Albert-Ludwigs-Universität Professur für Waldbau . D-79085 Freiburg

Professur für Waldbau

PhD Position

The Chair of Silviculture offers – pending the final approval by the funding agency - a PhD position to carry out research on

Short-term and long-term variation in P concentrations in growth rings of trees as indicators of P availability in forest ecosystems

within the DFG Priority Programme "Ecosystem Nutrition – Forest Strategies for limited Phosphorus Resources (SPP 1685)".

The position is anticipated to start in fall 2013 and will run for three years. Payment is according to the German standard tariff (65 to 75 % TVL13).

The PhD position will be integrated in the research group of Prof. Jürgen Bauhus at the Chair of Silviculture (www.waldbau.org), Faculty of Environment and Natural Resources at Freiburg University. The project will investigate whether long- and short-term variation in P concentrations and contents in growth rings of trees can be used as indicator for the availability of P in forest ecosystems of Central Europe. This would enable retrospective analysis of P nutrition of trees and forest stands and provide valuable information about the effect of long-term environmental trends (soil acidification, ecosystem eutrophication) and short-term events (lime application, drought years) on P nutrition. In addition, this project will provide valuable information on P stored in woody biomass and P annual immobilization rates, which are required for nutrient budgets and biogeochemical models. The project offers the opportunity to train a young researcher in dendro-chemistry, an area in which only few people work worldwide. The multidisciplinary environment of the DFG priority programme facilitates cooperation with soil scientists, plant physiologist, modellers, etc.

We are looking for a highly motivated and cooperative person with an MSc or equivalent degree in Environmental Sciences, Soil Science, Plant Ecology, Forest Sciences or related areas. Applicants should have a background in nutrient cycling, forest ecology and/or dendro-chronological approaches and enjoy working in the lab. Experience in analytical chemistry is particularly welcome. The applicant should be able to independently plan and undertake sampling of tree cores and stem discs in the field. Furthermore, the candidate will be responsible to acquire samples and data from collaborators and liaise with new cooperation partners. The applicant should be able to process the samples in an accurate and strictly reproducible manner. Good statistical background and experience with appropriate software is expected. The project will be carried out in collaboration with EMPA (Swiss Federal Laboratories for Material Science and Technology) and the candidate will be working for a total of 8 months in Dübendorf, near Zürich, Switzerland where drill cores will be analysed. Fluency in English is indispensable. The doctoral thesis shall be prepared as a series of manuscripts to be published in international journals.

The University of Freiburg aims to increase the proportion of women in academic positions and therefore welcomes in particular applications by females. Disabled persons with equal qualifications will be preferably employed. Applications must include a motivation letter, CV, copies of certificates, copies of publications or a thesis, and names and contact details of two academic referees. Please submit applications **until the 15. July 2013** as a single PDF file to juergen.bauhus@waldbau.uni-freiburg.de.

Further information:
Prof. Dr. J. Bauhus (Tel. +49 761-203-3678, e-mail: juergen.bauhus@waldbau.uni-freiburg.de) or Dr. M. Kohler (Tel. +49 761-203-3673, e-mail: martin.kohler@waldbau.uni-freiburg.de).