



PhD Position at the Chair of Silviculture, Freiburg University

in a (DFG-funded) research project on

"The effects of tree-species diversity on the light absorption, light-use efficiency and growth of mixed-species forests"

The position is anticipated to start in mid-2015 and will run for three years. Payment is according to the German standard tariff (65 % TV-L E13). The PhD position will be at the Chair of Silviculture (www.waldbau.org), Faculty of Environment and Natural Resources at Freiburg University.

Many studies have shown that forest productivity can increase in mixed-species forests compared with monocultures. One possible explanation is that inter- and intra-specific differences in crown architecture and vertical positioning within the canopy enables greater light absorption within mixtures than in monocultures. However, this has received little attention, partly due to the difficulty in quantifying light absorption by individual trees. This study will combine direct field measurements with a 3D light model. A preliminary study is described in Forrester and Albrecht (2014; *Forest Ecology and Management*, 328, 94-102) and the project will test a conceptual model described in Forrester (2014, *Forest Ecology and Management* 312, 282-292).

We are looking for a highly motivated and cooperative person with a MSc or equivalent degree in Environmental Sciences, Plant Ecology, Forest Sciences or related areas. The work will be done in planted biodiversity experiments in Finland and Wales as well as forest plots in Germany. Therefore, the candidate should be prepared for several months of travelling, should be an efficient fieldworker, and have very good analytical skills. The applicant should be able to independently plan and undertake measurements of crown architecture in the field, process biomass samples in the lab and run process-based physiological models to predict light absorption. The applicant will also be responsible for obtaining data from collaborators. A good statistical background and experience with appropriate software is expected and the candidate must be fluent in English. The project will be carried out in collaboration with partners at Bangor University in Wales, Royal Holloway University of London, England and the Technical University of Munich, Germany. The doctoral thesis shall be prepared as a series of manuscripts to be published in international journals.

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 by the **27th of March 2015** as a **single PDF file** to david.forrester@waldbau.uni-freiburg.de. For further information see: <http://www.waldbau.uni-freiburg.de/>

The contract is a fixed-term contract for 3 years. The salary will be determined in accordance with TV-L E13.

For further information, please e-mail david.forrester@waldbau.uni-freiburg.de.