



Teagasc Walsh Fellowship PhD Position

Halting biodiversity loss: identification and mapping of important areas of plant diversity

Applications are invited for this PhD research position funded through Teagasc's Walsh Fellowship scheme, in collaboration with Trinity College Dublin, Teagasc and the National Botanic Gardens

Background

Biodiversity conservation on farmland is critical to international, EU and CAP policy objectives of halting the loss of biodiversity, and will mainly depend on effective agri-environment schemes. A priority objective is to targeting agri-environment payments to areas of high biodiversity that occur outside of Natura 2000 sites. To this end, the spatial distribution of biodiversity remains a major knowledge gap. At the same time, agri-environment expenditure has become increasingly focused on biodiversity objectives, and will increasingly depend on delivery of targeted benefits that are clearly demonstrated.

This project will identify and map the spatial distribution of important areas for plant diversity, based on a GIS database of 900,000 records of rare and threatened plant species. It will be conducted as a major collaboration between Teagasc, Trinity College Dublin and the National Botanic Gardens.

The project will describe and prioritise the biodiversity value of different areas within the 26 Irish counties, based on objective and transparent criteria that reflect a hierarchy of biodiversity importance. In this way, important areas of plant diversity within each county of the Irish countryside will be identified. The distribution of these hotspots will be compared with that of protected areas (Natura 2000 sites and other protected areas). The distribution of plant diversity will be compared to land use patterns using spatial analysis, to test hypotheses about factors controlling plant distribution, and to provide essential information to support conservation planning.

Specific tasks include the following:

1. Collate plant diversity records for the 26 counties of Ireland in a GIS database
2. Map the spatial distribution of important areas for plant diversity.
3. Assess the current extent to which conservation policy/agri-environment schemes target the identified biodiversity hotspots.
4. Use spatial analysis to investigate how plant diversity is related to land use patterns, and to investigate lessons for conservation ecology.

The project will be supervised by Dr Steve Waldren (TCD), Dr John Finn (Teagasc) and Dr Matthew Jebb (NBG).

Applications

Applicants should possess a masters, first class or upper second-class honours degree in a relevant subject. A knowledge of GIS applications, and of the flora of Ireland will be highly advantageous. An ability to drive would also be advantageous. Applications should be sent to Dr S. Waldren (Department of Botany, Trinity College, Dublin 2, Ireland) by 5th August 2011, and should include a covering letter and CV, and the names and contact details of two academic referees.

The successful applicant will be based in the School of Natural Science's Centre for Biodiversity at Trinity College, Dublin and at the Teagasc Research Centre at Johnstown Castle, Co. Wexford. The Fellowship, which will commence on 1st October 2011, will provide funding of €21,000 per annum to cover academic fees AND research student stipend.

For further information please contact Dr S. Waldren at the address above.