Arthropods associated with small rodent carcasses exposed in a secondary wood area in the municipality of Campinas, SP

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Abstract

Although studies of the *post-mortem* fate of human corpses are of forensic interest, and in natural environments large animals become available to insect colonization soon after death, the fate of the vast number of small carcasses in some habitats, as well as the parameters that lead this process, are not objective of important investigations. Due to this situation, decomposition studies of small rodent carcasses were conducted in a secondary wood area within the Campus of Campinas State University – UNICAMP (22°49'15''S, 47°04'08''W) in the municipality of Campinas (Brazil), from August 2003 to June 2004, to analyze the composition of the local carrion visiting and colonizing invertebrate fauna. Four laboratory mouse carcasses (*Mus musculus*) and four rat carcasses (*Rattus norvegicus*) were exposed in each season, during the set period. All the carcasses were placed in an iron-mesh cage, which was adequate to collect adult and immature insects. In the course of the decomposition of the 32 rodent carcasses, 6514 specimens (820 adults and 5694 immatures) of 53 arthropod species from the families Sarcophagidae, Calliphoridae, Muscidae, Fanniidae, Syrphidae, Richardiidae, Sepsidae, Micropezidae, Otitidae, Drosophilidae, Phoridae, Dolichopodidae, Anthomyiidae, Asilidae and Lauxaniidae (Diptera), Formicidae, Ichneumonidae, Encyrtidae e Apidae (Hymenoptera), Staphylinidae (Coleoptera) and Gonyleptidae (Opiliones) were collected. The most abundant species breeding on the carcasses were *Lucilia eximia* (Wiedemann, 1819) (Diptera: Calliphoridae) and some Sarcophagidae species, such as *Peckia (Pattonella) intermutans* (Walker, 1861) and *Sarcophaga (Liopygia) ruficornis* (Fabricius, 1794), which are rarely seen breeding on carcasses of large animals. This behavior can suggest a specialization of these species in colonizing small carcasses, possibly an attempt to avoid competition with other species of necrophagous Diptera in carcasses of large animals.

Key-words*:* forensic entomology, animal carcasses, Diptera, mice, *Rattus norvegicus*.

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Artrópodes associados às carcaças de pequenos roedores expostas em área de formação vegetal secundária no município de Campinas, SP / Thiago de Carvalho Moretti. -- Campinas, SP: [s.n.], 2006.

Orientador: Odair Benedito Ribeiro.
Dissertação (mestrado) – Universidade Estadual de Campinas, Instituto de Biologia.

1. Entomologia forense. 2. Animais - Carcaças. 3. Diptera. 4. Camundongo. 5. *Rattus norvegicus*. I. Ribeiro, Odair Benedito. II. Universidade Estadual de Campinas. Instituto de Biologia. III. Título.

(rcdt/ib)