

Protandry in *Doryctobracon areolatus* (Szépligeti, 1911) (Hymenoptera: Braconidae) and its implications in mating

DORI EDSON NAVA¹; KARINA JOBIM PINTO²; HEITOR LISBOA²;
RAFAEL DA SILVA GONÇALVES²; SANDRO DANIEL NÖRNBERG²;
RICARDO ALEXANDRE VALGAS¹

¹ Embrapa Clima Temperado, Br 392 Km 78, Caixa Postal 403, 96010-971, Pelotas, Rio Grande do Sul, Brazil. ² Universidade Federal de Pelotas, Capão do Leão, Rio Grande do Sul, Brazil

Protandry is a reproductive strategy consisting in the emergence of males before females. This work aimed to characterize the occurrence of protandry in parasitoids of fruit flies *Doryctobracon areolatus* as well as the influence of male and female age on mating and sex ratio. The experiments were carried out under controlled conditions of temperature ($25\pm 2^{\circ}\text{C}$), relative humidity ($70\pm 10\%$) and a photophase of 12 hours. To evaluate the occurrence of protandry, we monitored the emergence of males and females to *D. areolatus*. Couples were formed from the emergence rate with difference of up to 3 days. Protandry in *D. areolatus* was observed and the sex ratio was 0, 0.06, 0.62, 0.87, 0.98, 1.0, and 1.0 for 1, 2, 3, 4, 5, 6 and 7 days of emergence, respectively, totaling a sex ratio of 0.61. Couples with younger females produced more females with a higher sex ratio. The occurrence of protandry as reproductive strategy of *D. areolatus* and its influence on generation of offspring contribute to broaden the basic knowledge about the species, enabling the optimization of lab rearing and later releases in the field.

Keywords: biological control, parasitoids, reproductive strategy, biology.

