
European PhD Network "Insect Science" - XI Annual Meeting

30 November – 4 December 2020

Inter- and intra-specific competition in Bethyloid wasps

R

S. Malabusini¹, N. Mortazavi², Z. Golparvar³, C. Jucker¹, D. Lupi¹

¹Università degli Studi Milano – Dipartimento di Scienze per gli Alimenti, la Nutrizione e l'Ambiente;

²Tarbiat Modares University Theran, Iran - Department of Entomology, Faculty of Agriculture;

³University of Mohaghegh Ardebili, Ardebil, Iran

Intraspecific and interspecific competition is poorly studied in Bethyloid wasps, a very complex family of parasitoids that includes genus with different degrees of sociality. For examples, *Goniozus* species are sub-social and aggressively excludes conspecific females from the brood, showing an increasing competition when multiple foundress are present on the same victim. Conversely, *Sclerodermus* species are quasi-social parasitoids, with foundress that share the oviposition site and take care of the brood all together. However, until now the information on the competition among *Sclerodermus* sp. foundress is poor. A major degree of competition can occur in interspecific rivalry. In this case the competition can be influenced by the prior ownership of the host as well as by the parasitoid and host size, the biology of the parasitoid, the oviposition time, etc. No study about interspecific competition in *Sclerodermus* sp. is present in literature so far. The present study aims at evaluating both inter- and intra-specific competition in *Sclerodermus brevicornis*. Tests have been set up to evaluate 1) the behavior of *S. brevicornis* in case of overexploitation of the host, forcing intraspecific competition with increasing number of foundress on the same victim (10-55 foundress/victim); 2) the effect of the degree of kinship in intraspecific competition (none, two siblings, all siblings) on different behavioral traits (cooperation, ability to parasitize, number of eggs, number of offspring., etc.); 3) interspecific competition occurring in the case of an encounter on the same host between a more aggressive species (*Goniozus legneri*) and a more cooperative one (*S. brevicornis*).

ZOOM MEETING ID: 966 7937 5889 PASSCODE: 767620

[Link](#)

R Regular Presentation (20 min, discussion included) **S** Short Presentation (5 min, discussion included)