



'Rui Nabeiro' Biodiversity Chair / CIBIO-UE

One master fellowship, within the project “QuerCom: Environmental controls of community structure and ecosystem function: an assessment with cork oak (*Quercus suber*) communities in the Iberian Peninsula”

04th February 2014

It is now opened a call for the attribution the one master fellowship, within the project “**QuerCom: Environmental controls of community structure and ecosystem function: an assessment with cork oak (*Quercus suber*) communities in the Iberian Peninsula**” with the reference FCT “**EXPL/AAG-GLO/2488/2013**”, and “**FCOMP-01-0124-FEDER-041974**”, funded by the FCT/MEC through national funds (PIDDAC) and cofounded by Fundo Europeu de Desenvolvimento Regional (FEDER) through by COMPETE – Programa Operacional Fatores de Competividade (POFC), under the following conditions:

Scientific area: Biological Sciences

Admission requirements:

The applicant should have a Master’s degree or similar experience in ecology or a related field. English as a first or second language is required. Essential skills are:

- Demonstrated ability in data management and use of database software
- GIS
- Clear communication in both spoken and written English

Experience of working with one or more of the following is desirable: species distribution modelling, community distribution modelling, functional traits, ecosystem services, biological invasions, landscape ecology, biogeographical analyses. Knowledge and experience of *Q. suber* communities would be a great advantage. The technician must be able to work semi-independently, deciding between problems that can be solved themselves and problems that should be communicated to the PI.

Plan of work: The technician will undertake the compilation of the GIS database of *Q. suber* communities, and will support researchers in modelling the species composition and abundance of these communities in different locations. The technician will also compile and manage data on functional profiles of *Q. suber* communities, and will support analyses investigating how functional profiles correspond to invasion resistance. There may be a field work component, collecting data on *Q. suber* communities directly. The technician is expected to work closely with researchers, and so there is the opportunity to learn skills in ecological modelling. The technician will be encouraged to participate in scientific discussion, preparation of publications, and attend research meetings.

The project also involves collaboration with several international research teams (see project description background) and the technician will be required to work both independently and collaboratively. The technician will be expected to coordinate research and collate data with research groups in Évora, Porto, and Barcelona, and participate in meetings, for which international travel may be possible.

Project Background - A key impact of environmental change is to change the composition and abundance of species in ecological communities, i.e. community 'structure'. Structural changes have knock-on effects for biodiversity and the ecosystem services on which human societies rely. It is therefore imperative to understand how ecological communities will respond to environmental change, in particular climate and land-use change.

The project will develop a database of species composition and functional profiles of all natural forest communities that are dominated by *Quercus suber*, i.e. cork oak forest, in the Iberian Peninsula. The data to be compiled are available at very high spatial resolutions. This study system is ideal for our purposes because it consists of several sub-communities with different species compositions across a large environmental and spatial gradient. We will therefore be able to use environmental variation over space as a substitute for environmental change over time.

With this database we will ask two questions. First, what is the best technique for modelling changes in the species composition and abundance across an environmental gradient? Second, do changes in species composition correspond to changes in functional composition across an environmental gradient? Finally, through collaboration with a sister project at CIBIO Porto, we will ask whether our measurements of functional profiles indeed capture a classical ecosystem property – resistance to invasion

In addition to answering the questions outlined above, this project will also develop a database that can be used to address several future questions in the newly-emerging but fast moving field of community biogeography. There is therefore an opportunity for the successful applicant to build a research programme with the QuerCom database beyond the life of the project itself.

Research Team

- Regan Early (PI), Alba Estrada, Manuel Mendoza Garcia, “Rui Nabeiro” Biodiversity Chair, University of Évora, Portugal.
- Hari Prasad Dasari, Centre for Geophysics, University of Évora, Portugal.
- Xavier Font Castell, Department of Plant Biology, University of Barcelona, Spain.
- Joana Raquel Silva Vicente, João José Pradinho Honrado, Research Centre in Biodiversity and Genetic Resources, CIBIO, Porto, Portugal.
- Miguel Matias, Imperial College London, UK.

Applicable laws and regulations: The Research Grant award will be held by a contract between the University of Évora and the grant recipient, in accordance with the Research Grant regulation from the University of Évora (Service Order No. 1/2011, the Scientific Research Fellow Statutes (law No. 40/2004 of 18 August and Decree-law No. 202/2012 of 27 August) and in accordance with the legislation and Rules of the FCT Advanced Training and Qualification of Human Resources.

Work: The work will be undertaken in the Rui Nabeiro Biodiversity Chair facilities at the University of Évora, under the scientific supervision of Dr Regan Early.

Duration of the scholarship (s): the position will last 11 months, beginning in April 2014.

Value of monthly maintenance allowance: The stipend is € 980 according to the Regulation of advanced training and qualification of human resources of the Portuguese Foundation for Science and Technology (<http://www.fct.pt/apoios/bolsas/regulamento.phtml>), and the payments are processed each month, through cheque payment or bank transfer.

Methods of selection:

The selection methods to be used will be curriculum evaluation (contributing 50% to the final evaluation). There will be a preselection phase based on curricular evaluation, followed by interviews of the top candidates (contributing 50% to the final evaluation).

Composition of the selection jury:

President - Doctor Miguel Bastos Araújo

1º Vogal – Doctor Regan Early (Pós-doc Cátedra Rui Nabeiro)

2º Vogal – Doctor Miguel Matias (Pós-doc Cátedra Rui Nabeiro)

1º Suplente – Doctor Alba Estrada (Pós-doc Cátedra Rui Nabeiro)

2º Suplente – Doctor Manuel Mendoza (Pós-doc Cátedra Rui Nabeiro)

Form of publicizing/notification of results: The final candidate rank and selection will be published at the Rui Nabeiro Biodiversity Chair premises at Casa Cordovil (University of Évora). The candidates will be also notified by email whether they were selected or not for the positions.

Application deadline and submission of applications: The application period is open from 20th February 2014 until the 14nd March 2014 and its selection results will be published until 21 March 2014.

The application must include a cover letter (in English) explaining your ability to carry out the post and explicitly highlighting your experience in the skills required, a short CV (please no more than 3 pages), and the names and contacts of two academics that can provide a reference for you.

Applications should be sent by email to:

Dr Regan Early

Cátedra Rui Nabeiro da Universidade de Évora

e-mail: catedra-biodiversidade@uevora.pt

