

Book of Abstracts



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SESSION XII

SOCIAL INSECTS AND APIDOLOGY

***Vespa orientalis*: a survey analyzing its diffusion, damage, and control strategies in Sicilian apiaries**

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In southern Italy, particularly in Sicily, the number of *Vespa orientalis* L. colonies, along with the territory it inhabits, have been increasing over the last 15 years. The causes are not yet entirely clear, though climate change may be playing a fundamental role. The fact remains that this voracious hymenopteran is a dangerous aggressor to domestic bees all over the world. Its repeated sieges during the period from July to October not only confine bees inside their hives, preventing almost all of the activities they carry out in the field, but, in the most serious cases, it causes the destruction of entire apiaries when they are not duly protected. Obtaining data on the population density and the intensity of this hymenopteran's attacks is very difficult, precisely because of its complex bio-ecology. Therefore, the starting point of this work was the creation of a questionnaire, submitted to experts, to verify the qualitative and quantitative damage that hornets cause to apiaries and to obtain further information about the defense methodologies adopted. 122 questionnaires were considered valid for the analysis. The results showed that more than 80% of Sicilian beekeepers believe that the current decline in bees is serious or even alarming. 60% of respondents said they had an anomalous loss of bee families in the previous year, mainly due to poor food availability (49%), followed by wasp attacks (39%). *V. orientalis* is particularly widespread in the Palermo area, with very serious attacks; the situation is less pressing in the Messina, Catania, and Ragusa areas, though the distribution area is expanding. Furthermore, there does not seem to be any correlation between *V. orientalis* attacks and the type of apiary management employed, nor with the bee subspecies or hybrids that are bred. Moreover, the methodologies for controlling this hymenopteran are very heterogeneous and not particularly effective. In conclusion, the need for further in-depth studies of the oriental hornet's biology, distribution, and possible containment methods is evident, as is the need for an assessment of the damage it causes to apiaries.

KEY WORDS: *Vespa orientalis*, apiary die-off, damage, questionnaire.