MASS REARING AND RELEASE OF THE DECAPITATING FLY *Pseudacteon tricuspis* (DIPTERA, PHORIDAE) FOR FIRE ANT BIOCONTROL IN THE UNITED STATES

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The fire ant *Solenopsis invicta* was accidentally introduced into the United States from South America about sixty years ago. Populations of this ant in the United States are about 5 times higher than those in South America, perhaps because almost all of the natural enemies were left behind. The decapitating fly *Pseudacteon tricuspis* is a promising fire ant biocontrol agent because it is widely distributed, host specific, and can stop fire ant foraging. During rearing studies conducted in the United States and in the Quarantine Laboratory for Biological Control Agents at Embrapa-CNPMA in Brazil (1996-1998), we found that this fly requires damp conditions to pupate. Total development time is 4-10 weeks depending on temperature. Adults emerge in the early morning and are ready to mate and parasitize new hosts by midday. With our current rearing techniques, about 70% of larvae emerge as adults. We are currently rearing 400-600 flies/day with 30-40% growth each generation. During 1998, we released flies near Gainesville, Florida, USA at 3 test sites (800 flies-July; 1200 flies-Sept., 1500 flies, Sept.-Oct.). Many first-generation field-reared flies were found at 2 sites while they were mating and attacking new hosts. Second generation flies were recovered in March and April, 1998 after having survived the winter. Several more months will be required to determine if stable self-cycling populations have been established.