

An identification information sheet for the invasive hornet *Vespa velutina* (Hymenoptera, Vespidae) with possible areas of confusion with other wasp species

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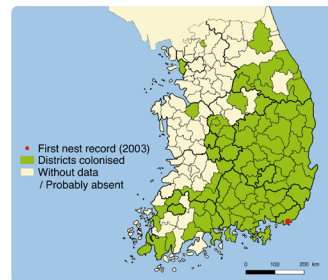
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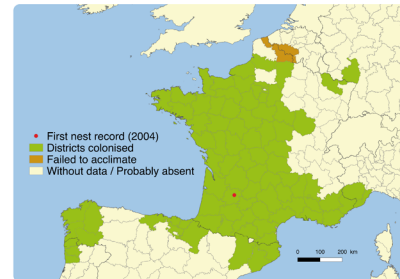
MNHN - INPN Website : <http://frelonasiatique.mnhn.fr> - vespa@mnhn.fr

A collaborative work was conducted in 2013-2014 between the NAAS (Jeonju, South Korea) and the MNHN (Paris, France) which focused on the invasion of the yellow-legged hornet *Vespa velutina* in both France and South Korea from the beginning of the 2000s (Choi et al., 2012; Villemant et al., 2011). *Vespa velutina* is a **bee-hawking hornet** which shows an increasing impact on honeybee colonies in South Korea.

Although nest destruction is the most efficient method to reduce hornet predation on apiaries, no method is currently available to easily detect the nests which are usually located in the crown of high trees (Rome et al., 2015). **Citizen participation** is thus necessary to help at **detecting** the invasive species (Rome et al., 2011). Such a survey through public warning is already performed since 2004 in France by the MNHN thanks to the INPN website. In the framework of the collaborative project and according to the leaflet made by the MNHN for France, a leaflet was produced in collaboration with the Kyungpook National University (Daegu, South Korea) with the aim at helping Korean citizen and beekeepers to recognize the invasive hornet while avoiding confusion with various other hornet and wasp species. Establishing in South Korea a citizen science program similar to that of France would help at **monitoring the spread of *Vespa velutina*** and detect as precociously as possible its potential introduction far from the invasion front, hence to help with planning dedicated control measures.



Actual distribution in South Korea. Data obtained by trapping and from Rescue Services (Choi, 08/2015)



Actual distribution in Europe. Data obtained from confirmed public records on the INPN-MNHN database (Rome, 08/2015)

Yellow-legged hornet, *Vespa velutina*



Generally very high in tree crown,
rarely under eaves or in shrub.
Pear-shaped with lateral entrance.

Yellow hornet, *Vespa similima*



Under the eaves or
on tree branches.
Spherical with
lateral entrance.



Paper wasp, *Polistes rothneyi*



Generally under the
eaves, sometimes on
tree branches.
Bell-shaped without
envelope.



European hornet, *Vespa crabro*



Hollow trees or crevices in
walls. Cylindrical with wide
entrance at the bottom.



Yellow-vented hornet, *Vespa analis*



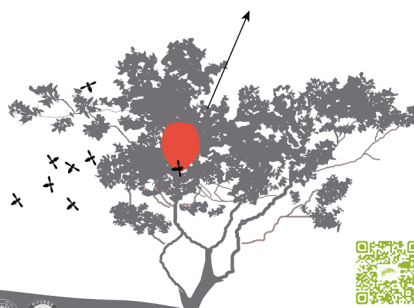
In bush, sometimes on tree
branches or under eaves.
Spherical-shaped.



Korean yellowjacket, *Vespula koreensis*



20-30 cm. Deep in
the underground.



References

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