

Book of Abstracts



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SESSION XII

SOCIAL INSECTS AND APIDOLOGY

Bibliometric analyses and systematic review on *Vespa orientalis* L.

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Vespa orientalis L., also known as the Oriental Hornet, is one of the main factors behind the reduction of the number of bees and apiaries in some areas of Sicily. Although there may seem to be a lot of information on *V. orientalis*, in reality several aspects remain to be investigated. The purpose of this work was to investigate the current state of knowledge, acquiring information regarding the different techniques applied in countries where *V. orientalis* is more prominent. To this end, two different approaches were used. The first considered the methodologies and logic of the VOSviewer software, which creates maps with keywords derived from co-occurrence analysis to reveal the main keywords used and the countries and journals which publish the most on the topic. The second followed the indications of the EFSA (European Food Safety Authority) guidelines where systematic analysis is required to evaluate the data from all the documents selected in a transparent and logical approach. The main goal was to offer a comprehensive understanding of potential control methods against *V. orientalis* as well as how future research directions should be oriented.

In total, just over 400 articles were identified, 393 of which were considered eligible for the study of the reports and selected topics. Although *V. orientalis* is widespread, above all in south-eastern Europe (including southern Italy), the Middle East, and Madagascar, most of the studies on this hornet have been carried out by Israeli research groups, followed by American, Indian, Russian, French and Egyptian researchers. The studies mainly concern issues relating to the wasp's biology, the chemical composition of its venom and its effects on humans, in particular allergic reactions following stings, as well as the venom's potential therapeutic properties. On the other hand, studies focused on comparing methods used against this hymenopteran species are poorly represented. Thus, the results highlighted the importance of continuing scientific research, in particular the exploration of conventional control methods as well as innovative solutions specific to this wasp.

KEY WORDS: Oriental hornet, control method, systematic revision, VOSviewer.

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