



Vespa Velutina monitoring network

Velutina Task Force

1



Monitoring the spread of an invasive alien species is crucial to plan appropriate management actions and activities to limit the expansion of the species. In addition, an early detection of the yellow-legged hornet in areas far away from the expansion front allows a rapid response aimed to remove these isolated populations before the species becomes established. In fact, *Vespa velutina* queens might be accidentally transported by human activities to very remote areas where these animals can give rise to new colonies and populations. In this short leaflet we introduce the idea of a collaborative network for monitoring purposes.

Create a monitoring network

We propose the creation of a monitoring network based on the collaboration of volunteers, both beekeepers and citizens. The monitoring network should allow:

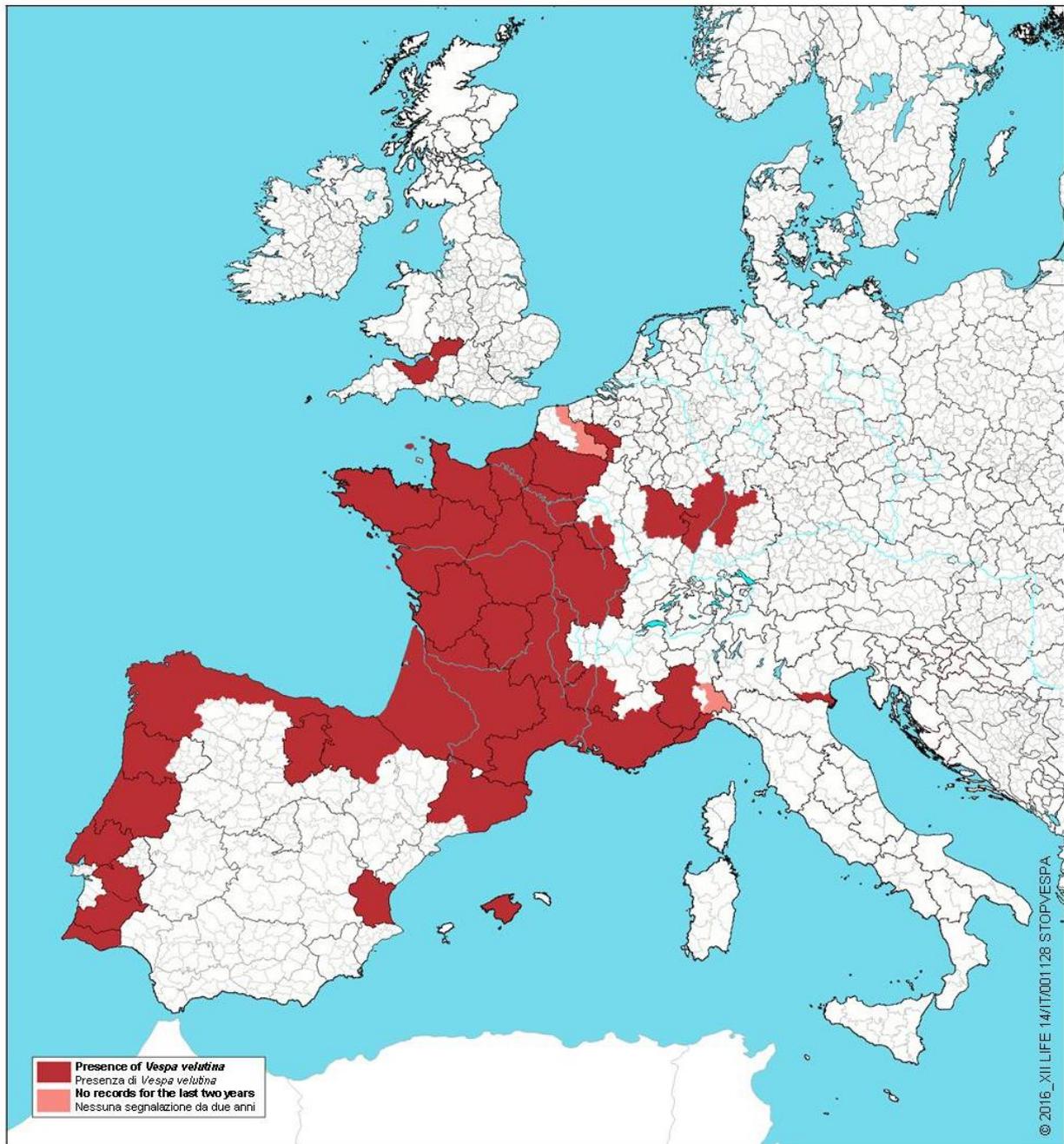
- the early detection of the yellow-legged hornet in new settlement areas, in order to quickly remove any new populations;
- the quick announcement and monitor of new outbreaks or expansion of the species to new areas;
- to evaluate the natural expansion of the species, in order to control the spread, with the aim of containing the expansion.

Only with the contribution of everybody, we can hope to defeat *V. velutina*.

The specific tasks of the monitoring network could be:

- to note the geographical coordinates of the monitored area;
- to register the results of the monitoring activity;
- to record if no *V. velutina* has been observed;
- to photograph the observed animals.

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2

Members of this task force will act as coordinators of the monitoring network in their country/area. Soon they will announce this initiative to the public through local media and beekeeping centres. At the same time, they shall be asked to disseminate all materials produced by this task force in time due on the hornets' biology and behaviour.

Means of monitoring *V. velutina*

V. velutina can be easily monitored following two main approaches:

- **traps to catch hornets:** the traps allow the capture *V. velutina* adults; they are easy to build and can be installed anywhere. The traps must be supplied with attractive baits in order to catch the hornets;
- **observations in the apiary:** apiaries are a very attractive source of food for *V. velutina*; the hornets are easily observable in front of the hives when they prey on honeybees, especially from June to late Autumn.

Building a trap for the yellow-legged hornet is easy and cheap: you can use common plastic bottles, filled with specific baits to attract the hornets.

How to build and install a trap for the hornets

- Take a transparent plastic bottle.
- Cut the upper end of the bottle, turn it upside down and insert it into the lower part. Alternatively you can apply a cheap but effective commercial tap (TapTrap[®]) or other more expensive commercial traps.
- Make some small holes (5 mm) to allow other insects to get out of the trap.
- Place the trap wherever you want it, hang it onto trees or artificial supports, at a height of 1.5-1.8 m from the ground.

What kind of attractive baits to use

- Many types of baits can be used: we recommend the use of lager beer (0.33 L with 4.7% alcohol), because it is attractive for the hornets, inexpensive and selective towards honey bees.
- The bait should be replaced every 15 days.

When placing the traps

- The best time of the year to place the traps for the hornets is between February and May, to catch the queens; from August until November they are still useful to detect the presence of the species in new areas, catching workers and/or the reproductive adults.

