

Ph.D. Position Open

Project: Evolutionary Niche dyNamics of Invasive Species (ENNIS)

Project Description: The ENNIS project seeks to understand the relationship between the evolutionary history of a clade, the niche variation and accompanying variation in the distribution of species, and the tendency for plant species to become invasive and/or naturalized. The project will focus on clades that have naturalized and invasive species in Switzerland and central Europe. We will use an interdisciplinary approach that includes activities in niche modeling, sequencing DNA regions, phylogenetic reconstruction and modeling trait evolution. The research includes characterization of the environmental niches and distribution of clade members using multivariate statistics and niche-based species distribution modeling; bioinformatics approaches to the use of sequence and phylogenetic databases, and use of other databases on the distribution of invasive species. A substantial portion of the research will involve production of DNA sequence data to complete phylogenetic trees of species in clades that contain invasive and naturalized species in central Europe. Collection of material for sequencing, and additional data on species global distributions, will involve visiting national herbaria, botanical gardens, individual researchers, and doing fieldwork throughout the sum distribution of the species in the focal clades. Phylogenetic reconstruction of evolutionary relationships will be undertaken using likelihood and Bayesian methods. Modeling of evolutionary processes of ecological diversification will be approached through the use of experimental software and the development of original algorithms.

The Ph.D. Student Position Description

The position includes funding for three years, during which you should be able to complete the degree. You will be matriculated in the Ecology and Evolution doctoral program of the University of Lausanne (UNIL), Switzerland, and will be a member of both the Department of Ecology and Evolution (DEE) at that institution and at the Federal Research Institute WSL, located in Birmensdorf near Zürich. You will spend substantial periods in residence at both institutions during the three-year period under the supervision of Drs. Peter B. Pearman (WSL) and Nicolas Salamin (UNIL).

Starting date: You would hopefully be ready to begin by June 1st, 2009

To Apply: See websites

<http://www2.unil.ch/phylo>

http://www.wsl.ch/personal_homepages/pearman

After reviewing the information available at the web sites, please direct your questions to:

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Or

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