

**16 months post doc:
Defence behaviour and personality in *Apis mellifera*
against the invasive predator *Vespa velutina***

Following its introduction a decade ago, the yellow-legged hornet, *Vespa velutina*, has been spreading through Europe. This invasive predator is mainly known for chasing domestic honeybees, *Apis mellifera*. Locally, predation pressure can reach 20 hornets in front of each hive. While its hunting behaviour is quite understood now, some points are still unclear especially how hornets choose their prey. Indeed, we have previously shown that the distribution of hornets within the apiary was not homogeneous and uncorrelated to honeybee colony strength. We suggest that this pattern is linked to colony behaviour, some of them being probably more prone at defending themselves against this predator. Honeybee colonies behave as a superorganism and their personality traits may greatly vary among colonies. Behavioural traits like boldness, activity and aggressiveness are thus interesting to quantify, as well as the ability of the colony to recruit enough workers for defence purpose which is probably trading-off with the maintenance of foraging activity (which ensures colony survival).

The aims of this work are diverse. First, it will provide new insights on how hornets adjust their hunting effort depending on prey behaviour, which opens interesting perspectives for the study of cognitive ability in prey-predator systems. Second, identifying the factors driving heterogeneous predation pressure in apiaries would be a mean to propose new pest management directions for beekeepers. Defence behaviour in honeybees has been shown to have a genetic basis thus different lineages may produce different levels of defence. If confirmed, it may open perspectives for honeybee livestock selection based on behavioural traits thus limiting the impact on bee colonies.

Qualifications:

The post-doctoral fellow will be integrated in the European Arc Atlantique 'Positive' project. We are looking for a young PhD in behavioural ecology with skills in fieldwork, statistical analyses (mixed effects models) and a previous experience with social insects. Driving licence for more than 2 years is also required.

He/She will be located in UMR INRA Save at INRA Bordeaux Aquitaine research centre (Villenave d'Ornon, 10 km from Bordeaux city). Supervision will be made by Dr Denis Thiéry (UMR 1065 SAVE, Villenave d'Ornon) and Dr Karine Monceau (La Rochelle Université, UMR 7372 CEBC, Villiers-en-Bois).

Extended deadline: March 1st; Interview: 2nd week of March (skype)

Duration: 16 months beginning in May 2019

Salary: 2000 € net/month.

Send application (CV and cover letter) to : Denis Thiéry (denis.thiery@inra.fr) and Karine Monceau (karine.monceau@univ-lr.fr)

https://www.researchgate.net/profile/Denis_Thiery

<http://www.kmonceau.fr>

References

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