

Ph.D. Position in Evolutionary Biology – Entomology

The unit of Evolutionary Biology & Ecology, Faculty of Sciences, Université Libre de Bruxelles (ULB), Belgium is offering a Ph.D. fellowship in the framework of a new research project (PI: Prof. Yves Roisin) financed by the Belgian National Fund for Scientific Research (F.R.S.-FNRS).

How stochastic vs deterministic processes contribute to the assembly and functional diversity of communities is a central question in ecology. In this respect, plant communities have received most attention, but little is known about the soil fauna. Soil-feeding termites are a prominent component of the pedofauna in many tropical regions. The core question of the project is:

Why are there so many species of soil-feeding termites in afrotropical and neotropical forests and woodlands ?

We propose to study community composition and functional diversity of soil-feeding termites in a range of afrotropical and neotropical forests and woodlands, to cast light on their functioning and assembly rules. We will focus on soldierless Apicotermittinae, a group abundant in both Africa and the Neotropics, and use the continent-endemic Cubitermittinae (afrotropical) and Syntermittinae (neotropical) for comparison.

The successful applicant will be expected to address the following topics:

- Establish a detailed, well-supported phylogeny of soldierless Apicotermittinae, in the framework of an international initiative on the world's termite phylogeny.
- Identify and characterize feeding niches by a combination of methods, including stable isotope ratio determination and digestive tube content analysis.
- Identify and quantify functional traits of mandible morphology and digestive anatomy.
- Assemble together phylogeny, feeding niches and functional traits to provide keys as to the evolution of soil-feeding termite taxa and their adaptations
- Carry out a comparative analysis of communities (composition, species and functional richness): test them for phylogenetic and functional clustering (or overdispersion), and assess the relationship between species richness and functional diversity.

Requirements for application

M.Sc. in Biology, Bio-engineering, Ecology or equivalent.

Interdisciplinary mind: interest in tropical ecology, field entomology, and molecular biology or chemistry lab work. Experience in any of these fields is an asset.

Skills in data treatment and statistics.

Good knowledge of English indispensable, French useful.

We offer

Fully funded Ph.D. fellowship (tax-free, with social security coverage) for a total duration of four years (annual renewal), starting 1 October 2015. The candidate will have to register at the ULB as a Ph.D. student and is expected to complete his/her Ph.D. within four years.

Application

Applications will be considered until the position is filled. The applicant should send his/her letter of motivation, curriculum vitae, transcripts, and coordinates of 2-3 persons of reference as soon as possible by e-mail to Prof. Yves Roisin.

E-mail for application or to obtain further information: yroisin@ulb.ac.be

EURAXESS Job ID: 34023925