

34. Effects of mating status on the oviposition behavior of *Cleruchoides noackae* (Hymenoptera: Mymaridae) in eggs of *Thaumastocoris peregrinus* (Hemiptera: Thaumastocoridae).

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Cleruchoides noackae (Hymenoptera: Mymaridae) native to Australia, is an egg endoparasitoid of *Thaumastocoris peregrinus* (Hemiptera: Thaumastocoridae) introduced into Brazil in 2012. This parasitoid has been reared and released for biological control of *T. peregrinus* in *Eucalyptus* spp plantations in several countries around the world. The oviposition behavior variation can occur in parasitoids as a function of mating condition. The oviposition behavioral patterns (host found time, foraging time and ovipositor insertion time) and progeny biological parameters (parasitism, viability and sex ratio) of mated or virgin females of *C. noackae* in *T. peregrinus* eggs was investigated. The parasitoid behavior was observed over a one-hour period for ten females of *C. noackae* (mated and virgin) and ten *T. peregrinus* eggs in polystyrene vial (7,5 cm high and 3,0 cm diameter). Virgins and copulated females found the first host in 15.21 and 17.14 minutes, respectively, and the next hosts in 3.85 and 0.86 minutes, respectively, showing a decrease of this time due to the experience acquired after lay the first egg. The foraging time of virgin and copulated females was 24 and 21 seconds, respectively. The duration of ovipositor insertion into *T. peregrinus* eggs was 5.13 minutes (virgin females) and 3.69 minutes (females copulated). Virgin females inserted the ovipositor more frequently on the sides of the egg, with a mean of 55%, while copulated females inserted more often on the sides (50%) and operculum of the egg (46%). Virgin and copulated females of *C. noackae* inserted the ovipositor into 64 and 59% of the eggs of *T. peregrinus* offered in one hour, respectively, and of these, almost 100% were parasitized. The viability was above 75% for both females and the sex ratio of 0.00 (virgin females) and 0.68 mated females) confirming the arrhenotokous parthenogenesis of *C. noackae*.