



THIBAUT LEROY

From France to Sweden



Project: **The survival of honeybee colonies**

Research topic: **Biodiversity science**

Swedish Institution: **Uppsala University / Swedish University of Agricultural Sciences**

French Institution: **National Research Institute for Agriculture, Food and the Environment INRAE**

Dates of mobility: **01/05/2023** to **31/05/2023**

Program: **SFVE-A**



PRESENTATION

[Thibault Leroy](#) is a permanent [INRAE](#) (ex-INRA) Toulouse Researcher on honeybee genomics at the Genetics, Physiology and Livestock Systems ([GenPhySE](#)) unit. His scientific interests span from speciation, gene flow and adaptive introgression, local adaptation to changing environments, and plant mutations to evolution of genomic variation within and between species, and methods in population genomics (demographic inferences, GWAS, somatic mutation detection). He obtained his habilitated (HDR) at the [University of Angers](#) in 2022 and his PhD from the same university in 2012.

ACTIVITIES IN SWEDEN

Thibault Leroy's mobility to Sweden was based at two laboratories, one at the Swedish University of Agricultural Sciences ([SLU](#)) and the other at [Uppsala University](#). He visited [Barbara Locke](#)'s laboratory at the [Department of Ecology](#) of SLU, a state-of-the-art honeybee health lab and focused on the interaction between honeybee, the parasite varroa and the viruses transmitted by this parasite. He also met with [Matthew Webster](#) and was introduced to his laboratory at the [Department of Medical Biochemistry and Microbiology](#), focused on honeybee genomes and their adaptation capacity to changing climates. These two threats (varroa and climate change) are at the core of the research undertaken by Leroy's team in Toulouse, and the objective of the trip was to find sources of resistance and adaptation to safeguard the survival of the honeybees.

He gave several presentations. He introduced Locke's team to his thematic orientation and led a seminar for Webster's team in front of around 50 scientific attendees. He also animated a journal club theme on the origins of new mutations. New collaboration projects were envisaged, particularly with Locke's lab in 2024, a project planning to transfer selected varroa-resistant honeybees from Sweden to the south of France, in order to observe the capacity of adaptation to climate change. He also discussed another collaboration, with Matthew Webster, that might see the day in 2025.