

# EVALUATION AND EXPORT OF *PSEUDACTEON* DECAPITATING FLIES (PHORIDAE: DIPTERA) COLLECTED IN THE JAGUARIÚNA AREA FOR FIRE ANT BIOCONTROL IN THE USA

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Fire ant decapitating flies were studied in and around the Embrapa - National Research Center for Environmental Monitoring and Impact Assessment, in Jaguariúna, State of São Paulo, Brazil. The objective was to evaluate and select several species for exporting to the United States as biocontrol agents. Eight species were collected during this study (January-June, 1996): *Pseudacteon convexicauda*, *P. curvatus*, *P. litoralis*, *P. obtusus*, *P. pradei*, *P. solenopsidis*, *P. tricuspis* and *P. wasmanni*. Seven species (all except *P. convexicauda*) were reared from eggs to adults. All seven species had the unusual habit of pupating inside the head capsule of their host. No suitable morphological characters were found to discriminate pupae of the different species. Pupae of different sexes were also indistinguishable except that females consistently emerged from larger hosts than males. The males of *P. tricuspis* readily mated with females while they were ovipositing in fire ant workers, but it was not possible to determine when and where other species of decapitating flies mated. Consequently, it was only possible to develop techniques for rearing *P. tricuspis*. Two species (*P. tricuspis* and *P. litoralis*) were sufficiently abundant to be exported to the USDA-ARS from Brazilian Quarantine Laboratory for specificity testing. After a period in USDA quarantine facilities both species received permission to be released and tested under field conditions in the USA.