

Encadrement :

Betty Benrey, Institute de Biologie, Université de Neuchatel. 41-327183132. betty.benrey@unine.ch

Titre du stage :

The role of bean resistant traits on the performance and behavior of bruchids and their parasitoids

Résumé:

We will be using a tritrophic system comprised of bean plants, bruchid beetles and several species of parasitoids that attack these bruchids. These organisms represent a highly coevolved system that has interacted together for thousands of years. In addition, the organisms are of tremendous economic importance and have been for sufficiently long time that evolutionary questions also pertain to the agro-ecosystem and how it interacts with natural ecosystems.

This project will study the role of three plant defense traits: phytohemagglutinin (PHA), arcelin (Arc) and α -amylase inhibitors (α AI), on the host specificity of bruchid beetles and their interaction with their parasitoids.

Références bibliographiques :

- Campan, E. and B. Benrey. 2004. Behavior and performance of a specialist and a generalist parasitoid of bruchids on wild and cultivated beans. *Biological Control*, 30: 220-228.
- Aebi, A. T. Shani, C. Hansson, J. Contrears-Garduno, G. Mansion and B. Benrey. 2008. The potential of native parasitoids in the control of Mexican bean beetles: A genetic and ecological approach. *Biological Control*. 47(3): 289-297.
- Alvarez, N., M. Hossaert-McKey, G. Restoux, A. Delgado-Salinas and B. Benrey. 2007. Anthropogenic effects on population genetics of phytophagous insects associated with domesticated plants. *Evolution*. **61(11)**: 2614-2622; doi:10.1111/j.1558-5646.2007.00235.x

Techniques mises en œuvre :

Behavioral experiments and field work

Compétences particulières exigées :

Some knowledge on rearing insects