BEHAVIOR OF BURYING BEETLES (COLEOPTERA: NICROPHORUS)

Summary

Carcasses, despite their low availability, are base resources for many insects. Scavengers developed many mechanisms that reduce negative impact of rivals. But the most spectacular behavior is extensive biparental care occurring in burying beetles (Nicrophorus sp.). For better understanding of the complexity of behavior of all burying beetles their life cycle is presented. Burying beetles have perfectly developed sense of smell; used for searching of carrion. They are remarkably adapt to detect the odor of recently died animals using the organs of smell located on their antennae. Furthermore, sense of the smell is involved in the communication between individuals of the opposite sex. Male emits a pheromone that serves as a female attractant. After finding resources and mates, burying beetles, start carcasses preparation. Beetles of Nicrophorus species remove from dead animal's fur or feathers and form balls. Simultaneously, the resource is buried and inoculated with oral and anal secretions that preserve the carrion and modify the course of its decomposition. The female lays eggs in soil. Parental care is a most important factors affecting to reproductive success. At the beginning, parental care takes a form, resembling more behavior found among birds and mammals than insects. Larvae after hatching draw towards the parents demanding food. In early development stages, most burying beetles offspring are unable to feed. Both males and females provide extensive parental care, and the major benefit of male assistance is to help to defend the brood and carcass from competitors. Parents stay in the resources until the offspring transforms into the pupa.

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