

Development, Fecundity and Prey Consumption of *Exochomus nigromaculatus* Feeding on *Hyalopterus pruni*

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Development, survival and reproduction of *Exochomus nigromaculatus* (Goeze) were studied in the laboratory at four constant temperatures from 20°C to 35±1°C in 5°C increments, 60±5% r.h. and 16 h of artificial light (5000 lux). Development time from egg to adult ranged from 22.4 days at 20°C to 10.6 days at 35°C, and required 278 degree-days above a threshold estimated to be 9.11°C. Survival was highest at 25°C and lowest at 35°C. Longevity of females declined significantly with increasing temperatures, ranging from 120.7 days at 20°C to 46.6 days at 35°C. Mean generation time became shorter with increasing temperatures. The intrinsic rate of increase of individuals kept at 30°C was significantly greater than that of individuals kept at the other temperatures tested. Fourth larval instars and adults of *E. nigromaculatus* displayed a Type II functional response to *Hyalopterus pruni* densities. Searching rate of fourth instar larvae and adults was similar, but handling time was shorter for female adults. Results obtained in this study showed that the optimal temperature for population growth of *E. nigromaculatus* was 30°C and this coccinellid predator may have potential as a biological control agent for *H. pruni* because of its feeding capacity.

KEY WORDS: *Exochomus nigromaculatus*; development; fecundity; prey consumption; *Hyalopterus pruni*; mealy plum aphid.

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