

FLIGHT TIME OF NOCTURNAL SCARABAEOIDEA IN A PASTURE AREA IN SELVÍRIA, BRAZIL

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Adults and young of Scarabaeoidea feed mostly on excrements, carcasses, grasses, foliage, fruits, fungi and decomposing animals, and some of them are serious agricultural product pests. Beetles in this family show a high degree of association with specific habitats. Flight activity is very important in the dispersion of a species, in food finding, mate location and escape from natural enemies. The most studied abiotic factors which regulate or interfere with the flight of insects are air temperature, air humidity, wind speed, rainfall and atmospheric pressure. The objective of this research was to determine the time of flight of non-coprophagous Scarabaeoidea and the influence of climatic factors upon it. The experimental site was a pasture covered with *Brachiaria decumbens* at UNESP Farm, located in Selvíria, state of Mato Grosso do Sul, Brazil. Beetles were captured one night a week, at 30-min intervals, with a black light intercept trap, while climatic factors were measured every 10 minutes. A total of 773 specimens were trapped between January and October 2005, in 24 species. Statistical analyses were performed on the four most abundant species, *Chaetodus* sp., *Cyclocephala* aff. *melanocephala*, *Fuethoela humilis* and *Phylllochloema* sp. Peak of flight in *F. humilis* was at 8:30 PM, in *C. aff. melanocephala* between 8:00 PM and 9:30 PM, in *Phylllochloema* between 8:30 PM and 10:30 PM, and in *Chaetodus* sp. between 11:30 PM and 1:30 AM. There was a positive correlation of time of flight with air temperature, air humidity, soil moisture and sundown, while it was negatively correlated with wind speed, for all four scarabaeoid species. Regression analyses indicate the most influential factors involved with time of flight of these beetles were atmospheric pressure and soil moisture.

FOOD PREFERENCES IN AN ASSEMBLAGE OF DUNG BEETLES (COLEOPTERA: SCARABAEIDAE) IN THE COLOMBIAN AMAZON

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The family Scarabaeidae is the principal taxon that shows a marked preference for the consumption of excrement as its main source of food. Nevertheless, some species consume other very different resources for its diet such as carrion, mushrooms, fruits, decomposing vegetable material and some invertebrates or arthropods. One of the resources that serve as an alternative source of food are the millipedes, especially for some species with carrion habits. In order to characterize the alimentary preferences in an assemblage of dung beetles in a tropical forest of the Colombian Amazon in the dry period, four transects with pitfall traps were used with four baits: human excrement, squid, mushrooms and millipedes. 23 species were collected, in thirteen genera. The bait that had the greatest attraction was the human excrement. Some species were attracted exclusively to some bait as in the case of the millipedes. The bait of mushrooms and squid were the more similar in the richness of the species attracted. A significant difference was found in the degrees of preference, according to the number of species and to the number of individuals by bait. This difference can be attributed to a preference for a specific resource, which inside the assemblages in a trophic level, can diminish the intraspecific and interspecific competition. These results indicate that different types of baits should be included in the studies of "dung beetles", followed by studies of the mechanisms of dilution and the alimentary preferences that favor the coexistence.