



# TIBEEES

13 | 14 | 15 PALAZZO DEI CONGRESSI  
OCT 2016 **LUGANO**

Scientific Bee Health Symposium

The Swiss Beekeepers Association (EBA) celebrates its 100th birthday.  
The symposium will be a celebration of the scientific research and practice of beekeeping and a celebration of the world of beekeeping open to everyone.

## Daniela Laurino

### **Vespa velutina: Biology and first steps of the European Life project STOPVESPA.**

*Vespa velutina: biologie et premières étapes du projet européen STOPVESPA.*

*Vespa velutina: Biologie und erste Schritte des europäischen Projekts STOPVESPA.*

*Vespa velutina: biologia e prime tappe del progetto europeo STOPVESPA.*

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*Vespa velutina* is a social wasp naturally spread in South East Asia, is an invasive alien species that poses a serious threat to European biodiversity due to its alimentary habits. Like in most social wasps, *V. velutina* larvae are fed with animal proteins from insects that adult workers – and, at the beginning of the colony cycle, also founding queens – prey on in the environment. *V. velutina* could potentially colonize a large part of the EU Mediterranean countries, Netherlands, Luxembourg, south-west Germany, and the British Isles. *Vespa velutina*, also called yellow-legged hornet, could also impact on beekeepers preying on honey bees and is producing alarm when nesting in urban areas and buildings.

The seasonal colonial cycle of *V. velutina* is basically not different from those of native social wasps. Colonies are founded by overwintered queens that had mated in the previous autumn; such queens start to build an embryo nest and rear a first batch of workers. After these first workers have emerged as adults, they take over of the various tasks as nest building, foraging for proteins, sugars and vegetable fibres, and brood rearing, while the queen specialises in egg laying. At an early stage of colony development, the colony can move from the embryo nest and build a secondary nest in a better site, usually on a tree several metres above ground level. When the colony is fully grown, males and queens are reared; the newly emerged queens mate with the males and leave the nest in search of a secluded space to overwinter in. In late autumn the colony breaks down and the old queen, the males and all workers die. Nests are protected by a tough cellulose covering and consists of several horizontal combs which are arranged one on the other, thus preventing direct observation late season workers and newly emerged virgin. Queens are difficult to distinguish without dissecting them to compare fat body and ovarian development.

A European Life Project (LIFE14 NAT/IT/001128 STOPVESPA) recently started in Italy.

The actions carried out by this project in the first year of activity are:

- i) monitoring the evolution of *V. velutina* populations in Italy, present in western Liguria and southern Piedmont;
- ii) controlling the populations by nest-localization (with two monitoring teams) and nest-destruction (with three destroyer teams), the destroyer teams are backed by local beekeepers and Civil Protection;
- iii) developing an harmonic radar, to track the hornets while flying back to their nests;
- iv) evaluating the impacts of *V. velutina* on natural communities, ecosystems and beekeeping;
- v) establishing of an Early Warning and Rapid Response System at a national level.

In this relation we present the most relevant results obtained by the STOPVESPA project in the first year of activity.