & Russian summary)) [!N]
- Korn, W. (1982a) Zur Fortpflanzung von *Poecilochirus carabi* G. u. R. Canestrini 1882 (syn. *P. necrophori* Vitzth.) und *P. austroasiaticus* Vitzthum 1930 (Gamasina, Eugamasidae). *Spixiana*, 5, 261-288. (biology, symbionts: mites in German (English summary))
- Korn, W. (1982b) Beiträge zur Postembryonalen Entwicklung von *Poecilochirus carabi* G. u. R. Canestrini 1882 und *P. austroasiaticus* Vitzthum 1930 (Acarina, Gamasidae). *Jahrbücher der Coburger Landesstiftung*, 27, 239-266. (biology, symbionts: mites in German)
- Korn, W. (1982c) Zur Eidonomie der *Poecilochirus* arten *P. carabi* G. und R. canestrini (= *P. necrophori* Vitzthum), *P. austroasiaticus* Vitzthum und *P. subterraneus* Müller (Gamasida, Acari). *Zoologische Jahrbücher (Abteilung für Anatomie und Ontogenie der Tiere)*, 108, 145-224. (biology, symbionts: mites in German (English summary)) [*Synonymized Poecilochirus necrophori* under *P. carabi* (but see Hyatt 1980)] [!N]
- Korn, W. (1983) Zur Vergesellschaftung der Gamasidenarten *Poecilochirus carabi* G. u. R. Canestrini 1882 (= *P. necrophori* Vitzthum 1930), *P. austroasiaticus* Vitzthum 1930 und *P. subterraneus* Müller 1859 mit Aaskäfern aus der Familie der Silphidae. *Spixiana*, 6(3), 251-279. (biology, symbionts: mites in German (English summary)) [!N]
- Koulianos, S., & Schwarz, H.H. (2000) Probability of intra- and interspecific encounters, and the duration of parental care in *Nicrophorus investigator* (Coleoptera: Silphidae). *Annals of the Entomological Society of America*, 93(4), 836-840. (biology, ecology, behavior) [*Mild support for Scott's (1998) hypothesis that duration of male care is influenced by probability of encounters with larger congenics vs. equitable conspecifics.*] [!S]
- Kozminykh, V.O. (1992) *Species list of silphids of genus Nicrophorus Fabricius 1775 (Coleoptera, Silphidae) of the USSR fauna. Insects in Natural and Human-Induced biogeocenoses of the Urals*. Proceedings of the 4th Entomological Conference at the Urals. Perm, March 24th - 26th, 1992. - Ekaterinburg, 1992. - Ekaterinburg, p. 64. (Conference: checklist in Russian) [*N. hauseri Hlis = N. vespillo syn. n.; N. baeckmanni Kiser = N. investigator syn. n.; N. funeror Reitt. ssp. (of investigator) stat. n.; N. maculiceps Jak. = N. maculifrons Kr. syn. n.*] [!S]
- Kozminykh, V.O. (1993a) Brief notes on palaeartic burying beetles (Coleoptera, Silphidae, Nicrophorinae). Keys for identification of subfamily Nicrophorinae taxones and the species catalogue of genus *Ptomascopus* Kraatz, 1877 and *Nicrophorus* Fabricius, 1775. *Perm*, 33 p. - *Paper deposited in ONP NPETS "Veras-Eco" and IZ AN of Belarus Republic 18.03.93, N 229*. (key, descriptions, regional in Russian)
- Kozminykh, V.O. (1993b) *Brief description of palaeartic burying beetles (Coleoptera, Silphidae, Nicrophorinae). Systematic Chapter: keys for genus identification in subfamily Nicrophorinae and species catalogue of genus Ptomascopus Kraatz, 1877 and Nicrophorus Fabricius, 1775*. In: *Fauna and Ecology of Insects of the Urals*. Perm pp. 54-70. (key, descriptions, regional in Russian) [*N. confusus Port = ssp of N. sepultor stat n.; N. argutor Jak. = ssp of N. sepultor stat n.*] [!S]
- Kozminykh, V.O. (1995) *Identification keys to burying beetles of genus Nicrophorus Fabricius, 1775 (Coleoptera, Silphidae) of the Urals and adjacent territories*. Animal World of the South Urals and North Cis-Caspians. Abstracts and Notes of the 3rd Regional Conference. Orenburg pp. 108-111. (Conference: key in Russian) [*Keys to 11 species listed in Kozminykh, V.O. & V. A. Nemkov. 1995, lacking illustrations.*] [!S]

- Kozminykh, V.O. (1997) *Faunistic records on silphid beetles (Coleoptera, Silphidae) of the Perm Region*. Problems of the Regional "Red Book". Collection of Scientific Papers. Perm State University. - Perm pp. 63-71. (checklist in Russian) [*Locality data in Russian.*] [!S]
- Kozminykh, V.O. & Esjunin, S.L. (1992) *The review of silphid beetles (Coleoptera, Silphidae) of the Urals fauna*. Achievements of Entomology in the USSR: Coleoptera (Insects). Abstracts of the 10th Meeting of All-Union Entomological Society, Leningrad, September 11th - 15th pp. 67-69 . (Conference: checklist in Russian) [*Table of species by zoogeographic zone; N. vespiloides only species in Northern.*] [!S]
- Kozminykh, V.O. & Esjunin, S.L. (1994) Spectra of ecological groups and the structure of Coleoptera necrobiont communities. *Russian Entomological Journal*, 3, 75-80. (biology, ecology in English (Russian summary)) [*Nicrophorus classified as obligate necrophages.*] [!S]
- Kozminykh, V.O. & Nemkov, V.A. (1995) *Systematic Catalogue of burying beetles species of genus Nicrophorus Fabricius, 1775 (Coleoptera, Silphidae) of the South Urals*. Animal World of the South Urals and North Cis-Caspians. Abstracts and Notes of the 3rd Regional Conference. Orenburg pp. 111-113 . (Conference: catalog in Russian) [*N. morio as subsp.; Koz. counts 10 species, but skipped? N. satanas (& N. morio).*] [!S]
- Kozol, A.J. (1981) *Ecology and population genetics of the endangered American Burying Beetle, Nicrophorus americanus*. Dissertation, Boston University 164 pp. (Ph.D. Thesis: biology, conservation, genetics) [*Five chapters covering ecology, reproduction, genetic variation, reintroduction efforts, and an overview of hypotheses of decline. Most, but not all, of this work was later published in primary journals.*] [!S]
- Kozol, A.J. (1989) *Studies on the American burying beetle, Nicrophorus americanus, on Block Island*. Unpublished report to The Nature Conservancy, 294 Washington Street, Boston, MA 10 pp. (unpublished report: biology, conservation)
- Kozol, A.J. (1990) *The natural history and reproductive strategies of the American burying beetle, Nicrophorus americanus*. A report for the U.S. Fish and Wildlife Service. 17 pp. (unpublished report: biology, conservation)
- Kozol, A.J. (1991) *Annual monitoring of the American burying beetle, Nicrophorus americanus, on Block Island*. Unpublished report to The Nature Conservancy, 294 Washington Street, Boston, MA 15 pp. (unpublished report: biology, conservation)
- Kozol, A.J., Amaral, M.J., & French, T.W. (1994) The reintroduction of the American burying beetle on Penikese Island, Massachusetts. *American Association of Zoological Parks and Aquariums, Annual Conference Proceedings*, 1994, 112. (Conference report: biology, conservation)
- Kozol, A.J., Scott, M.P., & Traniello, J.F.A. (1989) ["1988"] The American burying beetle, *Nicrophorus americanus* : Studies on the natural history of a declining species. *Psyche (Cambridge, Massachusetts)*, 95(3-4), 167-176. (biology, conservation) [*First detailed study of the biology of N. americanus.*] [!S]
- Kozol, A.J., Traniello, J.F.A., & Williams, S.M. (1994) Genetic variation in the endangered burying beetle *Nicrophorus americanus* (Coleoptera: Silphidae). *Annals of the Entomological Society of America*, 87(6), 928-935. (biology, conservation, genetics) [*Little unique genetic variation within BI vs western populations of ABB.*] [!S]
- Kraatz, G. (1864) Einige für Deutschland neue Käfer. *Deutsche Entomologische Zeitschrift*, 8, 47-48. (in German)
- Kraatz, G. (1876a) Uebersicht über die südamerikanischen Arten der Silphiden-Gattung *Hyponecrodes* Kraatz. *Deutsche Entomologische Zeitschrift*, 20, 375-376. (descriptions in German) [*Original description of Ptomascopus, Original misspelling of Ptomascopus: Tomascopus.*] [!N, S]
- Kraatz, G. (1876b) Ueber den Clypeus der *Necrophorus*-Arten. *Deutsche Entomologische Zeitschrift*, 20, 395-396. (morphology: clypeus in German) [*Tomascopus new genus p. 395, [emended to Ptomascopus p. 396]*] [!N, S]

- Kraatz, G. (1876c) Ueber das Artrecht des *Necrophorus morio* Gebl. *Deutsche Entomologische Zeitschrift*, 20, 396. (in German) [!S]
- Kraatz, G. (1876d) Ueber *Necrophorus sepulchralis* Heer. *Deutsche Entomologische Zeitschrift*, 20, 396-397. (comment in German) [!M, S]
- Kraatz, G. (1877) *Japanische Silphidae*. In: Kraatz et al., Beiträge zur Käferfauna von Japan, meist auf R. Hiller's Sammlungen basirt. *Deutsche Entomologische Zeitschrift* 21, 100-108. . (descriptions in German) [Original description of *N. concolor*; *P. morio*; *N. maculifrons*; *N. quadripunctatus*; *P. 4-maculatus* (= *P. plagiatus*).] [!N, S]
- Kraatz, G. (1880) Ueber rothgefleckte *Necrophorus germanicus*. *Entomologische Monatsblätter*, 2, 116-117. (description of variation in German) [Original description of *N. germanicus* var. *bipunctatus* (= *N. germanicus*); *N. germanicus* var. *apicalis* (= *N. germanicus*).] [!S]
- Kraatz, G. (1884) Neue Käfer-Arten von Margellan (Turkestan). *Deutsche Entomologische Zeitschrift*, 28, 229-230. (descriptions in German) [Original description of *N. nigerrimus* (= *N. humator*).] [!M, S]
- Krivolutskaya, G.O. (1973) *Entomofauna of the Kuril Islands: Principal Features and Origin*. Izdatel'stvo Nauka, Leningrad Division. 315 pp. (checklist in Russian (with electronic english translation)) [Major work on insect fauna of the Kuril Islands.] [!S]
- Krivolutskaya, G.O. (1997) *Entomofauna of the Kuril Islands: Principal Features and Origin: CHAPTER 3 SECTION 5. Order COLEOPTERA (beetles) Family SILPHIDAE (carrion beetles)* In: Urbain, B.K., Pietsch, T.W. (eds.), Urdang, E.B. (translator). *Electronic Version Only*: < <http://artedi.fish.washington.edu/okhotskia/ikip/Results/publications/entobook/title.htm>> (Website publication: checklist) [Good review of past faunal and floral treatments; all nicrophorine species recorded.] [!S]
- Kryzhanovskiy, O.L. (1971) New for the USSR representatives of Coleoptera from the Far Eastern marine territory and zoogeographical value of these findings. *Zoologicheskii Zhurnal*, 50, 210-214. (in Russian (English summary)) [!S]
- Krzelj, S. (1969) Structure anatomique comparée des élytres de Coléoptères. *Annales de la Société Royale Zoologique de Belgique*, 99, 85-109. (morphology: elytra in French) [!N]
- Kugelann, J.G. (1792) Verzeichniss der in einigen Gegenden Preussens bis jetzt entdeckten Käfer-Arten, nebst kurzen Nachrichten von denselben. *Neuestes Magazin für die Liebhaber der Entomologie*, 1, 477-512. (in German)
- Kuhnt, P. (1913) *Illustrierte Bestimmungs-Tabellen der Käfer Deutschlands: ein Handbuch zum genauen und leichten Bestimmen aller in Deutschland vorkommenden Käfer / Herausgegeben von P. Kuhnt*. Stuttgart, x, 1138p (in German) ["Larva" -Hatch 1928]
- Kurosa, K. (1999) A new species of *Bakerdania* (Acari: Pygmephoridae) from the burying beetle, *Necrophorus concolor* (Coleoptera: Silphidae), in Japan. *Journal of the Acarological Society of Japan*, 8(1), 41-46. (biology, symbionts: mites in English (Japanese summary))
- Kurosawa, Y. (1985a) *Silphidae*. In: Uéno, S.-I., Kurosawa, Y. and Satô, M. (eds.), *The Coleoptera of Japan in Color*. Vol. 2. Hoikusha Pub. Co., Osaka, Japan. pp. 247-252, pls. 44, 45. (checklist) [!N, S]
- Kurosawa, Y. (1985b) A new silphid genus and species (Coleoptera, Silphidae) from Nepal. *Bulletin of the National Science Museum, Tokyo (A)*, 11, 45-48. (descriptions) [Original description of *Eonecrophorus*; *Eonecrophorus tenuicornis*.] [!N, S]
- Küster, H.C. (1846a) *Die Käfer Europa's, nach der Natur beschrieben*. Viertes Heft. Bauer & Raspe Verlag, Nürnberg. 4 pp. + Nos. 1-100, 3 plates. (Serial: catalog in German) [!N]
- Küster, H.C. (1846b) *Die Käfer Europa's, nach der Natur beschrieben*. Siebentes Heft. Bauer & Raspe Verlag, Nürnberg. 2 pp. + Nos. 1-100, 2 plates. (Serial: catalog in German (English summary)) [!N]
- Kuwayama, S. (1967) *Insect fauna of the Southern Kurile Islands*. Sapporo (checklist in Russian)
- La Rivers, I. (1946) A fortuitous beer trap. *Pan-Pacific Entomologist*, 22, 117. (methods, ecology)

- Labitte, A. (1916) Longévité de quelques insectes in captivité. *Bulletin du Muséum d'Histoire Naturelle*, 22, 105-113. (biology in French)
- Lacordaire, M.Th. (1854) *Histoire Naturelle des Insectes. Genera des Coléoptères ou exposé méthodique et critique de tous les genres proposés jusqu'ici dans cet ordre d'insectes*. Vol. 2. Librairie Encyclopédique de Roret, Paris 548pp. 12 (biology, catalog in French) [!S]
- Lafer, G.Sh. (1989) Fam. Silphidae. In: P. A. Ler (ed.): *Keys to the Insects of the Far Eastern USSR in Six Volumes. Vol. 3, Coleoptera or Beetles, Part 1*. Nauka, Leningrad. , pp. 329-344.. (key, descriptions, description of variation in Russian) [*Original description of N. praedator insularis* (= *N. investigator*).] [!M, N, S]
- Lago, P.K. & Miller, P.R. (1983) Records of Mississippi Silphidae (Coleoptera) with a key to the species known to occur in the state. *Journal of the Mississippi Academy of Sciences*, 28, 83-87. (checklist) [*Four species of Nicrophorus, but N. carolinus hasn't been collected since 1954 & N. americanus not since 1950.*] [!S]
- Laicharting, J.N.E. v. (1781) *Verzeichniss und Beschreibung der Tyroler-Insecten*. I. Theil, Käferartige Insecten. Zürich. xii + (1) + 176 pp. (catalog)
- Lamson, S.R. (1989) Endangered and threatened wildlife and plants: determination of endangered status for the American Burying Beetle. *Federal Register*, 54, 29652-29655. (biology, conservation) [!N]
- Lane, C. & Rothschild, M. (1965) A case of Müllerian mimicry of sound. *Proceedings of the Royal Entomological Society of London (A)*, 40, 156-158. (biology, behavior) [!N, S]
- Laplante, S., Bousquet, Y., Bélanger, P. & Chantal, C. (1991) Liste des espèces de Coléoptères du Québec. *Fabriques, Supplément*, 6, 1-136. (checklist in French) [!N]
- Laporte, F.L. (1832) Mémoire sur cinquante espèces nouvelles ou peu connues d'insectes. *Annales de la Société Entomologique de France*, 1, 386-415. (descriptions in French) [*Original description of N. corsicus* (= *N. interruptus*).] [!N, S]
- Laporte, F.L. (1840) *Histoire Naturelle des Insectes Coléoptères, vol. 2*. In: *Histoire Naturelle des Animaux Articulés, Annelides, Crustacés, Arachnides, Myriapodes et Insectes, vol. 3*. P. Duménil, Paris. 564 pp., 38 pls. (descriptions in French) [*Original description of N. sayi; N. 4-signatus* (= *N. orbicollis*).] [!N, S]
- Latreille, P.A. (1804) *Histoire Naturelle, Générale et Particulière des Crustacés et des Insectes. Familles Naturelles des Genres. Vol. 9*. F. Dufart, Paris. 416 pp., pls. 74-80. (in French) [!N]
- Latreille, P.A. (1807) *Genera Crustaceorum et Insectorum, secundem Ordinem Naturalem in Familias Disposita, Iconibus Exemplisque Plurimum Explicata*. Vol. 2. Amand Koenig, Paris. 280 pp. (catalog) [!N]
- Leach, W.E. (1815) *Entomology*. In: Brewster (ed.). *Edinburgh Encyclopedia. Vol. 9 (1)*. Edinburgh. pp. 57-172. (descriptions) [*Subsequent misspellings of Nicrophorus :Necrophagus; N. mediatatus Fabricius (--itself a junior synonym of carolinus):N. medianus;*] [!N]
- LeBaron, W. (1871) *Prairie Farmer*, Aug. 26 [not found]
- Leclercq, J. (1954) Phytophagy among *Necrophorus vespillo* (L.) (Col. Silphidae). *Entomologist's Monthly Magazine*, 90, 240. (biology, ecology, behavior)
- LeConte, J.L. (1853) Synopsis of the Silphales of America, north of Mexico. *Proceedings of the Academy of Natural Sciences of Philadelphia*, 6, 274-287. (descriptions) [*Missidentification of N. obscurus: N. melsheimeri; Original description of N. lunatus LeConte nec Fischer* (= *N. sayi*).] [!N, S]
- LeConte, J.L. (1854) Descriptions of some new Coleoptera from Oregon, collected by Dr. J.G. Cooper of the North Pacific R.R. expedition, under Gov. J.J. Stevens. *Proceedings of the Academy of Natural Sciences of Philadelphia*, 7, 16-20. (descriptions) [*Original description of N. pollinator* (= *N. defodiens*); *N. confossor* (= *N. investigator*).] [!S]
- LeConte, J.L. (1859a) Catalogue of the Coleoptera of Ft. Tejon, California. *Proceedings of the Academy of Natural Sciences of Philadelphia*, 11, 69-90. (checklist)

- LeConte, J.L. (1859b) Additions to the coleopterous fauna of northern California and Oregon. *Proceedings of the Academy of Natural Sciences of Philadelphia*, 11, 281-292. (in English)
- LeConte, J.L. (1859c) The Coleoptera of Kansas and eastern New Mexico. *Smithsonian Contributions to Knowledge*, 11(6): vi + 58. (checklist)
- LeConte, J.L. (1866a) Additions to the coleopterous fauna of the United States. No. 1. *Proceedings of the Academy of Natural Sciences of Philadelphia*, pp. 361-394. (nomenclature) [!S]
- LeConte, J.L. (1866b) List of the Coleoptera collected in the mountains of Lycoming County, Pa. *Proceedings of the Academy of Natural Sciences of Philadelphia*, pp. 346-348. (checklist)
- LeConte, J.L. (1870) Synonymical notes on North American Coleoptera. *Annals and Magazine of Natural History*, 4(6), 394-404. (nomenclature) [!S]
- LeConte, J.L. (1873) Synonymical remarks upon North American Coleoptera. *Proceedings of the Academy of Natural Sciences of Philadelphia*, pp. 321-336. (nomenclature) [!S]
- Lee, Y.I., Kim, W.T. & Kim, D.H. (1985) *Insect fauna of Mt. Halla*. In: *Rep. acad. Surv. Hallasan (Mt.) Nat. Pres.: 351-455*. (checklist in Korean)
- Leech, H.B. (1934) The family history of *Nicrophorus conversator* Walker. *Proceedings of the Entomological Society of British Columbia*, 31, 36-40. (biology, ecology, behavior) [“The most complete life history study of a North American species.”-Milne & Milne 1944. [as of 1944]-actually a short series of observations.] [!N, S]
- Leech, H.B. (1937) Notes on certain names in use in the *vespilloides* group of *Nicrophorus* Fab. (Coleoptera: Silphidae). *Bulletin of the Brooklyn Entomological Society*, 32, 156-159. (nomenclature) [Concludes Nearctic *N. vespilloides* is conspecific with Palearctic, and *N. defodiens* is a ssp. Synonymizes *N. conversator* under *N. defodiens*. Argues against aberrational names for *N. vespilloides*.] [!S]
- Leng, C.W. (1920) *Catalogue of the Coleoptera of America, north of Mexico*. Mount Vernon, New York: John D. Sherman. 470 pp. (Silphidae, pp. 86-89). (catalog) [!S]
- Lengerken, H. von. (1939) *Die Brutfürsorge- und Brutpflegeinstinkte der Käfer. Ergebnisse der Insektenbiologie, Band 1*. Akademische Verlagsgesellschaft, Leipzig. vi + 285 pp. (biology in German) [!N]
- Leonard, M.D. (1928) A list of the insects of New York, with a list of the spiders and certain other allied groups. *Cornell University Agricultural Experiment Station Memoir*, 101, 1-1121. (checklist) [!N]
- Leschen, R.A.B. (1993) *Evolutionary patterns of feeding in selected Staphylinoidea (Coleoptera): shifts among food textures*. In: Schaefer, C.W. and Leschen, R.A.B. (eds.). *Functional Morphology of Insect Feeding*. Thomas Say Publications in Entomology, Entomological Society of America, Lanham, Maryland. {by June 1993} pp. 59-104. (morphology: mandibles) [*Ptomascopus* larval mandibles: simple and slightly falcate with an apicomesal region of teeth; *Nicrophorus* larval mandibles: falcate with 2 proximate apical teeth and a minute serrate web between.] [!N, S]
- Levesque, C. & Levesque, G.-Y. (1986) Activité et succession saisonnière de Coléoptères épigés d'une forêt décidue du sud du Québec. *Naturaliste Canadien*, 113, 39-46. (biology, ecology in French) [!N]
- Lewis, G. (1879) On certain new species of Coleoptera from Japan. *Annals and Magazine of Natural History*, 5(4), 459-467. (descriptions) [Original description of *P. carbunculus* from the Amazon [erroneous locality data]; *P. plagiatiennis* (= *P. plagiatus*).] [!N, S]
- Lewis, G. (1887) A list of the Japanese Silphidae. *Annals and Magazine of Natural History*, 5(20), 338-342. (description) [Original description of *N. montivagus*; *N. tenuipes*; *N. latifasciatus* (= *N. "praedator"/N. investigator*).] [!N, S]
- Lewis, G. (1888) Notes on the Japanese species of Silpha. *Entomologist*, 21, 7-10.
- Lewis, K.C. (1991) Coleoptera trapped over a twelve-month period. *Bulletin of the Amateur Entomologists' Society*, 50(374), 29-33. (distribution note)

- Lindroth, C.H. & Ball, G.E. (1969) *An annotated list of invertebrates of the Kodiak Island refugium*. In: Karlstrom, T.N.V. & Ball, G.E. (eds.). *The Kodiak Island refugium: its geology, flora, fauna and history*. Ryerson Press, Toronto. pp. 122-155. (in English) [!N]
- Lingafelter, S.W. (1995) Diversity, habitat preferences, and seasonality of Kansas carrion beetles (Coleoptera: Silphidae). *Journal of the Kansas Entomological Society*, 68, 214-223. (biology, ecology) [No *N. mexicanus* or *N. americanus* found, *N. tomentosus* found from spring to late summer.] [!N, S]
- Linnaeus, C. (1758) *Systema Naturae per Regna Tria Naturae, secundum Classes, Ordines, Genera, Species, cum Characteribus, Differentiis, Synonymis, Locis*. Editio Decima, Reformata. Vol. 1. L. Salvii, Holmiae. 824 + iii pp. (descriptions in Latin) [*Original descriptions of N. germanicus* & *N. vespillo*.] [!N, S]
- Linnaeus, C. (1761) *Fauna Svecica, sistens animalia Sveciae regni: Mammalia, Aves, Amphibia, Pisces, Insecta, Vermes; distributa per classes & ordines, genera & species, ... Editio altera, auctior*. Laurentii Salvii, Stockholmiae. 46 unnumbered + 578 pp., 2 pls. (catalog in Latin)
- Linnaeus, C. (1767) *Systema Naturae Per Regna Tria Naturae, secundum Classes, Ordines, Genera, Species, cum characteribus, differentiis, synonymis, locis*. Editio Duodecima Reformata. - Tom I. Pars II. Holmiae pp. 533-1327. (catalog in Latin)
- Linnaeus, C. (1771) *Regni animalis appendix*. In: *Mantissa plantarum altera generum editionis VI & specierum editionis II*. L. Salvi, Holmiae. pp. 521-556. (descriptions) [*Original description of N. carolinus*.] [!N, S]
- Linnaeus, C. (1790) *Systema Naturae, sive regna tria naturae systematice proposita per classes, ordines, genera et species*. ed. Von J. F. Gmelin (Ins. in Bd. I, Teil 4) pp. 1517-2224. (catalog in Latin)
- Linssen, E.F. (1959) *Beetles of the British Isles: First series comprising the superfamilies Caraboidea, Palpicornia, Staphylinoidea and Diversicornia with 19 plates in colour, 20 in black and white and numerous text figures and diagrams*. Frederick Warne & Co., Ltd. London & New York (catalog) [!S]
- Lintner, J.A. (1886) *Report of the state entomologist*. In: *Thirty-ninth annual report of the trustees of the State Museum of Natural History for the year 1885*. Albany, New York. 227 pp., 12 pls. 39, 77-125. (in English)
- Lisa, R. (1995) ["1994"] Coleoptera, Silphidae. *Bollettino dell'Associazione Romana di Entomologia*, 49(3-4), 216. (in Italian)
- Löding, H.P. (1945) Catalogue of the beetles of Alabama. *Geological Survey of Alabama, University of Alabama Monographs*, 11, 1-172. (checklist) [!S]
- Lomolino, M.V., & Creighton, J.C. (1996) Habitat selection, breeding success and conservation of the endangered American burying beetle *Nicrophorus americanus*. *Biological Conservation*, 77(2-3), 235-241. (biology, conservation) [*Supports Anderson's hypothesis; deep soils of mature forest preferred by ABB.-breeding success in grasslands only 66% of that in forests "N. germanicus-now presumed extinct"; carcasses in grassland sites were deeper & had fewer fly larvae than those in forests.*] [!S]
- Lomolino, M.V., Creighton, J.C., Schnell, G.D., & Certain, D.L. (1995) Ecology and conservation of the endangered American burying beetle (*Nicrophorus americanus*). *Conservation Biology*, 9(3), 605-614. (biology, conservation in English (Spanish summary)) [*ABB more generalized habitat preferences than congeners-rejects Anderson's hypothesis.*] [!S]
- Lord, W.D., & Burger, J.F. (1984) Arthropods associated with herring gull (*Larus argentatus*) and great black-backed gull (*Larus marinus*) carrion on islands in the Gulf of Maine. *Environmental Entomology*, 13, 1261-1268. (biology, ecology) [!N]
- Lucas, R. (1913) Coleoptera für 1912. *Archiv für Naturgeschichte*, 79 (B), 48-408.
- Lucas, R. (1921) ["1916"] Coleoptera für 1915 (mit Nachträgen für 1914). *Archiv für Naturgeschichte*, 82 (B), 1-317. [!N]

- Lucht, W.H. (1987) *Die Käfer Mitteleuropas: Katalog*. Goecke & Evers, Krefeld. 342 pp. (catalog in German) [!N]
- Lumpkin, B.C. (1971) *Elevational studies of Silphidae (Insecta: Coleoptera)*. Master's Thesis, University of Tennessee at Knoxville., 50 pp. (M.S. Thesis: biology, ecology)
- Lutz, F.E. (1921) In: *Fieldbook of insects*. G. P. Putnam's Sons. pp 295-256 (biology, ecology, behavior) ["Cites *N. americanus* as preferring reptiles, but indicates no burying beetles came to any bait set out under experimental conditions."-Milne & Milne 1944.]
- M. de T. (1877) [no title, note under general title "Observations entomologiques"]. *Petites Nouvelles Entomologiques*, 2, 179. (biology in French) ["Biology" -Hatch 1928.]
- Madge, R.B. (1958) *A taxonomic study of the genus Necrophorus in America north of Mexico (Coleoptera, Silphidae)*. M.S. Thesis, University of Illinois, Urbana, Illinois. iii + 77 pp., 7 pls. (M.S. Thesis: revision: key, descriptions, ecology, distributions) [!N]
- Madge, R.B. (1980) A catalogue of type-species in the family Silphidae (Coleoptera). *Entomologica Scandinavica*, 11, 353-362. (catalog) [!N, S]
- Madge, R.B. (1994) Who was Herschel? *The Canadian Entomologist*, 126, 543-548. (comment) [Mention of unverified possible manuscript name: *N. britannicus* Herschel.] [!S]
- Maes, J.-M., & Navarrete-Heredia, J.L. (2002) Silphidae (Coleoptera) de Nicaragua *Dugesiana*, 9(1), 1-4 (distribution note in Spanish) [!S]
- Mannerheim, C.G. (1843) Beitrag zur Käferfauna der Aleutischen Inseln, der Insel Sitka und Neu-Californiens. *Bulletin de la Société Impériale des Naturalistes de Moscou*, 16(2), 175-314. (descriptions in German) [Original description of *N. nigrita*.] [!S]
- Mannerheim, C.G. (1846) Nachtrag zur Käfer-Fauna der Aleutischen Inseln und der Insel Sitka. *Bulletin de la Société Impériale des Naturalistes de Moscou*, 19(2), 501-516. (descriptions in German) [Original description of *N. defodiens*.] [!N, S]
- Mannerheim, C.G. (1852) Zweiter Nachtrag zur Käfer-Fauna der Nord-Amerikanischen Laender des Russischen Reiches. *Bulletin de la Société Impériale des Naturalistes de Moscou*, 25(1&2), 283-387. (checklist, descriptions in German) [!N]
- Mannerheim, C.G. (1853) Dritter Nachtrag zur Käfer-Fauna der Nord-Amerikanischer Laender des Russischen Reiches. *Bulletin de la Société Impériale des Naturalistes de Moscou*, 26(3&4), 95-273. (descriptions in German) [Original description of *N. pollinator* (= *N. investigator*); *N. infodiens* (= *N. investigator*); *N. tardus* (= *N. investigator*).] [!N, S]
- Mareuse, L.S.V. (1840) Essai sur les Nérophages de France et principalement du Nord. *Bulletin de la Société Linnéenne du Nord de la France*, 1, 21-80. (description of variation in French) [Original description of *N. sepultor cadaverinus* (= *N. vestigator*).]
- Marié, P. (1927) Recherche des insectes microcevernicoles propres aux terriers de Marmottes. *Bulletin de la Société Entomologique de France*, 1927(2), 64-73. (biology, ecology in French)
- Marrone, G.M. (1993) *A survey to determine the presence of the endangered American burying beetle (Nicrophorus americanus) on the Fort Pierre National Grassland in central South Dakota*. Final report to the USDA Forest Service, Pierre, SD. (unpublished report: biology, conservation)
- Marrone, G.M. (1994a) *A survey to determine the presence of the endangered American burying beetle (Nicrophorus americanus) on the Rosebud casino site in Todd County, South Dakota*. Final report to BBC Entertainment, Mission, SD. (unpublished report: biology, conservation)
- Marrone, G.M. (1994b) *A survey to determine the presence of the endangered American burying beetle (Nicrophorus americanus) on a proposed feedlot site in Brookings County, South Dakota*. Final report to Minnesota Corn Processors, Marshall, MN. (unpublished report: biology, conservation)
- Marseul, S.-A. (1863) *Catalogue des Coléoptères d'Europe et du Bassin de la Méditerranée en Afrique & en Asie. Deuxième édition*. A. Deyrolle, Paris. 300 pp. (catalog in French) [!N]

- Marseul, S.-A. (1866) Catalogue des Coléoptères d'Europe et des pays limitrophes. *Abeille*, 4, 1-131. (catalog in French) [!N]
- Marseul, S.-A. (1884) Précis des genres & espèces de la tribu des Silphides de l'Ancien-Monde. *L'Abeille*, 22, 1-204 (key, descriptions in French) [!N, S]
- Marseul, S.-A. (1885) ["1882-1889"] Catalogue synonymique et géographique des Coléoptères de l'Ancien-Monde Europe et contrées limitrophes en Afrique et en Asie, pp. 169-192. *Abeille*, 23 ((4) 5), 169-192. (catalog in French) [!N]
- Marshall, S.A. (1991) A new Ontario record of a seed eating bug (Hemiptera: Coreidae) and other examples of the role of regional insect collections in tracking changes to Ontario's fauna. *Proceedings of the Entomological Society of Ontario*, 122, 109-111. (biology, conservation) [Short comment on decline of *N. americanus* & distribution note.] [!S]
- Marshall, T. (1802) *Entomologia Britannica, sistens insecta britanniae indigena, secundum methodum Linnaeanam disposita. Vol. 1, Coleoptera*. Wilks & Taylor, Londini. xxxi + 547 pp. [!N]
- Martin, S.J. (1989) Altitudinal distribution of burying beetles (Coleoptera, Silphidae) in the Southern Alps of Japan. [*Kontyu*] *Japanese Journal of Entomology*, 57, 876-879. (biology, ecology) [Lists *N. praedator* as "Formerly *N. investigator latifasciatus* Lewis".] [!N, S]
- Masán, P. (1994) The eviphidid mites (Acarina: Mesostigmata; Eviphididae) associated with scarabaeid and carrion beetles (Coleoptera: Scarabaeidae, Silphidae) in Central Europe. *Acarologia (Paris)*, 35(1), 3-20. (biology, symbionts: mites in English (French & German summary)) [Documents *Alliphis necrophilus* Christie from 2 *Nicrophorus* spp.] [!S]
- Masán, P. (1999) Mites (Acarina) associated with burying and carrion beetles (Coleoptera, Silphidae) and description of *Poecilochirus mrciaki* sp. n. (Mesostigmata, Gamasina). *Biológia (Bratislava)*, 54(5), 515-524. (biology, symbionts: mites) [15 mite species of 2 suborders and 6 families (2,638 individuals) were found on carrion beetles in Slovakia. Mite species were both specialist and generalist on carrion beetles.] [!S]
- Masui, Y. (1939) A list of Silphidae from Korea. *Sci. Rep. Keityu, Seoul*, 2, 19-24. (checklist)
- Matis, E.G. (1981) *Coleoptera, Silphidae*. In: Scarlato, O.A. & Gorodkov, K.B. (eds.) *Provisional Atlas of the Insects of the European Part of U. S. S. R*. Nauka, Leningrad, 56 pp. (distributional atlas in Russian) [!S]
- Matthews, A. (1888) *Fam. Silphidae* In: *Biologia Centrali-Americana. Insecta. Coleoptera. Vol. 2 (1)*. Taylor & Francis, London, pp. 72-101, pl. 3.. (description) [Original description of *N. mexicanus*; *N. olidus*; *N. quadrimaculatus*; *N. montezumae* (= *N. marginatus*).] [!N, S]
- Matthews, C.Y. (1995) *Interspecific competition between the burying beetles Nicrophorus americanus and N. orbicollis*. M. S. Thesis, University of Oklahoma. (M.S. Thesis: biology, conservation) [Thorough demonstration of Kozol et al.'s 1988 findings that *N. americanus* wins interference competition events but novel demonstration that *N. orbicollis* wins exploitative competition events.]
- Matuszewski, B., Hoser, P., Hoser, G., & Michalak, M. (1977) Organization of the oocyte nucleus in silphid beetles (Silphidae, Coleoptera-Polyphaga). *Experientia*, 33, 883-885. (biology, cytology) [!N]
- Matzek, C.A.E. (1839) *Necrophorum monographiae particula prima. Dissertatio quam amplissimi ordinis philosophorum auctoritate in academia vratislaviensi pro summis in philosophia honoribus rite obinedis die VI Februarii A. MDCCCXXXIX Vratislaviae*, 61 pp. (Ph.D. Thesis: morphology: internal & external anatomy in Latin) [Description of external and internal morphology of *Nicrophorus*, in Latin. Good figures.] [!S]
- May, M. (1993) Coleopteran child care. *American Scientist*, 81, 20-22. (biology, behavior)
- Mazokhin-Porshnyakov, G.A. (1953) [Carrion beetles (Coleoptera, Necrophorini) of north eastern Korea]. *Zoologicheskii Zhurnal*, 32, 235-237. (descriptions, catalog in Russian) [Original description of *N. chryseus* (= *N. investigator*?)] [!N, S]

- McAtee, W.L. (1918) Food habits of the mallard ducks of the United States. *U. S. Department of Agriculture Bulletin*, 720, 1-36. (biology, ecology)
- McIndoo, N.E. (1915) The olfactory sense of Coleoptera. *Biological Bulletin*, 28, 407-461. (biology, behavior)
- Medvedev, S.I. & Sosnina, Y.F. (1974) Beetles (Coleoptera) from the nests of Muridae in the forest zone of the Crimean Mountain region. *Entomological Review*, 52, 524-530. (biology, ecology) [*One N. investigator found in an underground vole nest.*] [!S]
- Medvedev, S.I. & Vysotskaya, S.O.. (1969) Coleoptera from the nests of small mammals in the Transcarpathian province. *Entomological Review*, 48, 498-508. (biology, ecology) [*N. vespiloides found in nest of yellow necked field mouse.*] [!S]
- Meier, W. (1899) Über Abänderungen einiger Coleopteren-Arten, welche bei Hamburg gefunden wurden. *Entomologische Nachrichten*, 25, 97-102. (description of variation in German) [*Original description of N. humator var. atricornis (=N. humator); N. humator var. maculosus (=N. humator).*] [!N, S]
- Meier, W. (1900) Coleopterologische Notizen. *Entomologische Nachrichten*, 26, 218-219. (description of variation in German) [*Original description of N. corsicus var. laportei & N. corsicus var. vodozi*] [!N, S]
- Meierhofer, I, Schwarz, H.H., & Müller, J.K. (1999) Seasonal variation in parental care, offspring development, and reproductive success in the burying beetle, *Nicrophorus vespillo*. *Ecological Entomology*, 24(1), 73-79. (biology, ecology, behavior) [*Duration of care correlated with seasonal temperature.*] [!S]
- Melsheimer, F.E. (1853) *A Catalogue of The Described Coleoptera of the United States, revised by S. S. Haldeman and J. L. LeConte* Washington, D. C., Smithsonian Institution, xvi + 174 pp (catalog) [!S]
- Melsheimer, F.V. (1806) *A Catalogue of Insects of Pennsylvania*. Hanover, York County. vi + 60 pp. (catalog)
- Ménétriés, E. (1832) *Catalogue raisonné des objets de Zoologie recueillis dans un voyage au Caucase et jusqu'aux frontières actuelles de la Perse entrepris par ordre de S. M. l'Empereur*. Académie Impériale des Sciences, St. Pétersbourg. xxxii + (2) + 271 + iv + (1) pp. (checklist in French) [!N]
- Ménétriés, E. (1849) Catalogue des insectes recueillis par feu M. Lehmann avec les descriptions des nouvelles espèces. Coléoptères pentamères. *Mémoires de l'Académie Impériale des Sciences de Saint-Pétersbourg*, (6) 6 (2), 17-66. (checklist in French) [!N]
- Ménétriés, E. (1854) Coléoptères recueillis dans la Mongolie Chinoise et aux environs de Pékin. In: V. Motschulsky *Études Entomologiques*, 3, 26-41. (descriptions in French) [*Original description of P. plagiatus.*] [!N, S]
- Merkuschew, A.V. (1960) *Concerning the role of insects in the spread of Trichinellosis*. Program & Abstracts, 1st International Conference on Trichinellosis, ROK VI, Wroclaw nr. 4, 319-320. (Conference: biology, parasites)
- Meserve, F.G. (1936) The Silphidae of Nebraska (Coleoptera). *Entomological News*, 47, 132-134. (checklist, distribution)
- Michow, H.P.G. (1866) Ueber *Nicrophorus microcephalus* Thoms. *Berliner Entomologische Zeitschrift*, 10, 411-412. (description of variation in German)
- Michow, H.P.G. (1873) *Die Begrenzung der deutschen Necrophoren-Arten (Coleoptorum genus Necrophorus Fabr.)* Jena, Druck von Hossfeld & Oetling. 29 pp. (in German)
- Miller, E.J. & McDonald, L. (1997) Rediscovery of *Nicrophorus americanus* Olivier (Coleoptera: Silphidae) in Kansas. *The Coleopterists Bulletin*, 51(1), 22. (biology, conservation) [*First record in Kansas since 1940.*] [!S]

- Miller, S.E. & Miller, P.M. (1985) *Beetles of Santa Barbara Island, California (Coleoptera)*. In: Menke, A.S. & Miller, D.R. (eds.), *Entomology of the California Channel Islands*. Santa Barbara Museum of Natural History, Santa Barbara, California. pp. 3-27 & 121-136. (biology, symbionts: mites, checklist) [*New combination of Laelaps pilosula Banks 1904 into Poecilochirus. Mentions mitetypes prob. from N. nigrita.*] [!S]
- Miller, S.E. & Peck, S.B. (1979) Fossil carrion beetles of Pleistocene California asphalt deposits, with a synopsis of Holocene California Silphidae (Insecta: Coleoptera: Silphidae). *Transactions of the San Diego Society of Natural History*, 19(8), 85-106. (fossils) [!N, S]
- Milne, L.J. (1928) Notes on Silphidae in Haliburton Co., Ont. *Canadian Field-Naturalist*, 42, 43. (biology, behavior) [*Earlier observations on burying behavior.*]
- Milne, L.J. & Milne, M.J. (1944) Notes on the behavior of burying beetles (*Nicrophorus* spp.). *Journal of the New York Entomological Society*, 52, 311-327. (biology, behavior) [*Detailed description of reproduction behaviors, mites, and interactions among species.*] [!N, S]
- Milne, L.J. & Milne, M.J. (1976) The social behavior of burying beetles. *Scientific American*, 235, 84-89. (popular review) [!N, S]
- Milne, L.J. & Milne, M.J. (1980) *The Audubon Society field guide to North American insects and spiders*. Alfred A. Knopf, New York. 989 pp. (field guide, brief descriptions, ecology) [!N]
- Milne, L.J. & Milne, M.J. (1982) *Nature's clean-up crew. The burying beetles*. Dodd, Mead & Company, New York. pp. 1-62. (biology)
- Miwa, Y. (1931) *A systematic catalogue of Formosan Coleoptera*. Published by the Institute Taihoku, Formosa 55, 45-47. (catalog) [!S]
- Mochizuki, M. (1936) A list of Coleoptera on Mt. Kongo in Chosen. *Kontyû*, 10, 207-213. (checklist)
- Mochizuki, M. & Tsunekawa, W. (1937) A list of Coleoptera Middle -Korea. *J. Chos. Nat. Hist. Soc.*, 22, 78-79. (checklist)
- Moore, B.P. (1955) Notes on carrion Coleoptera in the Oxford district. *Entomologist's Monthly Magazine*, 91, 292-295. (biology, ecology) [!M, N]
- Moore, I. (1937) A list of the beetles of San Diego County, California. *Occasional Papers, San Diego Society of Natural History*, No. 2, 1-109 (checklist) [!N]
- Moore, R.T. (1990) *Summary report, American burying beetle survey*. Report prepared for Brohm Mining Corp., Deadwood, SD by ENSR Consulting, and Engineering, Fort Collins, CO. (unpublished report: biology, conservation)
- Mori, T. & Cho, P.S. (1938) A list of the Silphidae from Manchuria. *Zool. Mag. Japan*, 50, 329-334. (checklist)
- Morimoto, K. (ed.). (1992) *Field Selection: Beetles of Japan*. Hokuryukan, Co. Ltd., Tokyo, Japan. 208 pp. (descriptions in Japanese) [!N]
- Morita, C. (1936) A list on Coleoptera from Gunzan, Chosen. *Entomological World*, 4(34), 852-862. (checklist in Japanese)
- Morley, C. (1902) Field notes on stridulation. *Entomologist's Monthly Magazine*, 38, 249-250. (biology, behavior) [*Note that stridulation is affected by the elytra*] [!S]
- Mosebach, E. (1936) Aus dem leben des totengräbers (*Necrophorus*). *Natur und Volk*, 66, 222-231. (morphology, larval stages in German) [!N]
- Motschulsky, V. (1845a) Remarques sur la collection de Coléoptères russes de Victor de Motschoulsky. *Bulletin de la Société Impériale des Naturalistes de Moscou*, 18(1&2), 3-127. (descriptions in French) [*Original description of N. guttula.*] [!N, S]
- Motschulsky, V. (1845b) Observations sur le Musée Entomologique de l'Université Impériale de Moscou. Article 1. *Bulletin de la Société Impériale des Naturalistes de Moscou*, 18(3-4), 332-388. (descriptions in French) [*Original description of N. auriplosus (nomen nudum, =N. guttula); N. lateralis (nomen nudum, =N. nigrita)*] [!N, S]

- Motschulsky, V. (1859a) Coléoptères du gouvernement de Jakoutsk, recueillis par M. Paulofski. *Mélanges Biologiques*, 3, 221-238. (catalog)
- Motschulsky, V. (1859b) Coléoptères rapportés de la Songarie par M. Séménof et décrits par V. de Motchoulski. *Bulletin de l'Académie Impériale des Sciences de St.-Pétersbourg*, 1, 301-314. (descriptions in French) [Original description of *N. ruthens* (= *N. germanicus*).] [!M]
- Motschulsky, V. (1859c) Catalogue des insectes rapportés des environs du fleuve Amour depuis la Schilka jusqu'à Nikolaëvsk, examinés et énumérés. *Bulletin de la Société Impériale des Naturalistes de Moscou*, 32(4), 487-507. (catalog in French)
- Motschulsky, V. (1860) Coléoptères de la Sibérie orientale et en particulier des rives de l'Amour. In: Schrenk, L. v. (ed.). *Reisen und Forschungen im Amur-Lande in den Jahren 1854-1856, ... Vol. 2, Zoologie: Lepidopteren, Coleopteren, Mollusken*. Kaiserlichen Akademie der Wissenschaften, St. Petersburg. pp. 77-257, pls. 6-11. (descriptions in French) [Original description of *N. dauricus*; *N. orientalis* Motsch. nec Herbst (= *N. dauricus*); *N. suturalis* (= *N. interruptus*); *N. labiatus* (= *N. investigator*); *N. sibiricus* (= *N. investigator*); *N. aurora* (= *N. vespilloides*).] [!N, S]
- Motschulsky, V. (1870) ["1869"] Énumération des nouvelles espèces de Coléoptères rapportés de ses voyages. 8-ième Article. *Bulletin de la Société Impériale des Naturalistes de Moscou*, 42, 348-354. (descriptions in French) [Original description of *N. plagiatus* (= *N. defodiens*); *N. ruficornis* (= *N. nigrita*).] [!N, S]
- Mroczkowski, M. (1949) Notes on successive appearance of some species of the genus *Nicrophorus* Fabr. and *NeoNicrophorus* Hatch (Col., Silphidae). *Polskie Pismo Entomologiczne*, 19, 196-199. (biology, ecology in Polish (English summary)) [!N, S]
- Mroczkowski, M. (1955) *Omarlicowate - Silphidae*. In: *Klucze do oznaczania owadów Polski, Czesc 19, Zeszyt 25*. Państwowe Wydawnictwo Naukowe, Warsaw. 29 pp. (key, descriptions in Polish) [!N]
- Mroczkowski, M. (1959) *Nicrophorus (Nicrophorus) kieticus* sp. n. from the Solomon Islands (Coleoptera, Silphidae). *Annales Zoologici*, 18, 65-69. (description) [Original description of *N. kieticus*.] [!N, S]
- Mroczkowski, M. (1966a) Silphidae and Dermestidae (Coleoptera) collected in Mongolia by Polish zoologists in the years 1959-1964. *Fragmenta Faunistica*, 12, 333-338. (checklist)
- Mroczkowski, M. (1966b) Silphidae, Catopidae and Dermestidae of the Noona Dan Expedition to the Philippine and Bismarck Islands. Noona Dan papers No. 7. *Entomologische Meddelelser*, 34, 325-328. (checklist)
- Mroczkowski, M. (1966c) Contribution to the knowledge of Silphidae and Dermestidae of Korea (Coleoptera). *Annales Zoologici*, 23, 433-443. (checklist) [!N, S]
- Mroczkowski, M. (1971) Silphidae, Byrrhidae i Dermestidae (Coleoptera) Bieszczadów. *Fragmenta Faunistica*, 17, 213-220. (biology, ecology in Polish (Russian & English summary))
- Mroczkowski, M. (1978) Staphylinoidea nekrofagiczne Pienin (Coleoptera). *Fragmenta Faunistica*, 22, 235-245. (biology, ecology in Polish (Russian & German summary))
- Mueller, R. (1923) Ueber die Sinneszellen im Fühler von *Nicrophorus vespillo* L. *Entomologische Rundschau*, 40, 2, 5-7, 9-10. (comment in German)
- Müller, J.K. (1986) Anpassungen zur optimalen Ressourcennutzung bei *Nicrophorus vespilloides* (Col.: Silphidae) *Verhandlungen der Deutschen Zoologischen Gesellschaft*, 79, 180. (Abstract: biology, behavior in German) [!N]
- Müller, J.K. (1987) Replacement of a lost clutch: A strategy for optimal resource utilization in *Nicrophorus vespilloides* (Coleoptera: Silphidae). *Ethology. Berlin, Hamburg*, 76, 74-80. (biology, behavior) [!S]
- Müller, J.K. & Cordes, R. (1987) Vergleich der tageszeitlichen Aktivitätsverteilung der Aaskäfer *Nicrophorus humator* und *N. vespilloides* (Coleoptera). *Verhandlungen der Deutschen Zoologischen Gesellschaft*, 80, 321. (Abstract: biology, behavior in German)

- Müller, J.K. & Dressel, J. (1984) The regulation of clutch size in relation to the availability of food resources in silphids. *XVII International Congress of Entomology Abstract*, Volume: 377. (biology, behavior) [!N]
- Müller, J.K. & Eggert, A.-K. (1987) Effects of carrion-independent pheromone emission by male burying beetles (Silphidae: *Necrophorus*). *Ethology. Berlin, Hamburg*, 76(4), 297-304. (biology, behavior) [!S]
- Müller, J.K. & Eggert, A.-K. (1988) Biologie und Fortpflanzungsverhalten des Totengräbers *Necrophorus vespilloides*. *Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin (N.F.)*, 28, 31-43. (biology, behavior in German) [!N]
- Müller, J.K. & Eggert, A.-K. (1989) Paternity assurance by "helpful" males: Adaptations to sperm competition in burying beetles. *Behavioral Ecology and Sociobiology*, 24(4), 245-249. (biology, behavior) [!S]
- Müller, J.K., & Eggert, A.-K. (1990) Time-dependent shifts between infanticidal and parental behavior in female burying beetles: A mechanism of indirect mother-offspring recognition. *Behavioral Ecology and Sociobiology*, 27(1), 11-16. (biology, behavior) [!S]
- Müller, J.K., Eggert, A.-K. & Furlkröger, E. (1990) Clutch size regulation in the burying beetle *Necrophorus vespilloides* Herbst (Coleoptera: Silphidae). *Journal of Insect Behavior*, 3(2), 265-270. (biology, behavior) ["In contrast to Bartlett & Ashworth's (1988) study and Wilson & Fudge's (1984) study on *N. orbicollis*, our results indicate no correlation between female body size and clutch size."-and: correlation between clutch size and carrion mass holds only below 10 g carcasses.] [!S]
- Müller, J.K., Eggert, A.-K. & Dressel, J. (1988) Intraspecific brood parasitism in *Necrophorus vespilloides* (Coleoptera). *Verhandlungen der Deutschen Zoologischen Gesellschaft*, 81, 351. (Abstract: biology, behavior)
- Müller, J.K., Eggert, A.-K., & Dressel, J. (1990) Intraspecific brood parasitism in the burying beetle, *Necrophorus vespilloides* (Coleoptera: Silphidae). *Animal Behaviour*, 40(3), 491-499. (biology, behavior) [!S]
- Müller, J.K., Eggert, A.-K., & Sakaluk, S. K. (1998) Carcass maintenance and biparental brood care in burying beetles: are males redundant? *Ecological Entomology*, 23(2), 195-200. (biology, behavior) [Field test failed to show any benefit of males to reproductive success of females.] [!S]
- Müller, J.K. & Schwarz, H.H. (1990) Differences in carrier-preference and evidence of reproductive isolation between mites of *Poecilochirus carabi* (Acari, Parasitidae) living phoretically on two sympatric *Necrophorus* species (Coleoptera, Silphidae). *Zoologische Jahrbücher, Abteilung für Systematik, Ökologie und Geographie der Tiere*, 117(1), 23-30. (biology, symbionts: mites in English (German summary)) [!N, S]
- Müller, O.F. (1764) *Fauna insectorum Fridrichsdalina, sive methodica descriptio insectorum agrum Fridrichsdalensis, cum characteribus genericis et specificis, nominibus trivialibus, locis natalibus, iconibus allegatis, novisque pluribus speciebus additis*. I. F. Gleditsch, Hafniae et Lipsiae. xxiv + 96 pp. [!N]
- Müller, O.F. (1776) *Zoologiae Danicae prodromus, seu animalium Daniae et Norvegiae indigenarum characteres, nomina, et synonyma imprimis popularium*. Hallager, Havniae. xxxii + 274 pp. (catalog)
- Muths, E.L. (1992) ["1991"] Substrate discrimination in burying beetles, *Necrophorus orbicollis* (Coleoptera: Silphidae). *Journal of the Kansas Entomological Society*, 64(4), 447-450. (biology, ecology) ["Beetles discriminate between substrates, preferring substrates with added bulk over those without."] [!S]
- Nabaglo, L. (1973) Participation of invertebrates in decomposition of rodent carcasses in forest ecosystems. *Ekol. Pol.*, 21, 251-270. (biology, ecology)

- Nagano, M. & Hoshina, H. (2001) Report on the silphid beetle *Ptomascopus morio* having the elytra with dark-red patches *Coleopterists' News*, 135(Sept.), 1-5. (description of variation in Japanese) [Data demonstrating that the subspecific name *P. morio* var. *lewisi* is not deserving of subspecific rank.] [!S]
- Nakane, T. (1955a) *Colored illustrations of the insects of Japan: Coleoptera. Enlarged and revised edition* (revised Nakane, T., edited by the Kinki Coleopterological Society. Hoikusha, Osaka, Japan. 274 pp. (checklist, brief descriptions) [!N]
- Nakane, T. (1955b) *Silphidae*. In: Coleoptera (beetles) of Japan, parts 21-23 *Shin-Kontyu*, 8 (1), 50-55; 8 (2), 47-51; 8 (3), 51-55. (key, descriptions in Japanese) [!N]
- Nakane, T. (1963) *Families Hydraenidae through Pselaphidae*. In: Nakane, T., Ohbayashi, K., Nomura, S., & Kurosowa, Y. (eds.). *Iconographia Insectorum Japonicorum Colore naturali edita*, Vol. II, Coleoptera. Hokuryukan, Tokyo, Japan. , pp. 63-102, pls. 32-51. (checklist, brief descriptions in Japanese) [!N]
- Nakane, T. (1980) *Colored illustrations of the insects of Japan, vol I, Coleoptera, Enlarged and revised*. Edited by the Japan Coleopterological Society Hoikusha Pub., Osaka. 275 pp. (catalog)
- Nakane, T. & Baba, K. (1979) *Silphidae in Niigata Prefecture, Japan*. In: Baba, K. (ed.), *Insects of Niigata Province. Essa (Echigo-Sado)* Entomological Society Bulletin, 50th issue celebration volume. K. Baba, Niigata. pp. 10-12. (checklist, distribution in Japanese) [!N]
- Navarrete-Heredia, J.L. (1995) Coleopteros Silphidae de Jalisco y del Volcan de Tequila incluyendo comentarios generales sobre su biología. *Dugesiana*, 2, 11-16. (biology, ecology, key in Spanish) [describes habitat preferences, defense behaviors, stridulation, sex ratios, seasonality, and an illustrated key to species] [!S]
- Navarrete-Heredia, J.L. (2001) Comentarios sobre algunas especies de Silphidae de Sonora e Hidalgo, incluyendo la distribución por estado de las especies de Silphidae en México. *Acta Zoologica Mexicana*, (N.S.) 83, 169-171. (checklist, distribution in Spanish) [!N]
- Navarrete-Heredia, J.L. & Fierros-López, H.E. (1998) Silfidos de tres localidades de Jalisco, Mexico. *Dugesiana*, 5(1), 49-50. (distribution note in Spanish) [!N, S]
- Navarrete-Heredia, J.L. & Fierros-López, H.E. (2000) *Silphidae (Coleoptera)*. In: Llorente, J.E., González, E., & Papavero, N. (eds.), *Biodiversidad, taxonomía y biogeografía de artrópodos de México: hacia una síntesis de su conocimiento*. Vol. II. Museo de Zoología, Facultad de Ciencias, Universidad Autónoma de México, México D.F., México. pp. 401-412. (checklist, distribution in Spanish (English summary)) [!S]
- Navarrete-Heredia, J.L. & Quiroz-Rocha, G.A. (2000) Macro-coleópteros necrófilos de San José de los Laureles, Morelos, México (Coleoptera: Scarabaeidae y Silphidae). *Folia Entomologica Mexicana*, 110, 1-13. (biology, ecology, distribution in Spanish) [!N]
- Neal, J.C., Stewart, M.E. & Montague, W.G. (1994) Burying beetle (Coleoptera: Silphidae, *Nicrophorus*) surveys on Poteau Ranger District, Ouachita National Forest. *Proceedings of the Arkansas Academy of Science*, 48, 127-129. (checklist) [I specimen of 2,450 *Nicrophorus* was *N. americanus*.] [!N, S]
- Needham, J.G. (1904) Beetle drift on Lake Michigan. *Canadian Entomologist*, 36, 294-296. (biology, ecology) [*N. americanus* one among many beetle species found.]
- Neumann, K.W. (1943) The life history of the beetle mite *Poecilochirus necrophori* Vitzth. with a description of most of the stages of development. *Zoologischer Anzeiger*, 142, 1-21. (biology, symbionts: mites in German)
- Neumann, K.-W. & Sellnick, M. (1950) Einige Bemerkungen zur Lebensgeschichte der Trachytine Uroseius novus Oudms. 1902 (Acari, Parasitiformes) und eine Beschreibung ihrer Entwicklungsstufen. In: W. Herre (ed.), *Neue Ergebnisse und Probleme der Zoologie. Zoologischer Anzeiger (Ergänzungsband)*, 145, 643-654. (biology, symbionts: mites in German) [Biology of mite *Neoseius novus* on host *N. vespillo*. Predation on fly eggs like *P. carabi*.] [!N]

- Newman, E. (1838) Entomological notes. *Entomological Magazine*, 5, 372-402. (descriptions) [Original description of *N. bicolon* (= *N. pustulatus*).] [!S]
- Newton, A.F., Jr. (1991) *Silphidae (Staphylinoidea)*. In: Stehr, F.W. (ed.). *An introduction to immature insects of North America*. Vol. 2. Kendall/Hunt Publishing Co., Dubuque, Iowa. pp. 339-341. (morphology, larval stages) [Excellent review of larval diagnostic (synapomorphic?) characters at the genus and higher levels.] [!N, S]
- Niemitz, C. (1972) Bioakustische, verhaltensphysiologische und morphologische Untersuchungen an *Necrophorus vespillo* (Fab.). *Forma et Functio*, 5, 209-230. (morphology in German) [!N]
- Niemitz, C. (1978) *Necrophorus vespillo* (Silphidae)-- Kopulations- und Kampfverhalten-- Stridulationsgeräusche. *Publ. Wiss. Film., Sect. Biol., Ser. 11, Nr. 12/E 2436*. (biology, behavior in German)
- Niemitz, C. & Krampe, A. (1971) Gehörsinn bei polyphagen Käfern nachgewiesen. *Naturwissenschaften*, 58, 368-369. (morphology: stridulation, hearing in German) [!N, S]
- Niemitz, C. & Krampe, A. (1972) Investigations of the orientation behavior of the larvae of *Necrophorus vespillo* F. (Silphidae Coleoptera). *Zeitschrift für Tierpsychologie*, 30, 456-463. (biology, behavior in German (English summary)) [Only young (<50 hours old) larvae respond to stridulations.] [!S]
- Nikolajev, G.V. & Kozminykh, V.O. (2002) *The carrion beetles (Coleoptera: Agyrtidae, Silphidae) of Kazakhstan, Russia and adjacent countries*. Almaty, Kazak universiteti, 160 pp. (catalog, distribution, descriptions, keys, figures in Russian (English summary)) [! S]
- Nishikawa, M. (1984) An example of the food resource of *Nicrophorus quadripunctatus* Kraatz. *Kanagawa-Chuho, Yokohama*, 73, 18. (biology, note in Japanese (English summary))
- Nishikawa, M. (1986) [A review of the grouping within the tribe Nicrophorini, with a check-list of world species.] *Kanagawa-Chuho, Kawasaki*, 80, 93-100. (catalog in Japanese) [!S]
- Nishikawa, M. (2000) Carrion beetles (Agyrtidae, Leioididae, Silphidae) obtained during the Biological Expedition to the Kamchatka Peninsula and the north Kuril Islands. *Nat. Hist. Res., Special Issue*, 7, 113-117. (checklist in English (Japanese summary)) [Some new locality data for 2 *Nicrophorus* species known from this area since the 1920s.] [!S]
- Nishikawa, M. (2001) Description on larva of *Nicrophorus maculifrons* (Coleoptera, Silphidae). *Special Publications of the Japan Coleopterological Society, Osaka*, 1, 79-81. (larval descriptions, phylogenetics in English (Japanese summary)) [!S]
- Nisimura, T., Kon, M., Numata, H. (2002) Bimodal life cycle of the burying beetle *Nicrophorus quadripunctatus* in relation to its summer reproductive diapause *Ecological Entomology*, 27, 220-228 (biology, behavior) [Physiological / phylogenetic constraints invoked to explain summer diapause, not competition. Summer diapause expected not to occur in more northern latitudes with cooler midsummer temperatures.] [!S]
- Nomura, S. & Lee, C.E. (1992) Silphid fauna of Chejudo Island, Korea. *Esakia*, 32, 81-86. (catalog) [Report of misspelling synonym of *N. concolor* (*N. concoler*; Kim 1978:61).] [!N, S]
- Nomura, S., Kishimoto, T. & Watanabe, Y. (2000) A faunistic study on the staphylinoid beetles (Insecta, Coleoptera) from the garden of the Imperial Palace, Tokyo, Japan. *Memoirs of the National Science Museum*, 36, 257-286. [!N]
- Novák, B. (1965a) [Changes in density of Czechoslovak field carrion beetles (Coleoptera: Silphidae) as a result of extermination by soil traps]. *Acta Univ. Palackianae Olomucensis Fac. rerum naturalium*, 19, 99-119. (biology, ecology in Czech)
- Novák, B. (1965b) [Faunistic-ecological study of burying beetles in field biotopes near Hane (Col. Silphidae)]. *Acta Univ. Palackianae Olomucensis Fac. rerum naturalium*, 19, 121-152. (biology, ecology in Czech)
- Novak, P. (1952) *Kornjasi jadranskog primorja (Coleoptera)*. Jugoslavenska Akademija Znanosti i Umjetnosti. 521 pp (checklist in Croatian) [!N]

- Núñez, E., Tizado, E.J., Salgado, J.M., & Régil, A. (1989) The Silphidae family (Col.) from the phytogeographical Orocantabrica province. I. Study area and necrophorine tribe. *Boletín de la Asociación Española de Entomología*, 13, 431-449. (checklist in Spanish (English summary)) [*N. interruptus* almost absent in May, other species present.] [!S]
- Obrtel, R. (1971) Soil surface Coleoptera in lowland forest. *Acta Scientiarum Naturalium Academiae Scientiarum Bohemoslovaca Brno*, (N.S.) 5, 1-47. (biology, ecology)
- Ôhara, M. (1992) Notes on the insects fauna of the Nagahashi Naebo area, Otaru, central Hokkaido, Japan, No. 1. -Coleoptera. *Bulletin of the Otaru Museum*, 6, 1-21. (checklist in Japanese (English summary)) [!S]
- Ôhara, M. (1994a) *Notes of Insect in Mt. Yotei, Hokkaido*. Kutchan-sosyo, 14. 89 pp. (checklist in Japanese) [*B & W photos & elevational abundance data.*] [!S]
- Ôhara, M. (1994b) On the beetles in Otaru, Hokkaido. *Hokkaido no Shizen to Seibutsu (Nature and Organisms of Hokkaido)*, 9, 59-65. (checklist in Japanese) [*Subsequent misspelling of Nicrophorus: Nicropholus.*] [!S]
- Ôhara, M. (1995a) Notes on the insect fauna of the Nagahashi Naebo area, Otaru, central Hokkaido, Japan, No. 9.- Survey of the research in 1992 and 1993, and on the beetles collected by bait trap with dead chicken. *Bulletin of the Otaru Museum*, 8, 19-42. (checklist in Japanese (English summary)) [*P. morio* more abundant than other nicrophorines- 88 specimens, vs. 5 *N. maculifrons* & 37 *N. quadripunctatus* (3 silphinae species accounted for 7 specimens).] [!S]
- Ôhara, M. (1995b) Notes on insect fauna of the Okusawa-Suigenchi area, Otaru, central Hokkaido, Japan, No. 1. Coleoptera. *Bulletin of the Otaru Museum*, 8, 1-13. (checklist in Japanese (English summary)) [!N]
- Ôhara, M. (1997) Notes on the insect fauna of the Niseko Mountains, central Hokkaido, Japan, No. 1. - Survey of the research and records of beetles. *Bulletin of the Otaru Museum*, 10, 97-110. (checklist in Japanese (English summary)) [*Odd that only 1 Nicrophorus species found (perhaps due to season?)*] [!S]
- Ôhara, M. & S. Higashi (1987) Interference by ground beetles with the dispersal by ants of seeds of Trillium species (Liliaceae). *Journal of Ecology*, 75(4), 1091-1098. (comment: ecology) [*Reported N. quadripunctatus as nocturnal and from only 1 of 2 sites studied.*] [!S]
- Ôhara, M., K. Miyashita & T. Yabuki. (1995) Insect faunal survey of Mt. Yotei, Hokkaido. Coleoptera. *Bulletin of the Otaru Museum*, 8, 65-80. (checklist in Japanese (English summary)) [*N. investigator*, not *N. predator*.] [!S]
- Ôhara, M. & T. Yabuki. (1992) Insect faunal survey of Mt. Yotei, Hokkaido. - Coleoptera-. *Bulletin of the Otaru Museum*, 6, 55-62. (checklist in Japanese (English summary)) [*Graphs of abundance by elevation- N. quadripunctatus below 700 m, N. tenuipes from 600-1200 m.*] [!S]
- Ohkawara, K. (1991) A note on height of fright [sic] in *Nicrophorus* carrion beetles. *Research Bulletin Hokkaido University Forest*, 48(2), 463-467. (biology, ecology in Japanese (English summary)) [*N. maculifrons & N. vespilloides in traps set at 1.8m; N. investigator & N. tenuipes in traps set at 9.0m and 12.6m.*] [!S]
- Ohkawara, K., Suzuki, S., & Katakura, H. (1998) Competitive Interaction and niche differentiation among Burying Beetles (Silphidae, *Nicrophorus*) in Northern Japan. *Entomological Science*, 1(4), 551-559. (biology, ecology) [*N. maculifrons more active in spring, N. vespilloides and N. quadripunctatus in summer.*] [!S]
- Okamoto, H. (1924) The insect fauna of Querpert Island (Saishiu-to). *Bull. Agric. Expt. Stat. Gov. - Gen. Chosen*, 1, 47-233. (checklist)
- Olivier, A.G. (1790) *Entomologie, ou histoire naturelle des insectes, avec leurs caractères génériques et spécifiques, leur description, leur synonymie, et leur figure enluminée*. Coléoptères tome second, Paris, De l'Imprimerie de Baudouin, Imprimeur de l'Assemblée Nationale (descriptions in French) [*Original description of N. americanus; detailed description of genus, including larvae.*] [!N, S]

- Opler, P.A. [ed.] (1985) Species of special concern in Pennsylvania. Chapter 2 - invertebrates *Carnegie Museum Of Natural History Special Publication*, No. 11 pp. 81-165. (biology, conservation)
- Orchymont, A., dí (1920) La nervation alaire des Coléoptères. *Annales de la Société Entomologique de France*, 89 (morphology, wing venation in French)
- Osborne, P.J. (1956) Insects other than Lepidoptera at a mercury-vapor light trap. *Entomol. Mon. Mag.*, 92, 19. (biology, ecology)
- Osborne, P.J. (1969) An insect fauna of late Bronze Age date from Wilsford, Wiltshire. *Journal of Animal ecology*, 38(3), 555-566. (fossils) [*N. vespillo* listed among assemblage of fossils insects dated to 3,330 +/- 90 B. P.] [!S]
- Osinskii, S.O. (1938) The role of insects that attack carcasses in the preservation and spread of the bacilli of anthrax in nature. *Actes Sci. Inst. Vet. Kiev*, 1, 50-58. (biology, symbionts: bacteria in Ukrainian) [*Anthrax bacilli could be disseminated by silphids*]
- Osten-Sacken, B. (1862) Entomologische Notizen X. *Necrophorus americanus* Oliv. *Stettiner Entomologische Zeitung*, 23, 408. (biology, behavior in German) [*Early observations on burying behavior.*] [!S]
- Otronen, M. (1988) The effect of body size on the outcome of fights in burying beetles (*Nicrophorus*). *Annales Zoologici Fennici*, 25(2), 191-201. (biology, behavior) [*Larger beetles usually win.*] [!S]
- Otronen, M. (1990) The effect of prior experience on the outcome of fights in the burying beetle, *Nicrophorus humator*. *Animal Behaviour*, 40(5), 980-982. (biology, behavior) [*Results suggest prior experience is used by N. humator to decide whether to escalate or retreat from a conflict.*] [!S]
- Paik, W.H. (1985) The burying beetles of Korea. *Corentomon, Suwon*, 1, 2-12.
- Palestrini, C., Barbero, E., Luzzatto, M., & Zucchelli, M. (1996) *Nicrophorus mexicanus* (Coleoptera: Silphidae: Nicrophorinae): larval morphology and phylogenetic considerations on the *N. investigator* group. *Acta Societatis Zoologicae Bohemicae*, 60, 435-445. (larval descriptions, phylogenetics) [*Only nearctic investigator group spp. + N. interruptus; phylogenetics poorly done; key to distinguish larval instars regardless of species.*] [!S]
- Palestrini, C., Rolando, A., & Zunino, M. (1988) Sound production in the carrion beetle *Nicrophorus vespillo* (L.) (Coleoptera Silphidae). Abstract of paper presented at twelfth meeting of the Italian Society for the Study of Animal Behaviour (Catania, September 28-October 1, 1987). *Monitore Zoologico Italiano*, (N.S.) 22, 543-544. (Abstract: biology, behavior) [!N]
- Panov, A.A. (1986) The cerebral neurosecretory cells and retrocerebral endocrine complex in several representatives of Staphyliniformic beetles (Coleoptera, Staphyliniformia). *Journal für Hirnforschung*, 27, 409-421. (morphology: cerebral neurosecretory cells) [!N]
- Panzer, G.W.F. (1793) *Faunae insectorum Germanicae initia; oder Deutschlands insecten gesammelt und herausgegeben von D.G.W.F. Panzer*. Nürnberg, 1792-1844. 2 (Serial: catalog in German)
- Panzer, G.W.F. (1794) *Faunae Insectorum Germanicae initia oder Deutschlands Insecten*. Nürnberg, 24 (20) (catalog in German)
- Panzer, G.W.F. (1795) *Deutschlands Insectenfaune, oder entomologisches Taschenbuch für das Jahr 1795*. Nürnberg, in der Felseckerschen Buchhandlung, [32], 370, [2] p. 1 (Serial: catalog in German)
- Panzer, G.W.F. (1797) *Faunae insectorum Germanicae initia; oder Deutschlands insecten gesammelt und herausgegeben von D.G.W.F. Panzer*. Nürnberg, 62 (Serial: catalog in German)
- Papp, C.S. (1984) *Introduction to North American beetles, with more than 1,000 illustrations*. Entomography Publications, Sacramento, California. 335 pp. (descriptions) [!N]

- Pardo-Alcaide, A. & Yus, R. (1975) Genera de Coleópteros de la Península Ibérica. Familia Silphidae. *Graellsia*, 30, 93-111. (morphology, larval stages in Spanish) [!N]
- Parkhomenko, O.V. (2000a) A description of the third-instar larva of the burying beetle *Nicrophorus sepultor* (Coleoptera, Silphidae). *Vestnik Zoologii*, 34(1-2), 89-92. (morphology, larval stages in Ukrainian (English summary)) [!S]
- Parkhomenko, O.V. (2000b) The morphological characteristics of the larvae burying beetle, *Nicrophorus anttenatus* [sic] (Coleoptera, Silphidae). *Vestnik Zoologii*, 34 (supp. 14), 160-164. (morphology, larval stages in Ukrainian (English summary)) [!S]
- Pasquet, O. (1916) Nécropores d'Europe et du Caucase. Insecta. *Revue Illustrée d'Entomologie*, 6, 120-183. (description of variation in French) [Original description of *N. interruptus* var. *algericus* (= *N. interruptus*); *N. interruptus* var. *nigricans* (= *N. interruptus*).] [!M]
- Paulian, R. (1941) Les premiers états des Staphyloidea (Coleoptera). Étude de morphologie comparée. *Mémoires du Muséum National d'Histoire Naturelle*, (N.S.) 15, 1-36. (morphology, larval stages in French) [!N, S]
- Paulian, R. (1946) Essai de bionomie quantitative sur les nécrophores (Col. Silphidae). *Revue Française d'Entomologie*, 13, 93-98. (biology, ecology in French) [Quantitative ecological sampling.] [!N, S]
- Paykull, G. (1798) *Fauna Svecica. Insecta. Vol. 1*. J. F. Edman, Upsaliae [Uppsala]. 358 pp.
- Payne, J.A. & Crossley, D.A., Jr. (1966) *Animal species associated with pig carrion*. Oak Ridge National Laboratory, Oak Ridge, Tennessee. 70 pp. (biology, ecology) [!N]
- Payne, J.A. & King, E.W. (1970) ["1969"] Coleoptera associated with pig carrion. *Entomologist's Monthly Magazine*, 105, 224-232. (biology, ecology) [!N]
- Pearson, R.G. (1962) The Coleoptera from a late-glacial deposit at St. Bees, West Cumberland. *Journal of Animal Ecology*, 31(1), 129-150. (fossils) [Fossils that appear to match *N. humator* and *N. vespilloides* from 10,500 B.P.] [!S]
- Peck, S.B. (1982) The life history of the Japanese carrion beetle *Ptomascopus morio* and the origins of parental care in *Nicrophorus* (Coleoptera, Silphidae, Nicrophorini). *Psyche (Cambridge)*, 89(1-2), 107-111. (biology, behavior) [!N, S]
- Peck, S.B. (1986) *Nicrophorus* (Silphidae) can use large carcasses for reproduction (Coleoptera). *Coleopterists Bulletin*, 40, 44. (biology, behavior) [Note- first documentation that *Nicrophorus* will breed on large carcasses.] [!S]
- Peck, S.B. (1990) *Insecta: Coleoptera: Silphidae and the associated families Agyrtidae and Leiodidae*. In: Dindal, D.L. (ed.). *Soil Biology Guide*. John Wiley & Sons, New York. pp. 1113-1136. (key) [Subsequent misspelling of *N. guttula*: *N. gutula*.] [!N, S]
- Peck, S.B. (2000) *Silphidae Latreille, 1807*. In: Arnett, R.H., Jr. & Thomas, M.C. (eds.). *American Beetles, Vol. 1. Archostemata, Myxophaga, Adepaga, Polyphaga: Staphyliniformia*. CRC Press, Boca Raton, Florida. pp. 268-271. (family treatment) [Key to Nearctic genera.] [!N]
- Peck, S.B. (2001) Review of the carrion beetles of Australia and New Guinea (Coleoptera: Silphidae). *Australian Journal of Entomology*, 40, 93-101. (in English) [Table 1 lists Indo-Malaysian species of *Nicrophorus*, including 4 as yet undescribed species.] [!S]
- Peck, S.B. & Anderson, R.S. (1985) Taxonomy, phylogeny and biogeography of the carrion beetles of Latin America (Coleoptera: Silphidae). *Quaestiones Entomologicae*, 21(3), 247-317. (key, descriptions, phylogenetics) [Keys to all New World species (Except *N. hispaniola*); first cladistic analysis of relationships in the Silphidae. Placed *N. americanus* and *N. pustulatus* as *incertae sedis*.] [!S]
- Peck, S.B. & Kaulbars, M.M. (1987) A synopsis of the distribution and bionomics of the carrion beetles (Coleoptera: Silphidae) of the conterminous United States. *Proceedings of the Entomological Society of Ontario*, 118, 47-81. (checklist) [Detailed distribution maps for each species for the US.] [!N, S]

- Peck, S.B. & Miller, S.E. (1982) Type designations and synonymies for North American Silphidae (Coleoptera). *Psyche (Cambridge)*, 89(1-2), 151-156. (nomenclature) [*Synonymized N. hecate Bland under N. guttula Mots.*] [!N, S]
- Peck, S.B. & Miller, S.E. (1993) *A catalog of the Coleoptera of America north of Mexico. Family: Silphidae*. U.S.D.A. Agricultural Research Service, Washington, DC (Agriculture Handbook 529-28). x + 24 pp. (species-group catalog) [*Explanation of N. nigrita as a noun in apposition.*] [!N, S]
- Peck, S.B. & Thomas, M.C. (1998) A distributional checklist of the beetles (Coleoptera) of Florida. *Arthropods of Florida and Neighboring Land Areas*, 16: viii + 180 pp. (checklist, distribution) [!N]
- Peña G., L.E. (1981) El *Nicrophorus chilensis* Philippi. *Revista Chilena de Entomología*, 11, 10. (distribution note in Spanish)
- Peña G., L.E. (1996) *Introducción al estudio de los Insectos de Chile. Cuarta edición*. Editorial Universitaria, Santiago. 253 pp., 16 col. plates. (biology, ecology in Spanish) [!N]
- Pennington, M. [ed.] (1997) Update. *Shetland Entomological Group Newsletter*, 14, 9-12. (distribution note)
- Perreau, M. (1998) Commensal Coleoptera with Alcidae birds to the northeast of the Siberia (Coleoptera, Silphidae, Agyrtidae and Leiodidae Cholevinae). *Bulletin de la Société Entomologique de France*, 103(1), 83-89. (biology, ecology in French (Englishsummary)) [*Nicrophorus spp. on dead Auks, not commensal.*]
- Peschke, K., Krapf, D. & Fuldner, D. (1987) Ecological separation, functional relationships, and limiting resources in a carrion insect community. *Zoologische Jahrbücher, Abteilung für Systematik, Ökologie und Geographie der Tiere*, 114, 241-265. (biology, ecology) [!N]
- Petruška, F. (1964) Beitrag zur Bewegungsaktivität einiger Aaskäfer-Arten (Col. Silphidae et Histeridae) *Acta Universitatis Palackianae Olomucensis, Facultas Rerum Naturalium*, 16, 159-189. (biology, ecology in Czech (German summary)) [!N]
- Petruška, F. (1968) The carrion-beetles as a component part of the insects fauna of the fields in the Unicoiv Plain. *Acta Universitatis Palackianae Olomucensis, Facultas Rerum Naturalium*, 28, 159-187. (biology, ecology in Czech (English summary)) [!N]
- Petruška, F. (1976) The effect of predominating winds on the flight of some species of beetles from the group of Silphidae into pitfall traps (Col. Silphidae). *Acta Universitatis Palackianae Olomucensis Facultas Rerum Naturalium*, 51, 155-175. (biology, ecology in Czech (English summary))
- Peyerimhoff, P. de. (1934) Les *Nicrophorus* (Col. Silphidae) en Berbérie. *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord*, 25, 333-334. (distribution note in French) [*Records of N. interruptus and N. humator from North Africa.*] [!M, S]
- Peyton, M.M. (1994) *A report on the collection of 40 specimens of the endangered American burying beetle (Nicrophorus americanus) in the Upper Platte River Valley*. Unpublished Report to the U. S. Fish and Wildlife Service, 12 pp. (unpublished report: biology, conservation)
- Peyton, M.M. (1996) *The American burying beetle (Nicrophorus americanus). Range and population study for the dissected hills south of the Platte River, Dawson and Lincoln Counties, Nebraska, 1996*. Unpublished Report to the U. S. Fish and Wildlife Service and the Nebraska Game and Parks Commission, 16 pp. (unpublished report: biology, conservation)
- Philippi, F. (1887) Catálogo de los coleópteros de Chile. *Annales Universidad de Chile*, 71, 619-806. (catalog in Spanish)
- Philippi, R.A. (1871) Beschreibung einiger neuer chilenischer Insecten. *Stettiner Entomologische Zeitung*, 32, 285-295. (descriptions in German) [*Original description of N. chilensis.*] [!S]
- Pic, M. (1917a) Descriptions abrégées diverses. *Mélanges Exotico ñ Entomologiques*, 26, 2-24. (description of variation in French) [*Original description of N. didymus var. peruvianus (=N. didymus); N. insularis var. humeralis (=N. insularis).*] [!N, S]

- Pic, M. (1917b) Notes diverses, descriptions et diagnoses (suite). *Échange*, 33, 1, 5, 9, 13, 17, 21. (description of variation in French) [Original description of *N. interruptus* var. *pasqueti* (= *N. interruptus*); *N. vespilloides* var. *subinterruptus* (= *N. vespilloides*); *N. vestigator* var. *Viturai* (= *N. vestigator*).]
- Pic, M. (1933a) Notes diverses, nouveautés (suite). *Échange*, 49, 5-6. (description of variation in French) [Original description of *N. vestigator* var. *Carreti* (= *N. vestigator*).]
- Pic, M. (1933b) Coléoptères exotiques en partie nouveaux (suite). *Échange*, 49, 6-7. (description of variation in French) [Original description of *N. flexuosus* var. *Portevini* (= *N. didymus*).]
- Pickles, W. (1942) Animal mortality on three miles of Yorkshire roads. *Journal of Animal Ecology*, 11(1), 37-43. (comment: ecology) [*N. humator* one of 72 beetles found dead on examined road section.] [!S]
- Pierce, W.D. (1949) Fossil arthropods of California, 17. The silphid burying beetles in the asphalt deposits. *Bulletin of the Southern California Academy of Sciences*, 48, 55-70. (fossils, descriptions) [Original description of 6 fossil species: *N. guttula punctostriatus* (= *N. guttula*); *N. mckittricki* (= *N. marginatus*); *N. obtusiscutellum* (= *N. marginatus*); *N. guttulus labrae* (= *N. marginatus*); *N. investigator latifrons* (= *N. marginatus*); *N. investigator alpha* (= *N. nigrita*).] [!N, S]
- Pirone, D.J. (1974) *Ecology of necrophilous and carophilous Coleoptera in a southern New York woodland (phenology, aspection, trophic and habitat preferences)*. Ph.D. Thesis, Department of Biological Sciences, Fordham University, New York, New York. xxv + 769 + 3 pp. (Ph.D. Thesis: biology, ecology) [!N]
- Pirone, D.J. & Sullivan, D.J. (1981) ["1980"] Ecology of necrophilous and carophilous Coleoptera in a southern New York woodland. Part I -- Overview. *Journal of the New York Entomological Society*, 88, 186-196. (biology, ecology) [!N]
- Poda, N. (1761) *Insecta Musei Graecensis, quae in ordines, genera et species juxta systema naturae Caroli Linnaei / digessit Nicolaus Poda*. [S.l.] : Prostant Apud Joannem Baptistam Dietrich, bibliopolam; Graecii : Typis Haeredum Widmanstadii, anno 1761: [8], 127, [13] p (catalog)
- Poll, M. (1932) Contribution a l'étude des tubes de Malpighi des coléoptères; leur utilité en phylogénèse. *Récueil de l'Institut Zoologique Torley-Rousseau*, 4, 47-80. (morphology: malpighian tubules in French)
- Pontoppidan, E. (1765) *Kurzgefaszte nachrichten, die naturhistorie Dannemark betreffend. Aus dem Danischen uberseszet* Kopenhagen, Hamburg, Verlegts Gabriel Christian Rothens Wittwe, und Prosst, und Michael Christian Bock. 232 pp. (in German)
- Pope, R.D. (1977) *Coleoptera and Strepsiptera*. In: Kloet, G.S. & Hincks, W.D. *A Check List of British Insects (Second Edition). Handbooks for the Identification of British Insects, Vol. 11, Part 3*. Royal Entomological Society of London, London. xiv + 105 pp. (checklist) [!N]
- Poppius, B. R. (1899) Förteckning öfver Ryska Karelens Coleoptera. *Acta Societatis pro Fauna et Flora Fennica*, 18 (1), 1-125. (checklist in Swedish) [!N]
- Porta, A. (1926) *Fauna Coleopterorum Italica. Vol. 2. Staphylinoidea. Staphylinidae, ... Histeridae*. Stabilimento Tipografico Piacentino, Piacenza. 405 pp. (key, checklist in Italian) [!N]
- Portevin, G. (1903) Remarques sur les Nérophages du Muséum et description d'espèces nouvelles. *Bulletin du Muséum d'Histoire Naturelle*, 9, 329-336. (descriptions in French) [Original description of *N. quadricollis*; *N. vespilloides* var. *lateralis* (= *N. defodiens*).] [!N, S]
- Portevin, G. (1905a) Notes synonymiques sur les Silphides [Col.] *Bulletin de la Société Entomologique de France*, pp. 49-51. (nomenclature in French) [!S]
- Portevin, G. (1905b) Troisième note sur les Silphides du Muséum. *Bulletin du Muséum National d'Histoire Naturelle*, pp. 418-424. (distribution note in French) [!S]

- Portevin, G. (1914a) Silphides et Liodides nouveaux. *Annales de la Société Entomologique de Belgique*, 58, 190-198. (description of variation in French) [Original description of *N. antennatus* var. *centralis* (= *N. antennatus*); *N. vespilloides* var. *fractus* (= *N. vespilloides*); *N. vespilloides* var. *borealis* (= *N. vespilloides*); *N. vespilloides* var. *subfaciatus* (= *N. vespilloides*); *N. vestigator* var. *bipunctatus* (= *N. vestigator*); *N. vestigator* var. *obscuripennis* (= *N. vestigator*).] [!N, S]
- Portevin, G. (1914b) Révision des Silphides, Liodides et Clambides du Japon. *Annales de la Société Entomologique de Belgique*, 58, 212-236. (description of variation in French) [Original description of *Acanthopsilus* (= *Nicrophorus*), type species = *N. concolor*; Original description of *P. morio* var. *lewisi* (= *P. morio*).] [!N, S]
- Portevin, G. (1920) Revision des Silphini et Necrophorini de la région indo-malaise. *Bulletin du Muséum National d'Histoire Naturelle*, 26, 395-401. (descriptions in French) [Original description of *N. podagricus*; *N. validus*.] [!N, S]
- Portevin, G. (1922) Notes sur quelques Silphides et Liodides de la collection Grouvelle. *Bulletin du Muséum National d'Histoire Naturelle*, 28, 54-58. (descriptions in French) [Original description of *N. armeniacus* (= *N. germanicus*); *N. podagricus* var. *nigrifrons* (= *N. podagricus*).] [!N, S]
- Portevin, G. (1923) Revision des Necrophorini du globe. *Bulletin du Muséum National d'Histoire Naturelle*, 29, 64-71, 141-146, 226-233, 303-309. (key, descriptions in French) [Original description of *Nechrocaris* (= *Nicrophorus*), type species = *N. carolinus*; *N. usseriensis*; *N. carolinus* var. *dolosus* (= *N. carolinus*); *N. rotundicollis* (= *N. concolor*); *P. morio* var. *villosus* (= *P. morio*); *N. quadripunctatus* var. *immaculatus* (= *N. quadripunctatus*).] [!N, S]
- Portevin, G. (1924) Revision des Necrophorini du globe. *Bulletin du Muséum National d'Histoire Naturelle*, 30, 83-87, 145-150, 185-192, 287-293, 374-377. (key, descriptions in French) [Original description of *N. oberthuri*; *N. flexuosus* (= *N. didymus*); *N. fossor infuscaticornis* (= *N. interruptus*); *N. investigator* var. *variolosus* (= *N. investigator*); *N. confusus*; (= *N. sepultor?*); *N. vespilloides* var. *borealis* (= *N. vespilloides*).] [!N, S]
- Portevin, G. (1925) Revision des Necrophorini du globe. *Bulletin du Muséum National d'Histoire Naturelle*, 31, 165-170. (description of variation in French) [Original description of *N. velutinus* var. *aurigaster* (= *N. tomentosus*).] [!N, S]
- Portevin, G. (1926a) *Les Grands Nécropages du Globe. Silphini - Necrodini - Necrophorini*. Encyclopédie Entomologique (A), Vol. 6, Lechevalier, Paris. 270 pp. (revision: key, descriptions & catalog in French) [First world revision of the *Nicrophorinae*. Original description of *N. heurni*.] [!N, S]
- Portevin, G. (1926b) Description de deux Silphides nouveaux de Nouvelle Guinée. *Nova Guinea*, 15, 210-211. (descriptions in French) [Detailed redescription of *N. heurni*.] [!N, S]
- Portevin, G. (1929) *Histoire naturelle des coléoptères de France. Tome I. Adepaga - Polyphaga: Staphylinoidea*. P. Lechevalier, Paris. xi + 649 pp., 5 pls. (key, intraspecific variation in French) [!N]
- Portevin, G. (1932) Note sur quelques silphides du Deutsches Entomologisches Museum. *Bulletin Mensuel de la Société des Naturalistes Luxembourgeois*, 42, 58-60. (morphology in French) [!M]
- Portevin, G. (1943) Silphides nouveaux ou peu connus. *Revue Française d'Entomologie*, 10, 47-48. (description of variation in French) [Descriptions of aberrational (unavailable) names] [!N, S]
- Powell, J.A. & Hogue, C.L. (1979) *California insects*. University of California Press, Berkeley etc. x + 388 pp. (field guide) [!N]
- Power, J.A. (1865) Revision of the genus *Necrophorus*, as far as regards the British species. *Entomologist*, 2, 197-201. (revision: key, descriptions & catalog) [Diagnostics to distinguish *N. ruspator* from *N. microcephalus* (both = *N. investigator*) and *N. interruptus* from *N. gallicus* (both = *N. interruptus*).] [!S]

- Preysslner, J.D.E. (1790) *Verzeichniss Böhmischer Insekten : Erstes Hundert*. Prag, 108 p (in German)
- Procter, W. (1946) *Biological Survey of the Mt. Desert Region, incorporated. Part VII; being a revision of Parts I and VI with the addition of 1100 species. The insect fauna with references to methods of capture, food plants, the flora and other biological features*. Wistar Institute of Anatomy and Biology, Philadelphia. 566 pp. (checklist, ecology) [!N]
- Prokopic, J. & Karapcanski, I. (1973) ["1977"] The larval stages of several cestodes from beetles (Coleoptera) in Bulgaria. *Helminthologia (Bratislava)*, 14(1-4), 171-181. (biology, symbionts: cestodes in English (German, Russian summary))
- Provancher, L. (1877) *Petite faune entomologique du Canada précédée d'un traité élémentaire d'entomologie. Volume I - Les coléoptères*. C. Darveau, Québec. viii + 786 pp. (in French)
- Pukowski, E. (1933) Ökologische Untersuchungen an *Necrophorus* F. *Zeitschrift für Ökologie and Morphologie der Tiere*, 27, 518-586. (biology, ecology in German) [Seminal paper on behavior of *Necrophorus*.] [!N, S]
- Pukowski, E. (1934a) Ökologische Beobachtungen an *Necrophorus*. *Entomologische Rundschau*, 51, 3-6. (biology, ecology in German) [!N]
- Pukowski, E. (1934b) Zur Systematik der *Necrophorus*-Larven (Col.). *Stettiner Entomologische Zeitung*, 95, 53-60. (morphology, larval stages in German) [!N, S]
- Pukowski, E. (1934c) Die Brutpflege des Totengräbers. *Entomologische Blätter*, 30, 109-112, 1 pl. (biology, behavior in German) [!N]
- Purrington, F.F., & Davidson, R.L. (2000) New southerly distribution records for the boreal carrion beetle, *Necrophorus vespilloides* (Coleoptera: Silphidae). *Entomological News*, 111(5), 355-358. (distribution note)
- Pushkin, S.V. (1996) *Beetles- merthvoedi (Silphidae) of neighbourhoods of Stavropol*. Environment and man: the theses of the reports scientific - methodical student's conference.- Stavropol: SSU pp. 33-34. (Conference report: biology, ecology in Russian) [!S]
- Pushkin S.V. (1997) *Necrophages as indicators of ecological health ecosystem*. An Environment and man: materials scientific - methodical student's conference. Stavropol: SSU, series 6 pp. 23-25. (Conference report: biology, ecology in Russian) [!S]
- Pushkin S.V., & Charthenko, L.N. (1997) *An alimentary specialization of beetles - necrophages*. Fauna Stavropolia.- Stavropol: SSU. series. 7 pp. 60-64. (biology, ecology in Russian) [!S]
- Pushkin S.V. & Sigida, S.L. (1998) *Features biotopical allocation of the beetles (Coleoptera, Silphidae) in conditions Stavropolia*. Fauna Stavropolia: the receiving tank of the proceedings. series 8. -Stavropol: SSU pp. 83-86. (Conference report: biology, ecology in Russian) [!S]
- Putman, R.J. (1978) The role of carrion-frequenting arthropods in the decay process. *Ecological Entomology*, 3, 133-139. (biology, ecology) [!S]
- Putman, R.J. (1983) *Carrion and Dung: The Decomposition of Animal Wastes*. Edward Arnold, London. (biology, ecology) [Excellent treatment of carrion and dung from an ecosystem/processes perspective.] [!S]
- Quisenberry, S.C. & Purcell, B. (1993) New record for the American Burying Beetle (*Necrophorus americanus*) in Bryan County, OK. *Proceedings of the Oklahoma Academy of Sciences*, 73, 77. (biology, conservation)
- Raithel, C. (1991) *American Burying Beetle (Necrophorus americanus) recovery plan*. U.S. Fish & Wildlife Service.; Newton Corner, Massachusetts. 80 pp. (USFW Recovery Plan: biology, conservation) [Review of historical records, temporal pattern of extirpation, trap methods, et al.] [!N, S]
- Rana, R.L., Hoback, W.W., Rahim, N.A.A., Bedick, J., & Stanley, D.W. (1997) Pre-oral digestion: A phospholipase A sub(2) associated with oral secretions in adult burying beetles, *Necrophorus marginatus*. *Comparative Biochemistry and Physiology*, 118 B(2), 375-380. (biology, physiology) [First description of *Necrophorus* oral secretions.] [!S]

- Ranson, J. (1864) Fecundity of the burying beetle (*Necrophorus vespillo*). *Naturalist*, 1, 192. (biology, ecology)
- Rapp, O. (1933) *Die Käfer Thüringens unter gesonderer Berücksichtigung der faunistisch-oekologischen Geographie auf Grund der Literature, der Beiträge zahlreicher Entomologen und eigener Beobachtungen im Auftrage der Akademie gemeinnütziger Wissenschaften zu Erfurt*. Vol. 1. Privately published, Erfurt. xxiii + 766 pp. (biology, ecology, distribution in German) [!N]
- Rassi, P. & Rutanen, I. (1989) [*Nicrophorus humator* Gleditsch in Hango (Silphidae) (SHS 22.9.1989).] *Notulae Entomologicae*, 69(4), 212. (distribution note in Finnish)
- Ratcliffe, B.C. (1995a) Nebraska's threatened and endangered species. American burying beetle. *Nebraska Game and Parks brochure*. In: *Nebraskaland Magazine*, 73, 1-6. (biology, conservation)
- Ratcliffe, B. C. (1995b) *Nebraska's threatened and endangered species: American Burying Beetle*. Nebraska Games and Parks Commission. (Flier: biology, conservation) [*Designed to educate the public, good, short, overview of N. americanus.*] [!S]
- Ratcliffe, B.C. (1996) The carrion beetles (Coleoptera: Silphidae) of Nebraska. *Bulletin of the University of Nebraska State Museum*, 13, 1-100. (revision: key, descriptions & catalog) [*Faunal revision- keys, diagnoses, maps, review of biology.*] [!S]
- Ratcliffe, B.C., & Jameson, M.L. (1992) New Nebraska occurrences of the endangered American burying beetle (Coleoptera: Silphidae). *Coleopterists Bulletin*, 46(4), 421-425. (biology, conservation) [!S]
- Rauter, C.M. & Moore, A.J. (1999) Do honest signalling models of offspring solicitation apply to insects? *Proceedings of the Royal Society of London, series B Biological Sciences*, 266(1429), 1691-1696. (biology, ecology, behavior) [*The males and females regurgitated in equal amounts to offspring, but the females processed the carrion more often than the males.*] [!S]
- Rauter, C.M. & Moore, A.J. (2002) Quantitative genetics of growth and development time in the burying beetle *Nicrophorus pustulatus* in the presence and absence of post-hatching parental care. *Evolution*, 56, 96-110 (biology, behavior, genetics) [!N]
- Recce, S. (1988) Endangered and threatened wildlife and plants: proposed endangered status for the American Burying Beetle. *Federal Register*, 53(196), 39, 617-39,621. (biology, conservation)
- Redtenbacher, L. (1849) *Fauna Austriaca. Die Käfer. Nach der analytischen Methode bearbeitet von Ludwig Redtenbacher Zeite, gänzlich Umgearbeitete Vermehrte auflage*. Wien, C. Gerold. xxvii + 883 pp. (catalog in German)
- Redtenbacher, L. (1858) *Fauna Austriaca. Die Käfer. Nach der analytischen Methode bearbeitet Zweite, gänzlich Umgearbeitete, mit mehreren Hunderten von Arten und mit der Charakteristik sämtlicher europäischen Käfergattungen Vermehrte auflage*. Wien, C. Gerold. xlv + 1017 pp. (catalog in German) [!S]
- Reed, E.C. (1876) Catálogo de los Coleópteros de Chile. Segunda parte. *Anales de la Universidad de Chile*, 49, 274-295. (catalog in Spanish) [!N]
- Reed, H.B., Jr. (1958) A study of dog carcass communities in Tennessee, with special reference to the insects. *American Midland Naturalist*, 59, 213-245. (biology, ecology) [!N]
- Rehfous, M. (1955) Contribution à l'étude des insectes des champignons. *Mitteilungen der Schweizerischen Entomologischen Gesellschaft*, 28, 1-106. (biology, ecology in French) [!N]
- Reinking, M. (1988) *Aufwand und Erfolg der Brutpflege bei Necrophorus vespilloides (Coleoptera: Silphidae)*. Staatsexamensarbeit, Universität Bielefeld, Germany. (Ph.D. Thesis: biology, ecology, behavior)
- Reinking, M. & Müller, J.K. (1990) The benefit of parental care in the burying beetles *Necrophorus vespilloides*. *Verhandlungen der Deutschen Zoologischen Gesellschaft*, 83, 655-656. (Abstract: biology, behavior) [*Results suggest N. vespilloides larvae might require parental regurgitation for proper development.*] [!S]

- Reitter, E. (1883) Ueber die Verbreitung des *Necrophorus nigricornis* Fald. *Deutsche Entomologische Zeitschrift*, 27, 60. (comment in German) [*N. nigricornis* recorded from Germany.] [!S]
- Reitter, E. (1884) ["1885"] Bestimmungs-Tabellen der europäischen Coleopteren. XII. Necrophaga (Platypyllidae, Leptinidae, Silphidae, Anisotomidae und Clambidae). *Verhandlungen des Naturforschenden Vereines in Brünn*, 23, 3-122. (descriptions in German) [*Original description of N. antennatus*; *N. germanica* var. *fascifera* (= *N. germanicus*); *Silpha funeator* (= *N. investigator*).] [!N, S]
- Reitter, E. (1885) *Naturgeschichte der Insecten Deutschlands. Erste Abtheilung Coleoptera III*, 2. Nicolai / Koehler (pub.); Berlin / Leipzig (in German)
- Reitter, E. (1887) Insecta in itinere Cl. N. Przewalskii in Asia centrali novissime lecta. VI. Clavicornia, Lamellicornia et Serricornia. *Horae Societatis Entomologicae Rossicae*, 21, 201-234. (descriptions in German) [*Original description of N. praedator* (= *N. investigator*); *N. semenowi*.] [!N, S]
- Reitter, E. (1889) Berichte über die von E. v. Oertzen im Jahre 1887 in Griechenland u. Klein-Asien gesammelten Coleopteren. IX. Neue Arten aus verschiedenen Familien. *Deutsche Entomologische Zeitschrift*, 1889, 251-259. (in German)
- Reitter, E. (1893) Uebersicht der mir bekannten schwarzen *Necrophorus*-Arten. *Wiener Entomologische Zeitung*, 12, 147. (key, descriptions in German) [*Original description of N. satanas*.] [!N, S]
- Reitter, E. (1895a) Sechster Beitrag zur Coleopteren-Fauna von Europa und den angrenzenden Ländern. *Wiener Entomologische Zeitung*, 14, 199-204. (description of variation in German) [*Original description of N. interruptus* var. *centrimaculatus* (= *N. interruptus*).] [!S]
- Reitter, E. (1895b) Uebersicht der Arten der Coleopteren-Gattung *Necrophorus* Fabr. aus der palae-arctischen Fauna. *Entomologische Nachrichten*, 21, 323-330. (description of variation in German) [*Original description of N. sepultor* var. *pseudobrutor* (= *N. argutor*); *N. interruptus* var. *submaculatus* (= *N. investigator*); *N. investigator* var. *intermedius* (= *N. investigator*); *N. vespilloides* var. *sylvaticus* (= *N. vespilloides*).] [!N, S]
- Reitter, E. (1897) Coleopterologische Notizen. LIX. *Wiener Entomologische Zeitung*, 16, 48-49. (description of variation in German) [*Original description of N. vespilloides* var. *sylvivagus* (= *N. vespilloides*).] [!S]
- Reitter, E. (1900) Beitrag zur Coleopteren-Fauna von Europa und den angrenzenden Ländern. *Deutsche Entomologische Zeitschrift*, 1900, 81-88. (description of variation in German) [*Original description of N. vestigator* var. *Rautenbergi* (= *N. vestigator*).] [!S]
- Reitter, E. (1909) *Fauna Germanica. Die Käfer des Deutschen Reiches. Vol. 2*. K.G. Lutz, Stuttgart. 392 pp., pls. 41-80. (in German) [!N]
- Reitter, E. (1911) Über die Färbungsvarietäten von *Necrophorus vestigator* Herschel und *antennatus* Reitt. *Wiener Entomologische Zeitung*, 30, 106. (description of variation in German) [*Original description of N. interruptus* var. *trinitatus* (= *N. interruptus*).] [!N, S]
- Reitter, E. (1913) Eine Serie neuer Coleopteren aus der paläarktischen Fauna. *Deutsche Entomologische Zeitschrift*, 1913, 649-666. (descriptions in German) [*Original description of N. inclusus* (= *N. quadraticollis*).] [!N, S]
- Richter, S. (1991) Zum Lebenszyklus von *Rhabditis stammeri* Bemerkenswerte Bildungen eines aasbesiedelnden Nematoden an Totengraberkafer (*Necrophorus*/Silphidae). *Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin*, N F 31, 123-136. (biology, symbionts: nematodes in German)
- Richter, S. (1993) Phoretic association between the dauerjuveniles of *Rhabditis stammeri* (Rhabditidae) and life history stages of the burying beetles *Necrophorus vespilloides* (Coleoptera: Silphidae). *Nematologica*, 39(3), 346-355. (biology, symbionts: mites in English (German summary)) [*Illustration of alimentary canal of N. vespilloides* larva; nematode transfer during copulation..] [!S]

- Riha, P. (1949) Nova odchylka hrobarika *Necrophorus interruptus* Steph. Nova aberratio speciei *Necrophorus interruptus* Steph. (Col., Silphidae). *Acta Societatis Entomologicae Cechosloveniae*, 46, 133. (description in Czech) [*Description of 1 aberrational unavailable name.*]
- Rivera-Cervantes, L.E. & García-Real, E. (1998) Analisis preliminar sobre la composición de los escarabajos necrófilos (Coleoptera: Silphidae y Scarabaeidae) presentes en dos bosques de pino (uno dañada por fuego), en la Estación Científica Las Joyas, Sierra de Manantlán, Jalisco, México. *Dugesiana*, 5 (1), 11-22. (biology, ecology in Spanish) [!N]
- Roberts, R.A. (1933) Activity of blowflies and associated insects at various heights above the ground. *Ecology*, 14(3), 306-314. (comment: ecology) [*Lists N. marginatus as among the bottom 1% of predators on blowflies.*] [!S]
- Robertson, I.C. (1992) Relative abundance of *Nicrophorus pustulatus* (Coleoptera: Silphidae) in a burying beetle community, with notes on its reproductive behavior. *Psyche (Cambridge, Massachusetts)*, 99(2-3), 189-197. (biology, ecology) [*In lab N. pustulatus bred more efficiently on small carcasses than N. orbicollis.*] [!S]
- Robertson, I.C. (1993) Nest intrusions, infanticide, and parental care in the burying beetle, *Nicrophorus orbicollis* (Coleoptera: Silphidae). *Journal of Zoology (London)*, 231(4), 583-593. (biology, behavior) [*First study to demonstrate that usurpers destroy resident eggs.*] [!S]
- Robertson, I.C. (1995) ["1994"] Extra-pair copulations in burying beetles (Coleoptera: Silphidae). *Journal of the Kansas Entomological Society*, 67(4), 418-420. (biology, behavior) [*Half of the females were inseminated by parental males of N. orbicollis, but none were inseminated by N. pustulatus.*] [!S]
- Robertson, I.C., Robertson, W.G., & Roitberg, B.D. (1998) A model of mutual tolerance and the origin of communal associations between unrelated females. *Journal of Insect Behavior*, 11(2), 265-286. (biology, behavior) [*Model to predict patterns of communal behavior.*] [!N]
- Robertson, J.G. (1961) Ovariole numbers in Coleoptera. *Canadian Journal of Zoology*, 39, 245-263. (morphology: ovaries) [*References Stein 1847 -primary source for silphid ovariole numbers*] [!N, S]
- Roerich, C. (1949) Notes sur les nécrophores dans le bocage normand. *Entomologiste*, 5, 44-45. (biology, ecology in French) [!N]
- Roemer, J. J. (1789) *Genera Insectorum Linnei et Fabricii iconibus illustrata*. Vitoduri, Steiner; 4. 1-86 pp. (catalog)
- Rohner, C. (1990) Resource partitioning and interspecific competition in burying beetles *Necrophorus* (Coleoptera, Silphidae) in the Lake Zurich Area. *Revue Suisse de Zoologie*, 97(2), 453-464. (biology, ecology in German (English summary)) [!S]
- Rösel von Rosenhof, A.J. (1761) Der monatlich-herausgegebenen Insecten-Belustigung vierter Theil. *Nurnberg*, 1761-76. 376p pp. 1-20. (biology, behavior in German) [*Cited by Pukowski (1933) as one of the earlier observations on Nicrophorus behaviors*]
- Rosenhauer, W.G. (1847) *Beiträge zur Insekten-Fauna Europas. Erstes Bändchen, enthält die Beschreibung von sechzig neuen Käfern aus Bayern, Tyrol, Ungarn etc., so wie die Käfer Tyrols, nach dem Ergebnisse von vier Reisen*. T. Blaesing, Erlangen. x + 159 pp., 1 pl. (checklist in German) [!N]
- Rossi, P.D. (1790) *Fauna Etrusca: sistens Insecta quae in provinciis Florentina et Pisana praesertim collegit petrus Rossius*. Liburni: Typis Thomae Masi & Sociorum pp. xxii-350.
- Roubal, J. (1913) Koleopterologisch-oekologische Skizzen. *Casopis České Společnosti Entomologické*, 10, 121-123. (biology, ecology in Czech & German)
- Roubal, J. (1915) Vier Coleopteren-Neuheiten. *Entomologische Blätter*, 11, 169-171. (description of variation in German)
- Roubal, J. (1924) Einige Käferneuheiten. *Entomologischer Anzeiger*, 4, 80-81. (description of variation in German)

- Roubal, J. (1930) ["1930-1936"] *Katalog coleopter (Brouku) slevenska a podkarpatske Rusi na zaklade bionomickém a zoogeografickém a spolu systematicky doplněk Gangelbauerových "Die Käfer von Mitteleuropa" a Reitterovy "Fauna germanica". Catalogue des coléoptères de la slovaquie et de la Russie subcarpathique d'après les documents bionomiques et zoogéographiques ainsi que supplément systématique au Ganglbauer, Die Käfer von Mitteleuropa et Reitter, Fauna germanica.* Praha, Nákladem Učené společnosti safaríkovy v Bratislave vytiskla státní tiskarna v Praze (catalog in Czech) [!S]
- Roubal, J. (1934) Beschreibung zweier neuer Coleopteren nebst Bemerkungen. *Folia Zoologica et Hydrobiologica*, 5, 323-325. (description of variation in German) [short paragraph on a variant of *N. vespilloides*.] [!S]
- Roubal, J. (1939) *Necrophorus vespillo* L. v. bohemicus n. *Acta Societatis Entomologicae Bohemiae*, 36, 85-86. (description of variation in Czech (French summary)) [Original description of *N. vespillo* var. *bohemicus* (= *N. vespillo*).] [!S]
- Roubal, J. (1942) O nekolika nasich hrobarčích. De nonnullis nostris *Necrophoris*. *Acta Societatis Entomologicae Bohemiae*, 39, 17. (description of variation in Czech) [one page description of new forms (aberrations) of European *Nicrophorus*.] [!S]
- Roussel, J.-P. (1963) Conditions de reprise de l'activité et de la reproduction chez *Necrophorus vespillo* L. en état d'hibernation. *Bulletin de la Société Zoologique de France*, 88, 671-673. (biology, ecology, behavior in French)
- Roussel, J.-P. (1964a) Le développement larvaire de *Necrophorus vespillo* L. *Bulletin de la Société Zoologique de France*, 89, 102-110. (morphology, larval stages in French) [!N]
- Roussel, J.-P. (1964b) Le développement larvaire de *Necrophorus fossor* Er. *Bulletin de la Société Zoologique de France*, 89, 111-117. (morphology, larval stages in French) [!N]
- Roussel, J.-P. (1965a) Recherches sur la diapause de *Necrophorus fossor* Er. *Bulletin de la Société Zoologique de France*, 90, 67-88. (morphology, larval stages in French (English summary))
- Roussel, J.-P. (1965b) Recherches experimentales sur la diapause de *Necrophorus fossor* Er. *Comptes Rendus de l'Académie des Sciences*, (D) 6452-6454. (morphology, larval stages in French)
- Rozner, I. (1981) Data to the Silphidae (Coleoptera) fauna of the Hortobágy National Park. *Natural History of the National Parks of Hungary*, 1, 103-104. (checklist in Hungarian) [!N]
- Runtz, M.W.P. & Peck, S.B. (1994) The beetle fauna of a mature spruce-sphagnum bog, Algonquin Park, Ontario; ecological implications of the species composition. *Memoirs of the Entomological Society of Canada*, 169, 161-171. (biology, ecology) [!N]
- Růžička, J. (1992) The immature stages of central European species of *Nicrophorus* (Coleoptera, Silphidae). *Acta Entomologica Bohemoslovaca*, 89(2), 113-135. (key, descriptions, morphology, larval stages, phylogenetics) [Excellent illustrations and descriptions of European larval stages; follows phylogenetics of Anderson 1982a, but polarity of one character is changed.] [!S]
- Růžička, J. (1993) Agyrtidae, Silphidae, pp. 33-34. In: J. Jelínek (ed.), Check-list of Czechoslovak insects, IV (Coleoptera). *Folia Heyrovskyana Supplementum*, 1, 1-172. (checklist, distribution in English & Czech) [!N]
- Růžička, J. (1994) Seasonal activity and habitat associations of Silphidae and Leiodidae: Choleviinae (Coleoptera) in central Bohemia. *Acta Societatis Zoologicae Bohemoslovicae*, 58, 67-78. (biology, ecology) [All *Nicrophorus* spp. but *N. vespillo* were common in forests. *N. vespillo* was more common in fields.] [!N, S]
- Růžička, J. (1996) Results of the Czechoslovak-Iranian entomological expeditions to Iran. Coleoptera: Silphidae. *Klapalekiana*, 32(1-2), 73-75. (checklist) [First reliable records for *N. vespilloides* & *N. investigator* from Iran are provided.] [!S]

- Růžička, J. (1999) Beetle communities (Insecta: Coleoptera) of rock debris on the Borec hill (Czech Republic: České středohorí mts). *Acta Societatis Zoologicae Bohemoslovica*, 63, 315-330. (biology, ecology) [A few *Nicrophorus* were recovered among 3824 beetle specimens, few relevant *Nicrophorus* data, some seasonality data.] [!S]
- Růžička, J., Háva, J., & Schneider, J. (2000) Taxonomical and distributional notes on Oriental Silphidae, with description of *Nicrophorus sausai* sp. n. (Insecta: Coleoptera) *Reichenbachia*, 33(2), 377-384. (descriptions) [Original description of *N. sausai*; remarkable new species, intermediate? between *N. distinctus* and the *nepalensis* group.] [!S]
- Růžička, J., & Schneider, J. (1996) Faunistic records of Silphidae (Coleoptera) from China. *Klapalekiana*, 32(1-2), 77-83. (checklist in English (Czech summary)) [First record of *N. vestigator* in China.] [!S]
- Ryabukhin, A.S. & Matis, E.G. (1987) *Materialy po faune zhukov-mertvoedov (Coleoptera: Silphidae) Severo-Vostoka SSSR*. Preprint. Institut Biologicheskikh Problem Severa, Pal'nevostochnyy Nauchyy Tsentr, Akademiya Nauk SSSR, Magadan. 38 pp. (key, descriptions, distributions in Russian) [!N]
- Rye, E.C. (1870) Observations of *Necrophorus microcephalus*, Thoms. *Entomologist's Monthly Magazine*, 7(68), 182. (comment [translation of Michow 1866]) [Translation from German into English of Michow 1866. Comments on sexual dimorphism and smaller males appearance as females.] [!S]
- Rye, E.C. (1879) Coleoptera. *Zoological Record*, 14 (Insecta), 8-95 (catalog) [Subsequent misspelling of *Ptomascopus*: *Ptomatoscopus*] [!N]
- Safryn, S.A. & Scott, M.P. (2000) Sizing up the competition: Do burying beetles weigh or measure their opponents? *Journal of Insect Behavior*, 13, 291-297. (biology, behavior) [Pronotal width is a better predictor of competition success than body mass between male *N. orbicollis*.] [!S]
- Sahlberg, J. (1889) Enumeratio coleopterorum clavicornium Fenniae. *Acta Societatis pro Fauna et Flora Fennica*, 6, 13-152. (checklist in Swedish) [!N]
- Sainte-Claire-Deville, J. (1914) *Catalogue critique des Coléoptères de la Corse*. G. Poisson, Caen. 573 pp., 1 map. (checklist, discussion of variation in French) [!N]
- Sakaluk, S.K., Eggert, A.-K., & Müller, J.K. (1998) The 'Widow Effect' and its Consequences for Reproduction in Burying Beetles, *Nicrophorus vespilloides* (Coleoptera: Silphidae). *Ethology*, 104(7), 553-564. (biology, behavior) [Most widowed females didn't produce a replacement clutch.] [!S]
- Salgado Costas, J.M. & Régil Cueto, J.A. (1979) Aportación al conocimiento de los sílfidos (Col. Silphidae) de León *Boletín de la Asociación Española de Entomología*, 3, 85-93. (catalog, annotated & figured in Spanish) [This author seems to use the *ëvarí* rank for aberrations.] [!S]
- Samouelle, G. (1833) [1833-1834] *Entomological cabinet, being a natural history of British insects*. Longman, London. 2 vols., 156 pls. (descriptions) [Original description of *N. anglicus* (= *N. vestigator*).] [!N, S]
- Samsinák, K. (1945) *Necrophorus humator* ab. *dlabolae* m. n. *Acta Societatis Entomologicae Cechosloveniae*, 42, 91. (description of variation in Czech)
- Satou, A., Nisimura, T., & Numata, H. (2000) Reproductive competition between the burying beetles *Nicrophorus quadripunctatus* without phoretic mites and the blow fly *Chrysomya pinguis*. *Entomological Science*, 3, 265-268. (biology, symbionts: mites) [No effect on *N. quadripunctatus* reproduction in presence of blow flies if phoretic mites are removed.] [!S]
- Satou, A., Nisimura, T. & Numata, H. (2001) Cost and necessity of parental care in the burying beetle *Nicrophorus quadripunctatus*. *Zoological Science*, 18, 975-979. (biology, behavior) [!N]
- Sauer, F. (1993) *600 Käfer nach Farbfotos erkannt*. Fauna-Verlag, Karlsfeld. 350 pp. (field guide, brief descriptions, ecology in German) [!N]

- Say, T. (1825) Descriptions of new species of coleopterous insects inhabiting the United States. *Journal of the Academy of Natural Sciences of Philadelphia*, 5, 160-204. (description) [Original description of *N. orbicollis*.] [!M, N, S]
- Schaeffer, J.C. (1769) *Icones insectorum circa Ratisbonam indigenorum coloribus naturam referentibus expressae. Natürlich ausgemahlte Abbildungen Regensburgscher Insecten*. Zunkel, Regensburg. Vol. 1 (2), vi + 50 + 12 pp., pls. 51-100. (catalog)
- Schaufuss, C. (1916) *Calwer's Käferbuch - Einführung in die Kenntnis der Käfer Europas*. Band 1 + 2. ed. 6 Schweizerbart (pub.), Stuttgart (checklist in German) [!N]
- Schaum, H. (1859) *Catalogus Coleopterorum Europae. In Verbindung mit Dr. G. Kraatz und H. v. Kiesenwetter*. Nicolaische Verlagsbuchhandlung, Berlin. iv + 121 pp. (catalog in German) [!N]
- Schaum, H. (1862) *Catalogus Coleopterorum Europae. Editio secunda aucta et emendata*. F. Nicolai, Berolini. 130 pp. (catalog in German) [!S]
- Schaupp, F. G. (1881) ["1881-1882"] Description of the larva of *Necrophorus tomentosus*, *Web. Bulletin of the Brooklyn Entomological Society*, 4, 37-38. (morphology, larval stages) ["*N. tomentosus*" used in title, "*N. velutinus*" used in text. Observed "louse-like parasites" that "sucked out the pupae all of which shrunk and died"] [!N, S]
- Schawaller, W. (1977) Ergebnisse der Bhutan-Expedition 1972 des Naturhistorischen Museums in Basel. Coleoptera: Fam. Silphidae. *Entomologica Basiliensia*, 2, 259-260. (checklist in German) [!N, S]
- Schawaller, W. (1980) Faunistische und systematische Daten zur Silphiden-Fauna Koreas (Coleoptera: Silphidae). *Folia Entomologica Hungarica*, 41, 151-154. (checklist in German (English summary)) [!N, S]
- Schawaller, W. (1982) ["1981"] Die Aaskäfer des Himalaya (Insecta: Coleoptera: Silphidae s. str.). *Senckenbergiana Biologica*, 62(4-6), 237-260. (checklist in German (English summary)) [Synonymizes *N. tibetianus* (= *N. argutor*) under *N. semenowi*] [!S]
- Schawaller, W. (1990) Käfer aus Sibirien (Umgebung Novosibirsk) (Insecta: Coleoptera). *Beiträge zur Entomologie*, 40, 231-245. (checklist in German) [!N]
- Scheerpeltz, O. & Höfler, K. (1948) *Käfer und Pilze*. Verlag für Jugend und Volk, Vienna. 351 pp., 9 pls. (biology, ecology in German) [!N]
- Schiødte, J.C. (1862) De metamorphosi eleutheratorum observationes: Beidrag til insekternes udviklingshistorie. *Naturhistorisk Tidsskrift*, 3(1), 193-232, pls. 3-10. (morphology, larval stages in Danish) [descriptions of larval stages with illustrations] [!N, S]
- Schleicher, H. (1924) Einige neue Aberrationen meiner Sammlung. *Entomologische Blätter*, 20, 55-57. (description of variation in German)
- Schleicher, H. (1937) [untitled note]. *Bombus*, 1, 1. (description of variation)
- Schmidt, G. (1884) Notes entomologiques. *Feuille Jeunes Naturalistes*, 14, 89-90. (biology in French)
- Schmitt, M. (1992) ["1991"] *Stridulatory devices of leaf beetles (Chrysomelidae) and other Coleoptera*. In: Zunino, M., Bellés, X., and Blas, M. (eds.). *Advances in Coleopterology*. European Association of Coleopterology, Barcelona. pp. 263-280. (Book Monograph; Conference: morphology: stridulatory files) [!N]
- Schneider, D. & Boeckh, J. (1962) Rezeptorpotential und Nervenimpulse einzelner olfaktorischer Sensillen der Insektenantenne. *Zeitschrift für Vergleichende Physiologie*, 45, 405-412. (biology, physiology in German)
- Schneider, D. & Steinbrecht, R.A. (1968) Checklist of insect olfactory sensilla. *Symposia of the Zoological Society of London*, 23, 279-297. (morphology: antennal sensillae) [!N]
- Schneider, O. (1902) Ueber Melanismus korsischer Käfer. *Abhandlungen der Naturwissenschaftlichen Gesellschaft Isis in Dresden*, 1902, 43-60. (description of variation in German)
- Schneider, P. (1975) Die Flugtypen der Käfer (Coleoptera). *Entomologica Germanica*, 1, 222-231. (morphology, behavior: wing motion in German) [!N]

- Schneider, P. (1978) Die Flug- und Faltungstypen der Käfer (Coleoptera). *Zoologische Jahrbücher, Abteilung für Anatomie*, 99, 174-210. (morphology: wing folding in German) [Good illustrations and comparisons of wings- first note that *Nicrophorus hold* elytra rigidly during flight.] [!N, S]
- Schnell, G.D. & Hiott, A.E. (1998) 1998 Annual report of trapping and relocation activities concerning the endangered American burying beetle (*Nicrophorus americanus*) under Federal Fish and Wildlife Permit Number PRT-820707, Renewal 1. Report to United States Department of the Interior, Fish and Wildlife Service, 1875 Century Blvd., Atlanta Georgia. (unpublished report: biology, conservation)
- Schnell, G.D. & Hiott, A.E. (1999a) 1998 Survey for American burying beetles at Fort Chaffee, Arkansas. Report to Chaffee Maneuver Training Center, Building 1370, Fort Smith Boulevard, Fort Smith, Arkansas, 72905-1370. (unpublished report: biology, conservation)
- Schnell, G.D. & Hiott, A.E. (1999b) 1999 Annual report of trapping and relocation activities concerning the endangered American burying beetle (*Nicrophorus americanus*) under Federal Fish and Wildlife Permit Number PRT-820707, Renewal 1. Report to United States Department of the Interior, Fish and Wildlife Service, 1875 Century Blvd., Atlanta Georgia. (unpublished report: biology, conservation)
- Schnell, G.D. & Hiott, A.E. (1999c) Evaluation of American burying beetles on the Weyerhaeuser habitat conservation plan area. Report to M. Anthony Melchios, Environmental Forestry Research, Weyerhaeuser Company, 900 Whittington Avenue, Hot Springs, Arkansas 71901. 18 pp. (unpublished report: biology, conservation)
- Schoenly, K. (1981) *Dynamics of a desert carrion arthropod community*. M. S. Thesis, University of Texas, El Paso. (M.S. Thesis: biology, ecology)
- Schoenly, K. & Reid, W. (1983) Community structure of carrion arthropods in the Chihuahuan Desert. *Journal of Arid Environments*, 6, 253-263. (biology, ecology) [!S]
- Schönherr, C.J. (1808) *Synonymia Insectorum : oder: Versuch einer Synonymie aller bisher bekannten Insecten : nach Fabricii Systema Eleutheratorum geordnet : mit Berichtigungen und Anmerkungen, wie auch Beschreibungen neuer Arten*. Stockholm & Skara, 1806-17. 4 Thl. [in 2] 8°. (in German)
- Schrank, F. v. P. (1781) *Enumeratio insectorum Austriae indigenorum / Francisci de Paula Schrank*. Augustae Vindelicorum : Klett et Franck, 1781. 548 pp. (checklist)
- Schrank, F. v. P. (1789) Entomologische Beobachtungen. *Naturforscher Stück*, 24, 60-90. (in German)
- Schrank, F. v. P. (1798) *Fauna boica : durchgedachte Geschichte der in Baiern einheimischen und zahmen Thiere / von Franz von Paula Schrank*. Ingoldstadt: J.W. Krull 1 (in German)
- Schultze, W. (1915) *A catalogue of Philippine Coleoptera*. Bureau of Printing, Manila. 198 pp. (checklist) [!N]
- Schulz, H. (1907) *Nicrophorus corsicus* Laporte und seine Zeichnungs-Abänderungen. *Internationale Entomologische Zeitschrift*, 1, 43-44,46. (description of variation in German) [!N, S]
- Schulz, W.A. (1912) Ein altes, verschollenes Werk über Tiersystematik. *Archiv für Naturgeschichte*, 78 (A) (9), 21-91.(Serial in German)
- Schulze, J.D. (1775) Beiträge zur Kenntniss seltener Insecten. Erstes Stück. *Naturforscher*, 6, 87-98. (descriptions in German) [Original description of *Silpha speciosa* (= *N. germanicus*).] [!N, S]
- Schumacher, R. (1973) Beitrag zur Kenntnis der Stridulationsapparate einheimischer *Nicrophorus*-Arten (*Nicrophorus humator* Ol., *Nicrophorus investigator* Zetterst., *Nicrophorus vespilloides* Herbst) (Insecta, Coleoptera). *Zeitschrift für Morphologie der Tiere*, 75, 65-75. (morphology: stridulatory files in German (English summary)) [Good SEM & line drawings of scrapers & files.] [!N, S]

- Schwarz, C. (1793) *Nomenclator über die in den Roeselschen Insecten-Belustigungen und Kleemannschen Beiträgen zur Insecten-Geschichte abgebildeten Insecten und Würmer mit möglichst vollständiger Synonymie*. Nürnberg, Raspe 4. (Name des Verf. hinter der Vorrede). 7 Abt. 1, 100pp. (in German)
- Schwarz, E.A. (1878) The Coleoptera of Florida. *Proceedings of the American Philosophical Society*, 17, 353-372, 434-469. (checklist) [!N]
- Schwarz, H.H. (1996) Host range and behavioral preferences in German sibling species of the *Poecilochirus carabi* complex (Acari: Mesostigmata: Parasitidae). *International Journal of Acarology*, 22(2), 135-140. (biology, symbionts: mites) [*Poecilochirus necrophori* on *N. vespillo*; *P. carabi* on *N. humator*, *N. investigator* & *N. vespilloides*.] [!S]
- Schwarz, H.H. & Koulianos, S. (1998) When to leave the brood chamber? Routes of dispersal in mites associated with burying beetles. *Experimental and Applied Acarology*, 22, 621-631. (biology, symbionts: mites) [*Nice chart of seasonality of some European Necrophorus spp.; attractiveness of beetles to mites increases as the beetles age. Only P. carabi complex and P. subterraneus prefer parents for dispersal- other mites prefer the offspring.*] [!S]
- Schwarz, H.H. & Müller, J.K. (1990) Do *Poecilochirus carabi* deutonymphs recognize their carriers' sex? *Verhandlungen der Deutschen Zoologischen Gesellschaft*, 82, 323-324. (Abstract: biology, symbionts: mites) [*Yes. But only do so when dispersing from a reproductive crypt. Male N. vespilloides parents, departing their brood chambers, carry significantly more mites than either the female parent or the beetle progeny.*] [!S]
- Schwarz, H.H., & Müller, J.K. (1992) The dispersal behaviour of the phoretic mite *Poecilochirus carabi* (Mesostigmata, Parasitidae): adaptation to the breeding biology of its carrier *Necrophorus vespilloides* (Coleoptera: Silphidae). *Oecologia*, 89(4), 487-493. (biology, symbionts: mites) [!S]
- Schwarz, H.H., Müller, J.K., & Baker, A. (1991) *Genetic differentiation between deutonymphs of Poecilochirus carabi (Mesostigmata, Parasitidae): living on sympatric Necrophorus species (Coleoptera: Silphidae)*. In: Dusbabek, F. & Buvka, V. [Eds]. *Modern acarology. Volume II: proceedings of the 8 International Congress of Acarology held in Ceske Budejovice, Czechoslovakia, 6-11 August 1990*. pp. 431-436. SPB Academic Publishing, The Hague, The Netherlands. (biology, symbionts: mites)
- Schwarz, H.H., & Schürmann, A. (1991) Eine Leiche für die Kinder. Einige Aaskäfer begraben tote Vögel oder Kleinsäuger, um ihre Larven daran aufzuziehen. *Kosmos (Stuttgart)*, 10/91 pp. 80-85. (popular review in German) [*Includes photographs of brood-caring N. vespilloides*]
- Schwarz, H.H., Starrach, M., & Koulianos, S. (1998) Host specificity and permanence of associations between mesostigmatic mites (Acari: Anactinotrichida) and burying beetles (Coleoptera: Silphidae: *Necrophorus*). *Journal of Natural History*, 32(2), 159-172. (biology, symbionts: mites) [*7 species of 4 genera of mites: Poecilochirus carabi s. str., P. necrophori, P. subterraneus, Macrocheles nataliae, M. merdarius, Alliphis necrophilus, Neoseius novus.*] [!S]
- Schwarz, H.H., & M.G. Walz (1996) Pairing, oviposition and development in two sibling species of phoretic mites (Acari: Mesostigmata: Parasitidae: *Poecilochirus* spp.) associated with burying beetles (Coleoptera: Silphidae: *Necrophorus* spp.). *Journal of Natural History*, 30(9), 1337-1348. (biology, symbionts: mites) [*Host specialist sib spp. differ in reproductive behavior & fail to interbreed.*] [!S]
- Schweiger, H. (1967) ["1966"] Über einige von Prof. Dr. H. Franz, Wien, in Spanien und Nordafrika gesammelte Silphidae und Catopidae (Coleoptera). *Eos-Revista Española de Entomología*, 42: 547-559. (checklist in German) [!N]
- Schweitzer, D.F. (1990) *Findings concerning the endangered American burying beetle, Necrophorus americanus Olivier at the Dakota Dunes development site, North Sioux City, South Dakota*. Report to Buell, Winter, Mousel and Associates, Sioux City, IA. (unpublished report: biology, conservation)

- Schweitzer, D.F. & Master, L.L. (1987) *Nicrophorus americanus* (American burying beetle): results of a global status survey. The Nature Conservancy, Eastern Heritage Task Force, Boston, MA 13 pp. (unpublished report: biology, conservation)
- Scopoli, J.A. (1763) *Entomologia Carniolica : exhibens insecta Carnioliae indigena et distributa in ordines, genera, species, varietates, methodo Linnaeana / Ioannis Antonii Scopoli*. Vindobonae : Typis Ioannis Thomae Trattner, 1763; [xxxvi], 420 p. (checklist)
- Scott, M.P. (1989) Male parental care and reproductive success in the burying beetle *Nicrophorus orbicollis*. *Journal of Insect Behavior*, 2(1), 133-137. (biology, behavior) [Broods that received biparental care were both smaller and had lower offspring weight [possible artifact?]] [!N, S]
- Scott, M.P. (1990) Brood guarding and the evolution of male parental care in burying beetles. *Behavioral Ecology and Sociobiology*, 26(1), 31-39. (biology, behavior) [!S]
- Scott, M.P. (1994a) Competition with flies promotes communal breeding in the burying beetle, *Nicrophorus tomentosus*. *Behavioral Ecology and Sociobiology*, 34, 367-373. (biology, ecology, behavior) [On both medium and large carcasses, pairs rearing broods on flyblown carcasses had fewer young than pairs on clean carcasses or foursomes on flyblown carcasses.] [!S]
- Scott, M.P. (1994b) The benefit of paternal assistance in intra- and interspecific competition for the burying beetle, *Nicrophorus defodiens*. *Ethology Ecology & Evolution*, 6(4), 537-543. (biology, behavior) [Paternal care reduces the probability that the carcass will be usurped by a conspecific competitor.] [!S]
- Scott, M.P. (1996) Communal breeding in burying beetles. *American Scientist*, 84, 376-382. (popular review) [Review of aspects of communal breeding.] [!S]
- Scott, M.P. (1997) Reproductive dominance and differential ovicide in the communally breeding burying beetle *Nicrophorus tomentosus*. *Behavioral Ecology and Sociobiology*, 40(5), 313-320. (biology, behavior) [Influences of size of beetles and carcasses on communal breeding.]
- Scott, M.P. (1998a) Facultative adjustment of the duration of parental care by burying beetles. *Journal of Insect Behavior*, 11(4), 597-603. (biology, behavior) [Males raised in lab in dense groups provided longer care than males raised in isolation (cues for detection of population density).] [!S]
- Scott, M.P. (1998b) The ecology and behavior of burying beetles. *Annual Review of Entomology*, 43, 595-618. (biology, review of: ecology, behavior) [Lengthy review of literature on *Nicrophorus* behavior.] [!S]
- Scott, M.P., & Gladstein, D.S. (1993) Calculating males? An empirical and theoretical examination of the duration of paternal care in burying beetles. *Evolutionary Ecology*, 7(4), 362-378. (biology, behavior) [Variables: size of carcass & probability of usurpation.] [!S]
- Scott, M.P. & Traniello, J.F.A. (1987) Behavioural cues trigger ovarian development in the burying beetle, *Nicrophorus tomentosus*. *Journal of Insect Physiology*, 33(10), 693-696. (biology, behavior, physiology)
- Scott, M.P. & Traniello, J.F.A. (1989) Guardians of the Underworld. *Natural History*, 6, 32-36. (popular review) [!S]
- Scott, M.P. & Traniello, J.F.A. (1990) Behavioural and ecological correlates of male and female parental care and reproductive success in burying beetles (*Nicrophorus* spp.). *Animal Behaviour*, 39(2), 274-283. (biology, ecology, behavior) [!S]
- Scott, M.P., Traniello, J.F.A., & Fetherston, I.A. (1988) ["1987"] Competition for prey between ants and burying beetles (*Nicrophorus* spp.): Differences between northern and southern temperate sites. *Psyche (Cambridge, Massachusetts)*, 94(3-4), 325-331. (biology, ecology) [Southern sites had more intense competition with ants.] [!S]
- Scott, M.P., Trumbo, S.T., Neese, P.A., Bailey, W.D., & Roe, M.R. (2001) Changes in biosynthesis and degradation of juvenile hormone during breeding by burying beetles: a reproductive or social role? *Journal of Insect Physiology*, 47(3), 295-302. (biology, behavior, physiology)

- [Suggests role of increase in JH upon carcass discovery is not to influence vitellogenesis but to influence behavior.] [!S]
- Scott, M.P., & Williams, S.M. (1993) Comparative reproductive success of communally breeding burying beetles as assessed by PCR with randomly amplified polymorphic DNA. *Proceedings of the National Academy of Sciences, USA*, 90(6), 2242-2245. (biology, behavior) [“The male and female providing longer care, usually the larger of each sex, were the mother and father of most larvae (50-100%).”]
- Scriba, W. (1864) Ueber *Necrophorus fossor* und *gallicus*. *Berliner Entomologische Zeitschrift*, 8, 377-378. (descriptions in German)
- Scriba, H. v. L.G. (1790) [“1790-1791”] *Neuestes Magazin für die Liebhaber der Entomologie. (Frankfurt, bey Varrentrapp und Wenner, 1790-[1791])*, 1, 1-296. (in German) [not found]
- Seidlitz, G. (1874) *Fauna Baltica. Die Käfer (Coleoptera) der Ostseeprovinzen Russlands [3. Lieferung]*. H. Laakmann, Dorpat. pp. 49-80 (Gattungen), 209-340 (Arten). pp. 1872. (key in German) [!N]
- Seidlitz, G. (1888) *Fauna Baltica. Die Kaefer (Coleoptera) der Deutschen Ostseeprovinzen Russlands. Zweite neu bearbeitete Auflage*. [Lieferung 2, 3: Gattungen, pp. 17-80, Arten, pp. 97-336]. Hartungsche Verlagsdruckerei, Königsberg. pp. 1891. (key in German) [!N]
- Seidlitz, G. (1889) *Fauna Transsylvanica. Die Kaefer (Coleoptera) Siebenbürgens*. [Lieferung 3-4: Gattungen, pp. 49-128, Arten, pp. 241-544]. Hartungsche Verlagsdruckerei, Königsberg. pp. 1891. (key in German) [!N]
- Selous, C.F. (1911) A preliminary note on the so-called carrion-feeding Coleoptera. *Entomologist's Monthly Magazine*, 47, 86-89. (biology) [“Beetles flew into wind, walking last few feet to carrion, dragged carcasses to softer earth. Not convinced that *Nicrophorus* are feeders on carrion, probably predators.”-Milne & Milne 1944.]
- Semenov-Tian-Shanskij, A. (1894) Coleoptera Asiatica nova. *Horae Societatis Entomologicae Rossicae*, 28, 526-547. (description in Latin) [Original description of *N. przewalskii*.] [!S]
- Semenov-Tian-Shanskij, A. (1926) *Analecta coleopterologica*, XIX. *Russkoye Entomologicheskoe Obozrenie*, 20, 33-55. (descriptions in Latin) [Original description of *Necroxenus (=Nicrophorus)*.] [!N]
- Semenov-Tian-Shanskij, A. (1933) De tribu *Necrophorini* (Coleoptera, Silphidae) classificanda et de ejus distributione geographica. *Trudy Zoologicheskogo Instituta Akademii Nauk SSSR*, 1, 149-160. (catalog in Russian & Latin) [Original description of 8 genus-group names, all =*Nicrophorus*: *Eunecrophorus*, type species=*N. americanus*; *Necrophoriscus*, type species=*N. lunatus*; *Nesonecrophorus*, type species=*N. podagricus*; *Necrocphorindus*, type species=*N. validus*; *Necroleptes*, type species=*N. humator*; *Nesonecropter*, type species=*N. distinctus*; *Necropter*, type species=*N. investigator*; *Stictonecropter*, type species=*N. pustulatus*.] [!N, S]
- Seok, D.M. (1970) *The insect fauna of the Is. Querpant*. Bojinjae, Seoul, 186 pp. (checklist)
- Sharp, D. (1907) The proceedings of the Entomological Society of London for the year 1907: Micromorphism in Coleoptera. *The Transactions of the Entomological Society of London*, pp. i-clxv. (morphology: micromorphism)
- Sharp, D. & Muir, F. (1912) The comparative anatomy of the male genital tube in Coleoptera. *Transactions of the Entomological Society of London*, 1912, 477-642. (morphology: male genitalia) [!N, S]
- Sharps, J.C. (1994) *American burying beetle (Nicrophorus americanus) and western prairie fringed orchid (Platanthera praeclara) survey in Minnehaha County, SD, project P 6146 (1) & (2) PCEMS 357th and 3805*. Final report to the South Dakota Department of Transportation, Pierre, SD. (unpublished report: biology, conservation)
- Shchegoleva-Barovskaya, T.I. (1933a) Les *Necrophorini* (Coleoptera, Silphidae) de la faune de l'URSS (avec 11 fig.). *Trudy Zoologicheskogo Instituta Akademii Nauk SSSR*, 1, 161-191.

- (revision: key, descriptions & catalog in Russian) [*Original description of N. mongolicus; N. japonicus morpha degener* (= *N. japonicus*); *N. vicinus* (= *N. tenuipes*).] [!N, S]
- Shchegoleva-Barovskaya, T.I. (1933b) Une nouvelle espèce du genre *Necrophorus* (Coleoptera) provenant du Thibet. *Trudy Zoologicheskogo Instituta Akademii Nauk SSSR*, 1, 251-252. (descriptions in Russian) [*Original description of N. temporalis* (= *N. semenowi*)] [!N, S]
- Sherborn, C.D. (1922-33) *Index Animalium, sive index nominum quae ab A.D. MDCCLVIII generibus et speciebus animalium imposita sunt. Sectio secunda, a kalendis Ianuariis, MDCCCI usque ad finem Decembris, MDCCCL*. British Museum, London. cxxxix + 7056, cxlviii + 1098 pp. (catalog - index) [!N]
- Shibata, Y. (1969) Some reports on the burying beetles from Japan, I (Col., Silphidae). *Entomological Review of Japan*, 21, 47-54. (catalog) [!N, S]
- Shubeck, P.P. (1968a) Trapping Fabreís “sexton” beetles. *American Biology Teacher*, 30, 564-565. (methods) [!S]
- Shubeck, P.P. (1968b) Orientation of carrion beetles to carrion: random or non-random? *Journal of the New York Entomological Society*, 76, 253-265. (biology, behavior) [!N, S]
- Shubeck, P.P. (1969) Ecological studies of carrion beetles in Hutcheson Memorial Forest. *Journal of the New York Entomological Society*, 77, 138-151. (biology, ecology) [!N]
- Shubeck, P.P. (1970) Silphidae attraction to carrion-baited air cans versus carrion-baited ground cans. *Coleopterists' Bulletin*, 24, 66-70. (biology, ecology) [!N]
- Shubeck, P.P. (1971) Diel periodicities of certain carrion beetles. *Coleopterists Bulletin*, 25, 41-46. (biology, behavior) [!N, S]
- Shubeck, P.P. (1975) Do diurnal carrion beetles use sight, as an aid to olfaction, in locating carrion? *Bulletin of the William L. Hutcheson Memorial Forest*, 3, 36-38. (biology, behavior) [*Results indicate N. tomentosus relies more on olfaction than sight in finding carrion (but experimental design of dubious quality).*] [!N, S]
- Shubeck, P.P. (1976) Carrion beetle responses to poikilotherm and homiotherm carrion (Coleoptera: Silphidae). *Entomological News*, 87, 265-269. (biology, ecology) [*Only N. orbicollis showed a preference for poikilothermic carrion* -3 silphines studied also..] [!N, S]
- Shubeck, P.P. (1984) [“1983”] Habitat preferences of carrion beetles in the Great Swamp National Wildlife Refuge, New Jersey (Coleoptera: Silphidae, Dermestidae, Nitidulidae, Histeridae, Scarabaeidae). *Journal of the New York Entomological Society*, 91(4), 333-341. (biology, ecology)
- Shubeck, P.P. (1985) Orientation of carrion beetles to carrion buried under shallow layers of sand (Coleoptera: Silphidae). *Entomological News*, 96, 163-166. (biology, ecology) [!N, S]
- Shubeck, P.P. (1993) An ecotonal study of carrion beetles (Coleoptera: Silphidae) in the Great Swamp National Wildlife Refuge, New Jersey. *Entomological News*, 104, 88-92. (biology, ecology) [*Edge effect was only shown for N. orbicollis.*] [!S]
- Shubeck, P.P. (1997) Observation of the burying beetle, *Necrophorus tomentosus* (Coleoptera: Silphidae), burying a mole. *Entomological News*, 108(4), 289. (biology, ecology) [*Notes pheromone release & burial activity by N. tomentosus in late Sept.*] [!S]
- Shubeck, P.P. & Blank, D.L. (1982) Silphids Attracted to Mammal Carrion at Cheltenham, Maryland (Coleoptera: Silphidae). *Proceedings of the Entomological Society of Washington*, 84(2), 409-410. (biology, ecology)
- Shubeck, P.P., Downie, N.M., Wenzel, R.L. & Peck, S.B. (1977) Species composition of carrion beetles in a mixed-oak forest. *Bulletin of the William L. Hutcheson Memorial Forest*, 4, 12-17. (biology, ecology) [!N]
- Shubeck, P.P., Downie, N.M., Wenzel, R.L. & Peck, S.B. (1981) Species composition and seasonal abundance of carrion beetles in an oak-beech forest in the Great Swamp National Wildlife Refuge (N.J.). *Entomological News*, 92, 7-16. (biology, ecology) [!N, S]

- Shubeck, P.P. & Schleppek, A.A. (1984) Silphids attracted to carrion near St. Louis, Missouri (Coleoptera: Silphidae). *Journal of the Kansas Entomological Society*, 57(2), 360-362. (biology, ecology) [!N]
- Sidor, C. (1970) The results of investigations on the role of burying beetles (*Necrophorus vespillo*) in rabies transmission. *Mikrobiologija*, 7, 131-138. (biology, symbionts: bacteria) [Showed that rabies virus is inactivated in the gut of *Necrophorus*.] [!N]
- Siebke, H. (1875) *Enumeratio insectorum norvegicorum. Fasciculus II. Catalogum coleopterorum continens*. A. W. Brøgger, Christiania. pp. 61-334 (checklist in Norwegian) [!N]
- Sikes, D.S. (1993) The black burying beetle, *Nicrophorus nigrita* Mannerheim (Coleoptera: Silphidae), displays red maculations. *Coleopterists Bulletin*, 47(3), 231-232. (description of variation) [*N. nigrita* with red marked epipleura won't key properly in Anderson & Peck 1985.] [!S]
- Sikes, D.S. (1996) The natural history of *Nicrophorus nigrita*, a western Nearctic species (Coleoptera: Silphidae). *Pan-Pacific Entomologist*, 72(2), 70-81. (biology, ecology) [Crepuscular, moist forests, competitors, lack of diapause, longest development time of *Nicrophorus* recorded.] [!S]
- Sikes, D.S. & Peck, S.B. (2000) Description of *Nicrophorus hispaniola*, new species, from Hispaniola (Coleoptera: Silphidae) and a key to the species of *Nicrophorus* of the New World. *Annals of the Entomological Society of America*, 93(3), 391-397. (descriptions, phylogenetics) [Possibly a relict population- phylogenetics placing this new species as older than most of the New World *Nicrophorus* species.] [!S]
- Silfverberg, H. (1987) Lists of the insect types in the Zoological Museum, University of Helsinki. 5. Coleoptera: Staphylinoidea I. *Acta Entomologica Fennica*, 48, 47-52. (nomenclature) [!S]
- Silfverberg, H. (1992) *Enumeratio Coleopterorum Fennoscandiae, Daniae et Baltiae*. Helsingin Hyönteisvaihtoyhdistys, Helsinki. v + 94 pp. (checklist, distribution in English (Finnish & Swedish summaries)) [!N]
- Silfverberg, H. (ed.) (1979) *Enumeratio Coleopterorum Fennoscandiae et Daniae*. Helsingin Hyönteisvaihtoyhdistys, Helsinki. vi + 79 pp. (checklist, distribution) [!N]
- Sleeman, D.P. (1983) Dead rats, burying beetles and mites in west Cork. *Irish Naturalists' Journal*, 21(4), 186. (biology, symbionts: mites) [!N]
- Smetana, A. (1948) Dve nove odchytky brouku Csr. Duae coleopterorum aberrationes de RCS descriptae. *Acta Societatis Entomologicae Cechosloveniae*, 45, 34-35. (description of variation in Czech) [!N]
- Smirnov, D.A. (1908) Obzor raznovidnostei *Necrophorus vespilloides* Herbst. (Coleoptera, Silphidae). *Revue Russe d'Entomologie*, 8, 42-43. (description of variation in Russian) [!N]
- Smith, J.B. (1910) *The insects of New Jersey*. In: *Annual Report of the New Jersey State Museum, including a report of the insects of New Jersey: 1909*. pp. 15-888. New Jersey State Museum, Trenton, N. J. (checklist) [from Shubeck 1976: "Smith (1910) stated that *Nicrophorus americanus* was found ... almost exclusively on reptiles," but that *N. marginatus* was found "Throughout the state, on carrion of all kinds..." "] [!N]
- Smith, R.J., Bonilla, M., Calahan, C., & Mann, J. (2001) ["2000"] Comparison of reproductive success of in-situ burial versus the use of abandoned burrows for carcass interment by *Nicrophorus investigator* (Coleoptera: Silphidae) *Journal of the Kansas Entomological Society*, 73(3), 148-154. (biology, ecology, behavior) [Both field and controlled studies indicate that adults who drag carcasses to nearby holes are more successful at rearing broods than those who bury in-situ. Larger beetles can bury carcasses faster than smaller. Burrowing rodent activity may have an indirect positive effect on *Nicrophorus*.] [!S]
- Smith, R.J., & Heese, B. (1995) Carcass selection in a high altitude population of the burying beetle, *Nicrophorus investigator* (Silphidae). *Southwestern Naturalist*, 40(1), 50-55. (biology, ecology, behavior) [Preference for sunlit as opposed to shaded carcasses & possible benefit of ants to *Nicrophorus*.] [!S]

- Smith, R.J., Hines, A., Richmond, S., Merrick, M., Drew, A., & Fargo, R. (2000) Altitudinal variation in body size and population density of *Nicrophorus investigator* (Coleoptera: Silphidae). *Environmental Entomology*, 29(2), 290-298. (biology, ecology) [body size variation, population density and reproductive strategies over altitudinal gradient, lack of sex size dimorphism] [!S]
- Smith, R.J. & Merrick, M.J. (2001) Resource availability and population dynamics of *Nicrophorus investigator*, an obligate carrion breeder. *Ecological Entomology*, 26(2), 173-180. (biology, ecology, behavior)
- Smith, S.G. (1950) The cyto-taxonomy of Coleoptera. *The Canadian Entomologist*, 82, 58-68. (biology, cytology) [!S]
- Smith, S.G. (1953) Chromosome numbers of Coleoptera. *Heredity*, 7, 31-48. (biology, cytology) [!N]
- Smith, S.G. & Virkki, N. (1978) *Coleoptera*. In: John, B. (ed.). *Animal Cytogenetics*. Vol. 3: Insecta 5. Gebrüder Borntraeger, Berlin. 366 pp. (biology, cytology) [!N, S]
- Snow, L.M. (1902) The microcosm of the drift line. *American Naturalist*, 36, 855-864. (biology, ecology)
- Solsky, S.M. (1874) Coleoptera (1). *The journey of A. P. Fedtschenko in Turkestan*. Izv. Obshch. lyubit. estestvozn. antropol. etnogr. 11, 5, IV+222 pp. (checklist in Russian)
- Solter, L.F., Lustigman, B., & Shubeck, P. (1989) Survey of medically important true bacteria found associated with carrion beetles (Coleoptera: Silphidae). *Journal of Medical Entomology*, 26(4), 354-359. (biology, symbionts: bacteria) [!S]
- Sparre Schneider, J. (1888) Oversigt over di i Norges arktiske region hidtil fundne Coleoptera [part 1]. *Tromsø Museums Årsheft*, 11, 81-184. (checklist in Norwegian (German summary)) [!N]
- Spicarová, N. (1969) [The sex ratio of three species of *Necrophorus* F. (Col. Silphidae)]. *Acta Universitatis Palackianae Olomucensis Facultas Rerum Naturalium*, 31, 131-149. (biology, ecology in Czech)
- Spicarová, N. (1971) Dwarf forms of burying beetles and the causes of their development (Col. Silphidae). *Acta Universitatis Palackianae Olomucensis Facultas Rerum Naturalium*, 34, 193-197. (biology, genetics) [Individuals that don't get enough food are significantly smaller.] [!N, S]
- Spicarová, N. (1972) The emergence of burying beetles from soil after their metamorphosis and its dependence on day light (Col. Silphidae). *Acta Universitatis Palackianae Olomucensis Facultas Rerum Naturalium*, 39, 141-155. (biology, behavior)
- Spicarová, N. (1973) [Morphoplastic influence of the food factor on the progeny of several species of the genus *Necrophorus* F. (Col. Silphidae)]. *Acta Universitatis Palackianae Olomucensis Facultas Rerum Naturalium*, 43, 297-321. (biology, behavior in Czech (English summary)) [Weight of parents doesn't influence weight of offspring (possibly first documentation of this?)] [!S]
- Spicarová, N. (1974) Diurnal activity of young individuals of the species *Necrophorus germanicus* (Col. Silphidae). *Acta Universitatis Palackianae Olomucensis Facultas Rerum Naturalium*, 47, 179-187. (biology, behavior)
- Spriggs, A.H.K. (1981) British *Necrophorus* and *Necrodes* beetles and their lifecycle. *Bulletin of the Amateur Entomologists' Society*, 40, 114-119. (descriptions, ecology) [!N]
- Springett, B.P. (1968) Aspects of the relationship between burying beetles, *Necrophorus* spp., and the mite, *Poecilochirus necrophori* Vitz. *Journal of Animal Ecology*, 37, 417-424. (biology, symbionts, mites) [Results (mutualism) have yet to be replicated after many independent studies.] [!N, S]
- Staines, C.L., Jr. (1987) The Silphidae (Coleoptera) of Maryland. *Maryland Entomologist*, 3(1), 13-18. (key, descriptions) [!N]

- Staines, C.L., Jr. (1989) Additional records on Maryland Silphidae (Coleoptera). *Maryland Entomologist*, 3(3), 69-70. (key, descriptions, distributions) [!N]
- Starzyk, J.R. (1967) An interesting case of phoresis of the mite *Poecilochirus necrophori* Vitzth. (Parasitiformes, Parasitidae) on the burying beetle *Nicrophorus fossor* Er. (Coleoptera, Silphidae). *Przegląd Zool*, 11, 51-53. (biology, symbionts: mites)
- Steele, B.F. (1927) Notes on the feeding habits of carrion beetles. *Journal of the New York Entomological Society*, 35, 77-81. (biology, behavior) ["Indicated *N. orbicollis* and *tomentosus* ate maggots from a woodchuck, and preferred maggots to carrion."-Milne & Milne 1944.] [!N]
- Stein, J.P.E.F. (1868) *Catalogus Coleopterorum Europae*. F. Nicolai, Berlin. iv + 149 pp. (catalog in Latin) [!N]
- Stein, J.P.E.F. & Weise, J. (1877) *Catalogi Coleopterorum Europae. Editio Secunda*. Libreria Nicolai, Berlin. 209 pp. (catalog in Latin) [!N]
- Stephens, J.F. (1829a) *The nomenclature of British insects: being a compendious list of such species as are contained in the systematic catalogue of British insects and forming a guide to their classification, &c. &c.* Baldwin and Cradock, London. 68 pp. (checklist) [!N]
- Stephens, J.F. (1829b) *A Systematic Catalogue of British Insects: being an Attempt to arrange all the hitherto discovered Indigenous Insects in Accordance with their Natural Affinities. Part 1, Insecta Mandibulata*. Baldwin and Cradock, London. xxxiv + 416 pp. (catalog) [!N, S]
- Stephens, J.F. (1830) Illustrations of British Entomology, or a synopsis of indigenous insects, containing their generic and specific distinctions, with an account of their metamorphoses, times of appearance, localities, food, and economy, as far as practicable. Mandibulata, Vol. 3. Baldwin & Cradock, London. 374 pp. (biology, descriptions) [Original description of *N. interruptus*.] [!N, S]
- Stephens, J.F. (1839) *A manual of British Coleoptera or beetles*. Longman, London. 443 pp. (descriptions) [!N, S]
- Stevens, N.M. (1909) Further studies in the chromosomes of Coleoptera. *Journal of Experimental Zoology*, 6, 101-114. (biology, cytology) [!S]
- Stickney, F.S. (1923) The head-capsule of Coleoptera. *Illinois Biological Monographs*, 8, 1-104. (morphology: head capsule) [!N, S]
- Stierlin, W.G. (1872) ["1871"] Ueber *Nicrophorus sepulchralis*, Heer. *Mitteilungen der Schweizerischen Entomologischen Gesellschaft*, 3, 475-476. (in German)
- Stierlin, W.G. (1877) Ueber *Nicrophorus sepulchralis* Heer. *Deutsche Entomologische Zeitschrift*, 21, 288. (in German)
- Stierlin, W.G. & V. von Gautard. (1869) Fauna coleopterorum helvetica. Die Käfer-Fauna der Schweiz [part 1]. *N. Denkschr. Schweiz. Ges. Naturw.*, 23 ((3) 3) [Beitr. 4], 1-216. (checklist in German) [!N]
- Stork, N.E. (1980) A scanning electron microscope study of tarsal adhesive setae in the Coleoptera. *Zoological Journal of the Linnean Society*, 68, 173-306. (morphology: tarsal setae) [!N, S]
- Strand, E. (1917) Übersicht der in Gistel's "Achthundert und zwanzig neue oder unbeschriebene wirbellose Thiere" (1857) behandelten Insekten. *Archiv für Naturgeschichte*, 82 (A)(5), 75-101. (descriptions in German) [Original description of *N. interruptiolus* (nomen dubium).] [!N, S]
- Strauch, A. (1861) *Catalogue systématique de tous les Coléoptères décrits dans les Annales de la Société Entomologique de France depuis 1832 jusqu'à 1859*. H. W. Schmidt, Halle. iv + 159 pp. 8° (catalog in French) [!N, S]
- Stresemann, E., Hannemann, H.-J., Klausnitzer, B., & Senglaub, K. [Eds] (1989) *Exkursionsfauna für die Gebiete der DDR und der BRD*. Band 2/1. Wirbellose: Insekten - Erster Teil. 8 Aufl Volk und Wissen Vorseigener Verlag, Berlin (key in German) [*Nicrophorus*; *Fabricius 1775*; *key to species*; *Germany*; P. 219]

- Stroud, C.P. (1950) A survey of the insects of White Sands National Monument, Tularosa Basin, New Mexico. *American Midland Naturalist*, 44(3), 659-677. (checklist) [!S]
- Sturm, J. (1826) *Catalog meiner Insecten-Sammlung*. Erster Theil, Käfer. Privately published, Nürnberg. viii + 207 pp., 4 pls. (catalog in German)
- Sturm, J. (1838) *Deutschlands Fauna in Abbildungen nach der Natur, mit Beschreibungen*. Abth. II, III, V, VI / von Jacob Sturm; (Forgesetzt [Abth. V, Hft. 20-23] von J. H. C. F. Sturm) Nürnberg, 1797-1857. 4 Abth. 13 (in German)
- Šulc, K. (1940) O cisticích ústrojích hrobaríku. Über die Putzvorrichtungen bei den Necrophoren (Coleoptera). *Vestník Československé Zoologické Společnosti v Praze*, 8: 149-165. (morphology in Czech (German summary)) [!M, N]
- Sulzer, J.H. (1761) *Die Kennzeichen der Insekten : nach Anleitung des königl. Schwed. Ritters und Leibarzts Karl Linnaeus : durch XXIV. Kupfertafeln erläutert und mit derselben natürlichen Geschichte begleitet / von J.H. Sulzer ...; mit einer Vorrede des Herrn Johannes Gessners*. Zurich : Bei Heidegger und Comp., 1761. XXVIII, 203, [1], 67, [1] p. (in German)
- Šustek, Z. (1981) Mrchozroutovití Československa, Coleoptera Silphidae. *Zprávy Československé Společnosti Entomologické při CSAV, Klíče k Urcování Hmyzu*, 2, 1-46. (key, descriptions, regional in Czech) [!N]
- Suzuki, S. (1998) Interesting behaviour of Japanese burying beetles (*Nicrophorus* spp.) *Insectarium*, 35(6), 152-156 (4-8?). (biology, behavior in Japanese)
- Suzuki, S. (1999) Does carrion-burial by *Nicrophorus vespilloides* (Silphidae: Coleoptera) prevent discovery by other burying beetles? *Entomological Science*, 2(2), 205-208. (biology, ecology, behavior) [Answer: no, but carcass maintenance might help.] [!S]
- Suzuki, S. (2000a) Carrion burial by *Nicrophorus vespilloides* (Coleoptera: silphidae) prevents fly infestation. *Entomological Science*, 3, 269-272. (biology, ecology, behavior) [Clear demonstration of the benefits of carcass burial to *N. vespilloides*.] [!S]
- Suzuki, S. (2000b) Changing dominant-subordinate relationships during carcass preparation between burying beetle species (*Nicrophorus*: Silphidae: Coleoptera). *Journal of Ethology*, 18(1), 25-28. (biology, behavior) [Demonstration that *Nicrophorus* species may differ in preference of (1) burying vs (2) stealing carcasses already buried.] [!S]
- Suzuki, S. (2000c) Interference behavior of burying beetles on a carcass. *New Entomologist*, 49(3-4), 37-40. (biology, ecology, behavior in Japanese with English abstract)
- Suzuki, S. (2001) Suppression of fungal development on carcasses by the burying beetle *Nicrophorus quadripunctatus* (Coleoptera: Silphidae). *Entomological Science*, 4(4), 403-405. (biology, ecology, behavior) [!S]
- Swan, L.A. & Papp, C.S. (1972) *The common insects of North America*. Harper & Row, New York etc. xiii + 750 pp. (description) [!N]
- Szalanski, A.L., Sikes, D.S., Bischof, R., & Fritz, M. (2000) Population genetics and phylogenetics of the endangered American burying beetle, *Nicrophorus americanus* (Coleoptera: Silphidae). *Annals of the Entomological Society of America*, 93(3), 589-594. (biology, conservation, phylogenetics, genetics) [*N. orbicollis* found to be closest relative to *N. americanus* among 10 *nicrophorines* sampled. No evidence of genetic differentiation found among 5 populations of *N. americanus*.] [!S]
- Székey, V. (1939) Der Hautsaum der Staphyliniden und seine Funktion. *Verhandlung Int. Kongr. Ent., Berlin*, 2, 938-944. (morphology in German) [!N]
- Székey, V. (1961) Zwei neue Aberrationen der Silphiden-Gattung *Nicrophorus* Fabr. (Coleoptera). *Folia Entomologica Hungarica*, (S.N.) 14, 333-334. (description of variation in German) [!N]
- Takagi, S. (1936) A list of Coleoptera in Oze and Oku-Nikkô (I). *Kontyû*, 10, 189-206. (checklist in Japanese) [!N]

- Takaku, G., Katakura, H., & Yoshida, N. (1994) Mesostigmatic mites (Acari) associated with ground, burying, roving carrion and dung beetles (Coleoptera) in Sapporo and Tomakomai, Hokkaido, Northern Japan. *Zoological Science*, 11, 305-311. (biology, symbionts: mites) [!N]
- Tamutis, V. (1999) Soil surface insect fauna in rape agrocoenoses. *Ekologija*, 1, 18-24. (comment, distribution in Lithuanian (English summary))
- Telnov, D., Barsevskis, A., Savich, F., Kovalevsky, F., Berdnikov, S., Doronin, M., Cibulskis, R., & Ratniece, D. (1997) *Check-List of Latvian Beetles (Insecta: Coleoptera)* Mitteilungen des Internationalen Entomologischen Vereins e.V., ISSN 1019-2808 Supplement No. 5; the 5th May, 1997: pp. 1-140. (checklist) [on line at <http://www.lubi.edu.lv/les/Coleoptera.htm> Note: Since publication of the "Check-List of Latvian Beetles (Insecta: Coleoptera)" in the Supplement 5 of the "Mitteilungen des Internationalen Entomologischen Vereins", new families and more than 200 new species were found in Latvia. The new data were published in the "Acta Coleopterologica Latvica - 1997, Vol. 1 (2)", the "Latvijas entomologs - 1998, Vol. 36, 37 and 38" and the "Baltic Journal of Coleopterology" - 2001, Vol. 1 and are presented here in the complete list with no special comments.] [!S]
- Terrón, R.A., Anduaga, S. & Morón, M.A. (1992) ["1991"] Analisis de la coleóptero-fauna necrófila de la Reserva de la Biosfera La Michilia, Durango, México. *Folia Entomológica Mexicana*, 81, 315-324. (biology, ecology in Spanish (English summary)) [*N. mexicanus* only carrion feeder active through whole year.] [!S]
- Théodoridès, J. (1949) Les coleopteres nuisibles aux animaux domestiques. *Annales de Parasitologie Humaine et Comparée*, 24, 116-123. (biology, ecology in French)
- Théodorides, J. (1950a) Sur la répartition géographique de *Necrophorus humator* F. *Vie et Milieu*, 1, 97. (checklist in French) [!S]
- Théodoridès, J. (1950b) Notes diverses sur les *Necrophorus* (Coleoptera Silphidae). *Bulletin de l'Institut Royal des Sciences Naturelles de Belgique*, 26(52), 1-20. (biology, ecology, morphology in French) [!N]
- Théodoridès, J. (1955) *Contribution a l'étude des parasites et phoretiques de coléoptères terrestres*. *Vie et Milieu*, Suppl. No. 4, 310 pp. (biology, symbionts: mites in French) [Recorded *Neoseius novus* from *N. vespillo* and *N. vespilloides* in France. But no *Nicrophorus* found in Mediterranean region.]
- Théodoridès, J. (1960) Parasites et phoretiques de coléoptères et de myriapodes de Richelieu (Indre-et-Loire). *Annales de Parasitologie Humaine et Comparée*, 35, 488-503. (biology, symbionts: mites in French)
- Thiel, H. (1936) Vergleichende Untersuchungen an den Vormägen von Käfern. *Zeitschrift für Wissenschaftliche Zoologie*, 147, 395-432. (morphology: proventriculus in German) [!N]
- Thomson, C.G. (1862) *Skandinaviens Coleoptera, synoptiskt bearbetade*. Vol. 4. Lundbergska Boktryckeriet, Lund. 269 pp. (descriptions) [Original description of *microcephalus* (= *N. investigator*).] [!N, S]
- Thomson, C.G. (1885) *Skandinaviens Insecter, en Handbok i Entomologi, till allmänna läroverkens tjänst utarbetad. Första Häftet: Coleoptera*. Malmström & Komp's Boktryckeri, Lund. xx + 186 pp., 5 pls. (key, checklist in Swedish) [!N]
- Thunberg, C.P. (1789) *Periculum entomologicum, quo characteres generum Insectorum*. J. Edman, Upsaliae. 16 pp. (nomenclature) [unjustified emendation of *Nicrophorus* (*Necrophorus*)] [!S]
- Tischler, W.-H. (1976) Untersuchungen über die tierische Besiedlung von Aas in verschiedenen Strata von Waldökosystemen. *Pedobiologia*, 16, 99-105. (biology, ecology in German) [!N]
- Trumbo, S.T. (1990a) Interference competition among burying beetles (Silphidae, *Nicrophorus*). *Ecological Entomology*, 15(3), 347-355. (biology, ecology) [!S]

- Trumbo, S.T. (1990b) Reproductive benefits of infanticide in a biparental burying beetle *Nicrophorus orbicollis*. *Behavioral Ecology and Sociobiology*, 27(4), 269-273. (biology, behavior) [from abstract: "Use of a genetic marker demonstrated that male and female intruders obtained reproductive benefits from infanticide."] [!S]
- Trumbo, S.T. (1990c) Reproductive success, phenology and biogeography of burying beetles (Silphidae, *Nicrophorus*). *American Midland Naturalist*, 124(1), 1-11. (biology, behavior) [*N. orbicollis* & *N. tomentosus* common on mice, but *N. pustulatus* not; "Compared with earlier studies in northern habitats of North America, burying beetles are less abundant, less diverse and not as successful in southeastern woodlands."] [!S]
- Trumbo, S.T. (1990d) Regulation of brood size in a burying beetle, *Nicrophorus tomentosus* (Silphidae). *Journal of Insect Behavior*, 3(4), 491-500. (biology, behavior) [!N, S]
- Trumbo, S.T. (1991) Reproductive benefits and the duration of paternal care in a biparental burying beetle, *Nicrophorus orbicollis*. *Behaviour*, 117(1-2), 82-105. (biology, behavior) [from abstract: "It was estimated that *N. orbicollis* males received four times the reproductive benefit on large (27-33 g) as opposed to small carcasses (10-18 g) in the field."] [!S]
- Trumbo, S.T. (1992) Monogamy to communal breeding: Exploitation of a broad resource base by burying beetles (*Nicrophorus*). *Ecological Entomology*, 17(3), 289-298. (biology, behavior) [from abstract: "*N. orbicollis* and *N. sayi* are extremely dependent on parental regurgitations and young fail to survive to the second instar if parents are removed. Young of *N. defodiens*, *N. tomentosus* and *N. pustulatus* can develop normally without parental regurgitations."] [!S]
- Trumbo, S.T. (1994) Interspecific competition, brood parasitism, and the evolution of biparental cooperation in burying beetles. *Oikos*, 69(2), 241-249. (biology, behavior) [A female will accept heterospecific young that arrive on the carcass at the 'expected' time, but will eat larvae that arrive > 20 h before her own eggs hatch.] [!S]
- Trumbo, S.T. (1995) Nesting failure in burying beetles and the origin of communal associations. *Evolutionary Ecology*, 9(2), 125-130. (biology, behavior) [*N. defodiens* more tolerant of communal breeding than *N. orbicollis*.] [!S]
- Trumbo, S.T. (1996a) Parental care in invertebrates. *Advances in the Study of Behavior*, 25, 3-51. (biology, behavior) [Detailed overview of research on care in invertebrates: Prime Movers of Care, Physiology of Care, Parental Care Theory, Uniparental vs Biparental care.] [!S]
- Trumbo, S.T. (1996b) The role of conflict in breeding systems: burying beetles as experimental organisms. *American Biology Teacher*, 58, 118-121. (methods, biology, behavior) [Good intro to *Nicrophorus* trapping methods, observation methods, & conflict of interest in *Nicrophorus*.] [!S]
- Trumbo, S.T. (1997) Juvenile hormone-mediated reproduction in burying beetles: From behavior to physiology. *Archives of Insect Biochemistry and Physiology*, 35(4), 479-490. (Conference: biology, behavior, physiology) [Association of JH [] with behavior.] [!S]
- Trumbo, S.T. & Bloch, P.L. (2000) Habitat fragmentation and burying beetles abundance and success. *Journal of Insect Conservation*, 4, 245-252. (biology, ecology, conservation) [!S]
- Trumbo, S.T., Borst, D.W., & Robinson, G.E. (1995) Rapid elevation of juvenile hormone titer during behavioral assessment of the breeding resource by the burying beetle, *Nicrophorus orbicollis*. *Journal of Insect Physiology*, 41(6), 535-543. (biology, behavior, physiology) [JH surge in females not triggered by mating or feeding cues.] [!S]
- Trumbo, S.T. & Eggert, A.-K. (1994) Beyond monogamy: Territory quality influences sexual advertisement in male burying beetles. *Animal Behaviour*, 48(5), 1043-1047. (biology, ecology, behavior) [Male *N. defodiens* assess both resource quality & mate number when deciding whether to emit pheromone after securing a carcass.] [!S]

- Trumbo, S.T. & Fernandez, A.G. (1995) Regulation of brood size by male parents and cues employed to assess resource size by burying beetles. *Ethology Ecology & Evolution*, 7(4), 313-322. (biology, behavior) [*Burying beetles use a volume- but not a mass-related cue to assess resource potential.*] [!S]
- Trumbo, S.T. & Fiore, A.J. (1991) A genetic marker for investigating paternity and maternity in the burying beetle *Nicrophorus orbicollis* (Coleoptera: Silphidae). *Journal of the New York Entomological Society*, 99(4), 637-642. (biology, genetics) [*Method to investigate sperm competition in Nicrophorus.*] [!S]
- Trumbo, S.T. & Fiore, A.J. (1994) Interspecific competition and the evolution of communal breeding in burying beetles. *American Midland Naturalist*, 131(1), 169-174. (biology, behavior) [*Reproductive output per female was lower for group breeders.*] [!S]
- Trumbo, S.T., Kon, M., & Sikes, D. (2001) The reproductive biology of *Ptomascopus morio*, a brood parasite of *Nicrophorus* *Journal of Zoology*, 255(4), 543-560. (biology, ecology, behavior) [*Ptomascopus morio lacks the major behaviors of Nicrophorus associated with fast pre-emption of small carcasses and appears to frequently parasitize the broods of Nicrophorus.*] [!S]
- Trumbo, S.T. & Sikes, D.S. (2000) Sexual selection and leg morphology in *Nicrophorus orbicollis* and *Ptomascopus morio*. *Entomological Science*, 3(4), 585-589. (in English) [!S]
- Trumbo, S.T. & Thomas, S. (1998) Burying beetles (Coleoptera: Silphidae) of the Apostle Islands, Wisconsin: Species diversity, population density and body size. *Great Lakes Entomologist*, 31(2), 85-95. (biology, ecology) [*Effect of competitive release on smaller species.*] [!S]
- Trumbo, S.T. & Wilson, D.S. (1993) Brood discrimination, nest mate discrimination, and determinants of social behavior in facultatively quasisocial beetles (*Nicrophorus* spp.). *Behavioral Ecology*, 4(4), 332-339. (biology, behavior) [*Females of a species subject to a high rate of nest failure (N. defodiens) were more likely to cooperate than females of a species with a low rate of nest failure (N. orbicollis)*] [!S]
- Uetz, G.W., Van Der Laan, K.L., Summers, G.F., Gibson, P.A.K., & Getz, L.L. (1979) The effects of flooding on floodplain arthropod distribution, abundance and community structure. *American Midland Naturalist*, 101(2), 286-299. (comment: ecology in English) [*Noted general decline in species richness at lower elevations with greater flood frequency.*] [!S]
- Villada, M.M. (1901) *Catálogo de la colección de coleópteros mexicanos del Museo Nacional, formada y clasificada por el Dr. D. Eugenio Dugès (Salón de Entomología)*. Segunda edición. Museo Nacional, México. 148 pp., 12 pls. (checklist in Spanish) [!N]
- Villers, C. de. (1789) *Caroli Linnaei entomologia, faunae suecicae descriptionibus aucta ...* Vol. 1. xvi + 765 pp., 3 pls. Piestre & Delamolliere, Lugdini. (catalog) [!N]
- Vitzthum, H. (1930) Milben als pestträger? Ein Beitrag zu den Untersuchungen der mandschurischen Peststudien Kommission in Harbin. *Zoologische Jahrbücher (Abteilung für Systematik, Ökologie und Geographie der Tiere)*, 60, 381-428. (biology, symbionts: mites in German) [!N]
- Voigts, H & Oudemans, A.C. (1905) Zur Kenntnis der Milben-Fauna von Bremen. *Abhandlungen, Naturwissenschaftlichen Verein zu Bremen*, 18, 199-253. (biology, symbionts: mites in German) [*Description of Neoseius novus (Acari: Uropodina) in genus Uroseius.*] [!N]
- Vollenhoven, S.C. Snellen van. (1870) *Laatste Lijst van Nederlandsche Schildvleugelige Insecten (Insecta Coleoptera)*. Hollandsche Maatschappij der Wetenschappen, Haarlem. v + 146 pp. (checklist in Dutch) [!N]
- Wachek, F. (1955) Die entoparasitischen Tylechiden. *Parasitologische Schriftenreihe*, 3, 1-119. (biology, parasites in German)
- Waldow, U. (1973) Elektrophysiologie eines neuen Aasgeruchrezeptors und seine Bedeutung für das Verhalten des Totengräbers (*Necrophorus*). *Journal of Comparative Physiology*, 83, 415-424. (morphology: olfactory receptors in German (English summary)) [!N, S]

- Walkden, H.H. (1944) Insects and other arthropods collected in pasture grasses, waste lands, and forage crops, Manhattan Kansas, 1937-1940. *Journal of the Kansas Entomological Society*, 17, 128-143. (biology, ecology)
- Walker, F. (1866) *List of Coleoptera*. In: Lord, J.K. *The Naturalist in Vancouver Island and British Columbia*. R. Bentley, London. Vol. 2, pp. 309-334. (descriptions) [*Original description of N. conversator (=N. defodiens).*] [!N]
- Walker, T.J., Jr. (1957) Ecological studies of the arthropods associated with certain decaying materials in four habitats. *Ecology*, 38, 262-276. (biology, ecology) [!N, S]
- Wallace, F.L. & Fox, R.C. (1980) A comparative morphological study of the hindwing venation of the order Coleoptera, Part II. *Proceedings of the Entomological Society of Washington*, 82, 609-654. (morphology: wing venation) [!S]
- Walsh, B.D. (1867) [Burying beetles]. *Practical Entomologist*, 2, 108. (comment: ecology)
- Walsh, B.D. & Riley, C.V. (1869) Burying Beetles. *The American Entomologist*, 2, 61. (comment)
- Walsh, G.B. (1931) Studies in the British necrophagous Coleoptera. I. The activity of carrion-feeding beetles during the year. *Entomologist's Monthly Magazine*, 67, 76-81. (biology)
- Walsh, G.B. (1933) Studies in the British necrophagous Coleoptera. II The attractive powers of various natural baits. *Entomologist's Monthly Magazine*, 69, 28-32. (biology, ecology) [!M, N]
- Weber (1925) In: *Blunck, Syll. Ins.-Biol. Col. I [not found; "Biology" - Hatch 1928.]*
- Weber, F. (1801) *Observationes entomologicae, continentes novorum quae condidit generum characteres, et nuper detectarum specierum descriptiones*. Impensis Bibliopolii Academici Novi, Kiliae. xii + 116 + (1) pp. (descriptions) [*Original description of N. tomentosus.*] [!S]
- Weber, L. (1905) Zur Lebensgeschichte der Necrophoren. *Insekten-Börse*, XII (biology, ecology, behavior in German)
- Weber, L. (1918) Die Lebenserscheinungen der Kafer. *Entomologische Blätter*, 14, 1-19. (biology, behavior in German) [*"Biology; incubation" - Hatch 1928.*]
- Weigel, J.A.V. (1806) *Faunae Silesiaca prodromus. Verzeichniss der Thiere, die in Schlesien bisher entdeckt und bestimmt sind*. Himbürg, Berolini. 358 pp. (descriptions in German) [*Original description of N. funerarius (nomen dubium).*]
- Weiss, H.B. & West, E. (1920) Fungous insects and their hosts. *Proceedings of the Biological Society of Washington*, 33, 1-20. (biology, ecology)
- Welch, R.C. (1967) The Coleoptera of Monks Wood National Nature Reserve, Huntingdonshire. First Supplement. *Entomologist's Gazette*, 19, 9-20. (biology, ecology)
- Werner, S.M. & Raffa, K.F. (2000) Effects of forest management practices on the diversity of ground-occurring beetles in mixed northern hardwood forests of the Great Lakes Region. *Forest Ecology and Management*, 139, 135-155. (comment: ecology) [!S]
- Westhoff, F. (1881) ["1881-1882"] Die Käfer Westfalens. *Verhandlungen des Naturhistorischen Vereins der Preussischen Rheinlande und Westfalens*, 38 (supplement): xxvii + 1-140, 141-323. (description of variation in German) [*Original description of N. vespillo var. minor (=N. vespillo); N. vespillo var. varendorffi (=N. vespillo); N. vespillo var. Bolsmanni (=N. vespillo); N. vespilloides var. Altumi (=N. vespilloides).*] [!N]
- Westwood, J.O. (1839) *An introduction to the modern classification of insects, founded on the natural habits and corresponding organization of the different families*. Vol. 1, xii + 462 pp. Longman, Orme, Brown, Green and Longmans, London. (biology) [!N]
- Wetzel, D. (1995) American burying beetles at the Roger Williams Park Zoo. *American Association of Zoological Parks And Aquariums, Annual Conference Proceedings*, 1995, 562-566. (Conference report: biology, conservation)
- Wetzel, D. (1996) Conservation spotlight: American burying beetles make a home at Roger Williams Park Zoo. *Endangered Species Update*, 13 (4&5), 12. (biology, conservation) [!N]
- White, R.E. (1983) *A Field Guide to the Beetles of North America*. Houghton Mifflin Co., Boston. xii + 368 pp. (field guide) [!N]

- Wickham, H.F. (1911) A list of the Coleoptera of Iowa. *Bulletin of the Laboratories of Natural History of the State University of Iowa*, 6 (2), 1-40. (checklist) [!N]
- Wilhelm, S.I., Larson, D.J., & Storey, A.E. (2001) Habitat preference of two burying beetles (Coleoptera: Silphidae: *Nicrophorus*) living among seabirds *Northeastern Naturalist*, 8(4), 435-442. (biology, ecology) [*Beetles preferred petrel burrows, probably because this host was the only one in the correct size range for burial and was the most abundant host on the island.*] [!S]
- Will, K.W. (1992) *Nicrophorus americanus* (Olivier) American burying beetle recovery plan. (summary). *The Ohio Coleopterist*, 1, 10-11. (biology, conservation)
- Williams, A.B. (1936) The composition and dynamics of a Beech-Maple climax community. *Ecological Monographs*, 6(3), 317-408. (comment: ecology) [*N. marginatus listed among insects members of the near temporary pools/ beech-maple habitat.*] [!S]
- Willoughby-Ellis, H. (1926) Forms of *Necrophorus mortuorum*, F. (Col.). *Entomologist's Record and Journal of Variation*, 38, 3. (description of variation)
- Wilson, D. S. (1982) Genetic polymorphism for carrier preference in a phoretic mite. *Annals of the Entomological Society of America* 75(3), 293-296. (biology, symbionts: mites) [!S]
- Wilson, D.S. (1983) The effect of population structure on the evolution of mutualism: a field test involving burying beetles and their phoretic mites. *The American Naturalist*, 121(6), 851-870. (biology, symbionts: mites) [!N, S]
- Wilson, D.S. & Fudge, J. (1984) Burying beetles: Intraspecific interactions and reproductive success in the field. *Ecological Entomology*, 9(2), 195-203. (biology, ecology) [*Suggests adaptation to local environments may explain some intraspecific differences.*] [!S]
- Wilson, D.S. & Knollenberg, W.G. (1984) Food discrimination and ovarian development in burying beetles (Coleoptera: Silphidae: *Nicrophorus*). *Annals of the Entomological Society of America*, 77(2), 165-170. (biology, behavior, physiology) [*Documents different responses by Nicrophorus to large vs small carrion.*] [!S]
- Wilson, D.S. & Knollenberg, W.G. (1987) Adaptive indirect effects: The fitness of burying beetles with and without their phoretic mites. *Evolutionary Ecology*, 1(2), 139-159. (biology, symbionts: mites) [!S]
- Wilson, D.S., Knollenberg, W.G., & Fudge, J. (1984) Species packing and temperature dependent competition among burying beetles (Silphidae, *Nicrophorus*). *Ecological Entomology*, 9(2), 205-216. (biology, ecology) [!S]
- Wilson, E.O. (1971) *The insect societies*. Cambridge, Massachusetts: Harvard University Press. 548 pp. (comment) [!S]
- Winkler, A. (1925) *Catalogus Coleopterorum regionis palaearticae*, Vol. 1, Pars 3. Albert Winkler, Wien. pp. 241-368. (catalog) [!S]
- Wisniewski, J. (1982) Für die Fauna Polens neue Uropodina (Acari: Parasitiformes). *Teil II. Fragmenta Faunistica, Warsawa*, 27, 143-147. (biology, symbionts: mites in German) [*Recorded Neoseius novus (Acari) from 4 Nicrophorus species.*]
- Wolcott, A.B. & Montgomery, E. (1933) An ecological study of the Coleopterous fauna of a Tamarack swamp. *American Midland Naturalist*, 14(2), 113-169. (comment: ecology) [*Reported 2 species of Nicrophorus (N. orbicollis and N. tomentosus).*] [!S]
- Wood, J.G. (1873) *Insects at home: Being a popular account of all those insects which are useful or destructive, and minutely describing their structure, habits, and transformations*. W. Rutter & Company, Philadelphia. xx + 670 pp. (biology, ecology) [*“Indicates Nicrophorus attack poorly interred human bodies in Russia. Found sex ratio of 1:1. Other observations correspond to those of Furneaux, but more extended.”-Milne & Milne 1944.*] [!N]
- Wu, C.F. (1937) *Catalogus Insectorum Sinesium* 3. The Fan Memorial Institute of Biology, Peiping, 1312 pp. (catalog)

- Xambeau, P. (1892) Moeurs et Métamorphoses d'Insectes. *Annales de la Société Linnéenne de Lyon*, 39, 135-194. (biology in French)
- Xambeau, P. (1898) Moeurs et métamorphoses des insectes. 9e mémoire. Première partie. *Revue d'Entomologie*, 17, 1-63. (morphology, larval stages in French)
- Xu, H. & Suzuki, N. (2001) Effects of carcass size and parental feeding on reproductive success of the burying beetle *Nicrophorus quadripunctatus* (Coleoptera: Silphidae). *Entomological Science*, 4(2), 217-222. (biology, ecology, behavior) [Replication of observations made on European and North American species with Japanese species; remains uncertain if *N. quadripunctatus* regularly cannibalizes their larvae to regulate clutch size.] [!S]
- Yokoyama, K. (1930) *Beetles of Japan*. Nishigahara Kankokai, Tokyo. 163 + 10 pp., 20 pls. (descriptions in Japanese) [!N]
- Yokoyama, K. (1931) *Beetles of Japan*. Nishigahara Kankokai, Tokyo. 159 + 10 pp., 20 pls. (description in Japanese) [!N]
- Zahradník, J. (1985) *Käfer Mittel- und Nordwesteuropas: ein Bestimmungsbuch für Biologen und Naturfreunde / von Jirí Zahradník; Illustriert von Jarmila Hoberlandtová und Ivan Zpevák*. Hamburg: Paul Parey pp. 1-498 (catalog, annotated & figured in German) [keys to species & color illustrations] [!S]
- Zahradník, J. (1990) *Guía de los Coleópteros de España y de Europa. Revisión, adaptación y apéndice ibero-baleár de M. Blas y E. Vives*. Ediciones Omega, Barcelona. 570 pp. (key in Spanish) [!N]
- Zaragoza Caballero, S. & Pérez Ruiz, H. (1975) Varianza de *Nicrophorus mexicanus* Matt. (Coleoptera: Silphidae) y su correlación ambiental en al Pedregal de San Ángel, Distrito Federal, México. *Anales del Instituto de Biología, Universidad Nacional Autónoma de México (Zoología)*, 50, 459-475. (biology, ecology in Spanish (English summary)) [Graphs of abundance by month by sex; etc. interesting analysis, should be replicated in other species] [!S]
- Zetterstedt, J.W. (1824) Nya Svenska Insect-Arter. Kungliga Svenska Vetenskaps-Akademiens, *Handlingar*, 1824, 149-159. (descriptions) [Original description of *N. investigator*.] [!S]
- Zetterstedt, J.W. (1838) *Sectio Prima: Coleoptera, Orthoptera et Hemiptera*. In: *Insecta Lapponica descripta*. L. Voss, Lipsiae. pp. 7-314. 1838-40. [!N]
- Zhang, Y. (1992) Coleoptera: Silphidae. *Insects of the Hengduan Mountains Region 1*, 486-487. (checklist in Chinese (English summary))
- Zhang, Y. (1993) *Coleoptera: Silphidae*. In: Huang, Chun-mei [Ed.]. *Animals of Longqi Mountain*. China Forestry Publishing House: pp. 237-238. (in Chinese (English summary))

- Acanthopsilus Portevin, 20
- Cyrtoscelis Hope, 20
- Eonecrophorus** Kurosawa, 20
tenuicornis Kurosawa, 20
- Eunecrophorus Semenov-Tian-Shanskij, 20
- Necrocharis Portevin, 20
- Necrocleptes Semenov-Tian-Shanskij, 21
- Necrophagus; Leach, 20
- Necrophorindus Semenov-Tian-Shanskij, 21
- Necrophoriscus Semenov-Tian-Shanskij, 20
- Necrophorus Thunberg, 20
- Necropter Semenov-Tian-Shanskij, 21
- Necroxenus Semenov-Tian-Shanskij, 21
- Neonicrophorus Hatch, 21
- Nesonecrophorus Semenov-Tian-Shanskij, 20
- Nesonecropter Semenov-Tian-Shanskij, 21
- Nicrophorus** Fabricius, 20
 aleuticus Gistel, 99
 algiricus Pasquet, 81
 alpha Pierce, 141
 altumi Westhoff, 203
americanus Olivier, 20
 anglicus Stephens, 216
antennatus (Reitter), 27
 apicalis Kraatz, 54
- apo** Arnett, 29
argutor Jakovlev, 29
 armeniacus Portevin, 55
 atricornis Meier, 73
 aurigaster Portevin, 180
 aurora Motschulsky, 204
 baeckmanni Kieseritzky, 99
basalis Faldermann, 31
 basalis Gistel, 81
 benguetensis Arnett, 137
 bicolon Newman, 155
 bifasciatus Hausmann, 191
 bimaculatus Haworth, 56
 bipunctatus Kraatz, 56
 bipunctatus Portevin, 216
 bohemicus Roubal, 191
 bolsmanni Westhoff, 191
 borealis Portevin, 204
 brullei Jacobson, 216
 brunnipes Gradl, 81
 burmanicus Hlisnikovsky, 142
 cadaverinus Gravenhorst, 192
 cadaverinus Mareuse, 217
 cadaverinus Gistel, 57
carolinus (Linnaeus), 32
 carreti Pic, 217
 centralis Portevin, 28
 centrimaculatus Reitter, 82
chilensis Philippi, 36
 chryseus Mazokhin-Porshnyakov, 229
concolor Kraatz, 36
 confossor LeConte, 99
confusus Portevin, 39
 conversator Walker, 44
 corsicus Laporte, 83
 curvipes Duftschmid, 192
dauricus Motschulsky, 40
defodiens Mannerheim, 42
 degener Carret, 217
didymus Brull, 47
distinctus Grouvelle, 49
 dolosus Portevin, 34
encaustus Fairmaire, 49

Index (continued)

Nicrophorus

- fasciatus Hlisnikovsky, 175
 fascifer (Reitter), 57
 fauveli Fauconnet, 193
 flexuosus Portevin, 48
 fossor Erichson, 84
 fractus Portevin, 205
 frontalis Fischer von Waldheim, 58
 funebris Jakovlev, 134
 funerarius (Weigel), 229
 functor Fauvel, 100
 funereus Gn, 87
 funeror (Reitter), 100
 gallicus Jacquelin du Val, 88
germanicus (Linnaeus), 49
 grahami Swan & Papp, 101
 grandior Angell, 59
 grandis Fabricius, 25
guttula Motschulsky, 62
 hadenius Gistel, 193
 hallii Kirby, 149
 hauseri Hlisnikovsky, 193
 hebes Kirby, 205
 hecate Bland, 63
heurni Portevin, 65
hispaniola Sikes & Peck, 66
humator (Gleditsch), 66
 humeralis Pic, 77
hybridus Hatch & Angell, 76
 immaculatus Portevin, 160
 immaculosis Hatch, 64
 inclusus Reitter, 156
 infodiens Mannerheim, 101
 infuscaticornis Portevin, 89
insularis Grouvelle, 77
 insularis Lafer, 102
 intermedius Reitter, 102
 interruptiolus Strand, 218
interruptus Stephens, 78
 interruptus Brull, 218
 interruptus Gistel, 218
investigator Zetterstedt, 93
japonicus Harold, 116
 karafutonis Kno, 121
kieticus Mroczkowski, 118
 labiatus Motschulsky, 103
 labreae Pierce, 126
 laportei Meier, 89
 lateralis Portevin, 45
 latifasciatus Lewis, 103
 latifrons Pierce, 126
 listerianus (Geoffroy), 59
lunatus Fischer von Waldheim, 118
 lunatus LeConte, 164
 lunatus Gistel, 126
 luniger Harold, 165
 lunulatus Gistel, 126
 maculiceps (Jakovlev), 122
maculifrons Kraatz, 120
 maculosus Meier, 74
marginatus Fabricius, 123
 marginatus Gistel, 180
 maritimus Gurin-Mneville, 104
 maritimus Mannerheim, 105
 maritimus Gistel, 106
 mckittricki Pierce, 127
 mediatus Fabricius, 34
 melsheimeri Kirby, 106
mexicanus Matthews, 128
 microcephalus Thomson, 107
 minnesotianus Hatch, 76
 minor Westhoff, 193
 mixtus Hlisnikovsky, 131
mongolicus Shcheg.-Barovskaya, 129
 montezumae Matthews, 127
montivagus Lewis, 131
morio Gebler, 132
 mortuorum Fabricius, 206
 mysticallis Angell, 35
nepalensis Hope, 135
 nigerrimus Kraatz, 74
 nigricans Pasquet, 89
nigricornis Faldermann, 138
 nigrifrons Portevin, 150
nigrita Mannerheim, 139
oberthuri Portevin, 141

Nicrophorus

- obrutor Erichson, 172
 obscuripennis Portevin, 219
obscurus Kirby, 142
 obtusiscutellum Pierce, 127
 ocellatus Deyrolle & Fairmaire, 137
 olfactor Gistel, 220
olidus Matthews, 143
orbicollis Say, 144
 oregonensis Swann & Papp, 209
 orientalis (Herbst), 26
 orientalis Motschulsky, 41
 ornatus Hlisnikovsky, 60
 particeps Fischer von Waldheim, 108
 parvulus Hlisnikovsky, 122
 pasqueti Pic, 90
 peruvianus Pic, 48
 plagiatus Motschulsky, 45
pliozaenicus Gersdorf, 228
podagricus Portevin, 150
 pollinator LeConte, 46
 pollinator Mannerheim, 109
 portevini Pic, 48
 praedator (Reitter), 110
 proserpinae Gistel, 60
przewalskii Sem.-Tian-Shanskij, 151
 pseudobrutor Reitter, 30
 pulsator Gistel, 165
 punctostriatus Pierce, 64
pustulatus Herschel, 152
 pygmaeus Kirby, 209
quadraticollis Portevin, 156
 quadricollis Hatch, 157
 quadricollis Gistel, 144
 quadriguttata Angell, 65
quadrimaculatus Matthews, 157
quadripunctatus Kraatz, 158
 quadrisignatus Laporte, 149
 rautenbergi Reitter, 220
reichardti Kieseritzky, 160
 requiescator Gistel, 180
 rotundicollis Portevin, 38
 ruficornis Motschulsky, 141
 rugulipennis Jakovlev, 134
 ruspator Erichson, 111
 ruthenus Motschulsky, 60
satanas Reitter, 161
sausai Ruzicka, et al., 162
sayi Laporte, 162
scrutator Blanchard, 166
semenowi (Reitter), 166
sepulchralis Heer, 167
sepultor Charpentier, 169
 sepultor Gyllenhal, 220
 sibiricus Motschulsky, 113
smefarka Hva, et al., 173
 speciosus (J.D. Schulze), 61
 spinipes Leach, 194
 stenopthalmus (Jakovlev), 119
 subfasciatus Portevin, 210
 subinterruptus Pic, 210
 submaculatus Reitter, 113
 subterraneus Dahl, 229
 sulcatus Fischer von Waldheim, 75
 suturalis Motschulsky, 90
 sylvaticus Reitter, 211
 sylvivagus Reitter, 211
 tardus Mannerheim, 155
 temporalis Shch.-Barovskaya, 167
tenuipes Lewis, 173
 tibetanus Hlisnikovsky, 30
tomentosus Weber, 176
 trimaculatus Gradl, 90
 trinotatus Reitter, 91
 unifasciatus Hlisnikovsky, 142
ussuriensis Portevin, 182
validus Portevin, 183
 vandykei Angell, 65
 varendorffi Westhoff, 194
 variolosus Portevin, 114
 velutinus Fabricius, 181
vespillo (Linnaeus), 183
vespilloides Herbst, 195
vestigator Herschel, 212
 vicinus Shchegoleva-Barovskaya, 175
 virginicus Frlich, 26

Index (continued)**Nicrophorus**

- viturati Pic, 91
- vodozi Meier, 221
- vulgaris Fabricius, 194

Palaeosilpha Flach, 228

- fraasii** Flach, 228

Ptomascopus Kraatz, 222

- aveyronensis** Flach, 228
- carbunculus Lewis, 223
- davidis Deyrolle & Fairmaire, 225
- lewisi Portevin, 224

morio Kraatz, 222

- plagiatipennis Lewis, 226
- plagiatus** (Mntris), 224
- quadrimaculatus Kraatz, 226
- villosus Portevin, 224
- weberi Bodemeyer, 227
- zhangla** Hva, et al., 228

Ptomatoscopus Rye, 222

Stictonecropter Semenov-Tian-Shanskij, 21

Tomascopus Kraatz, 222