



## BACHELOR or MASTER THESIS

### **Mutualisms between ants and plants: morphological adaptation to arboreal lifestyles**

Ants and plants have been coevolving for more 100 million years. Recent research shows that cooperation led to a high level of diversification in both groups. Plants developed anatomical adaptations to house and feed their ant partners, while specialised behaviours evolved in arboreal ants. However, almost nothing is known about the morphological adaptations of ants to arboreal lifestyles. This project will address this gap, at a very large evolutionary scale, comparing ant morphology across the whole Formicidae family.

The student will use online photographic databases to collect morphological data on arboreal ant species and their non-arboreal closest sister-taxa, map them on the latest ant phylogenetic tree, and test for differences. This project will be the first large-scale study of ant morphological adaptation to mutualistic arboreal lifestyle, and will result in the publication of an article in a scientific journal.

We are looking for a highly motivated student from the natural science field who is interested in understanding the impact of mutualisms on species evolution. This project does not include labwork. It is suitable for a Bachelor or Master thesis, and will be carried out in English.

If you are interested or have any further question, please contact:

Dr. Axel Mithöfer ([amithoefer@ice.mpg.de](mailto:amithoefer@ice.mpg.de)) or Dr. Pierre-Jean Malé

([pmale@ice.mpg.de](mailto:pmale@ice.mpg.de)),

Max Planck Institute for Chemical Ecology, Jena.

