

SCIENTIFIC NOTE

POTENTIAL PHYLOGENETIC UTILITY OF MATING BEHAVIOR IN SOME
CARRION BEETLES (COLEOPTERA: SILPHIDAE: SILPHINAE)

In early spring, adults of the eastern North American carrion beetles, *Oiceoptoma noveboracense* (Forster) and *Necrophila americana* (Linnaeus), are commonly found paired, males mounted on top of females (see Anderson 1982 for phenology of eastern North American Silphinae). This position is maintained for sustained periods of time, even though copulation is not actively taking place. A closer look reveals that in most instances, the male has one of the antennae of the female firmly grasped in his mandibles. This position is maintained until copulation is attempted, whereupon the male releases the antenna of the female and, still facing forward, moves backward on her elytra. At this time he uses his antennae to drum or stroke the pronotum of the female. Once copulation has terminated, the male returns to his original position, searching for, and again grasping, an antenna of the female in his mandibles. This series of events is repeated periodically, apparently until the female oviposits. Although I have not seen the male dismount the female at this time, when eggs or early instar larvae are present at a carcass, few or no pairs are seen in this position. This suggests that the behavior may be a method by which males insure paternity of the offspring of the particular female with which they were mating (Parker 1970).

Similar behavior also occurs in *Aclypea opaca* (Linnaeus) (Heymons *et al.* 1929). My observations indicate that it does not occur in *Thanatophilus lapponicus* (Herbst) and thus, is not a trait common to all Silphinae.

Aside from structural features, behavioral traits are one of a number of other types of evidence used in reconstructing phylogenies. In the Silphinae, variation in aspects of mating behavior, such as those noted briefly herein, encourages examination of details of mating behavior for all genera to more completely ascertain taxonomic distribution and phylogenetic utility.

LITERATURE CITED

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(Received 25 February 1988; accepted 2 August 1988)