

**PhD Opportunity on Forest Pathology, University of Extremadura, Spain**  
**4-year-Contract**  
**Deadline: June 29, 2015**

*Castanea sativa* facing Global Change: Identification of trees tolerant to water stress and new *Phytophthora* species.

Sweet chestnut (*Castanea sativa* Mill.) is one of the multipurpose tree species of most economic and cultural importance in Europe. Due to its multipurpose characteristics it is considered a good example of integration between natural and man-driven distribution of biodiversity. It is also a good model for developing long-term strategies aimed to combine conservation and sustainable use. For a long time, however, chestnut stands have experienced an increase on mortality due to the presence of new species of *Phytophthora* and certain stress factors related to climate change.

The influence of changing scenarios of water stress vs waterlogging in the susceptibility of *C. sativa* to *Phytophthora* is ignored. Moreover, plant material tolerant to the new scenarios of global change, especially those involving water stress and soil infestation with new *Phytophthora* species, is not available. The experiments to be undertaken aim to (i) elucidate some of the current causes of mortality of chestnut, (ii) better understand the interactions between water stress and tree mortality due to *Phytophthora*, and (iii) make a first selection of native *C. sativa* genotypes - not hybrids - tolerant to water stress and *Phytophthora*, suitable for their use in central and southern Spain. Diagnostic techniques and neutral, functional and gene expression markers will be used. The project will provide valuable scientific knowledge that can be transferred to other forest species. The work will be useful for describing current threats, still not addressed, and the selected plant material will contribute in the medium term to improve the socioeconomic situation of regions where *C. sativa* is present.

This study will be based at the Forest Research Group in Plasencia, University of Extremadura, Spain. The PhD thesis will be supervised jointly by Prof. Alejandro Solla ([https://www.researchgate.net/profile/Alejandro\\_Solla](https://www.researchgate.net/profile/Alejandro_Solla)) and Dr. Ángela Martín ([https://www.researchgate.net/profile/Angela\\_Martin12](https://www.researchgate.net/profile/Angela_Martin12)), within the framework of a Ministerio de Economía y Competitividad (AGL2014-53822-C2-1-R) project. Funding is secured for a 48-month period by a full contract receiving about 1.150 euro per month. Facilities for long-term research stays at Swedish University of Agricultural Sciences, Consiglio Nazionale della Ricerca CNR (Porano, Italia) and Catholic University of Porto (Portugal) will be provided. Expecting starting date is 1 October 2015.

Candidates for this position must have a post-graduate (master) degree in **Forestry, Agronomy, Environmental Science, Biotechnology**, or a related field. This master must be necessarily recognized by the Bologna Accords. Applicants should preferably have good qualifications and it will be given priority to those applicants having a Master degree in Research finished. Applicants may have some background on Plant Science, Forest or Plant Pathology, and Plant Biotechnology. Excellent written and oral communication skills in English language are expected. They will be enthusiastic for both field and lab work, with a strong interest in data analysis. Due to field work, owning a driving license is mandatory.

Applications will comprise a full c.v., including the grades, masters and qualifications. The deadline for the application is Monday 29 June 2015. For inquiries please contact Prof. Alejandro Solla ([asolla@unex.es](mailto:asolla@unex.es)) or Dr. Ángela Martín ([angelamartin@unex.es](mailto:angelamartin@unex.es)) preferably before Friday 26 June 2015.