BACKGROUND

The COFORD/EPA funded BIOFOREST project was an integral part of the emerging body of knowledge on forest biodiversity in Ireland following a period of intensive afforestation and associated landscape changes during the latter part of the twentieth century. Although expansion of the forest estate remains a priority for government, the character of Ireland's forests is undergoing considerable change. An increasing proportion of existing conifer forests are being harvested and restocked, and a high proportion of plantings now consist of a mix of conifer and broadleaved species. FORESTBIO seeks to address gaps in the knowledge of forest biodiversity in three forest types (second rotation conifer plantations, mixed tree species plantations and native woodlands) through surveys of plants, birds and invertebrates.

OBJECTIVES

• Assess the biodiversity of native woodlands, second rotation plantations and mixed species plantations.
• Conduct inter-forest type comparisons and comparisons with data from BIOFOREST to build a picture of the variety of forests in Ireland today.
• Identify indicators of biodiversity for different forest types and describe long term monitoring techniques.
• Identify measures to enhance the biodiversity of the different forest types.

PROGRESS

This project will sample 60 forest sites in total, 20 each of the three forest types. The following target taxonomic groups are being examined:

• Epiphytes;
• Ground-dwelling plants;
• Ground-dwelling invertebrates;
• Canopy-dwelling invertebrates;
• Lepidoptera;
• Birds.

The intention was to complete the majority of fieldwork during the first two years to allow sufficient time for subsequent laboratory identification of specimens and for data analysis. To this end 30 sites (20 second rotation...
plantation, five oak native woodland and five ash native woodland) were selected for survey during 2007 and thirty (20 mixed tree species plantation, five oak native woodland and five ash native woodland) during 2008. Much of the project fieldwork has now been completed and specimen identification is well underway. In addition to the flora and fauna surveys conducted during 2007, dedicated Lepidoptera surveys were conducted during the summer of 2008, and a subset of sites selected for autumn Lepidoptera surveys. Similarly, a subset of sites was selected for winter bird surveys.

Analysis of data collected thus far has commenced and team members are working towards interpretation and dissemination of results. Construction of the project database will bring together the many disciplines and add value to the results generated by each group, while making the data accessible to stakeholders in a user-friendly format.

During the summer of 2008 the canopy fogging surveys uncovered a new species of spider to Ireland. One male and one female of *Entelecara acuminata* (Wider 1834) were captured at Brownstown Wood in Co Kilkenny. This species is rare in England and has occasionally been recorded in Scotland, but never before in Ireland. Although a labour intensive and often difficult method for surveying forest canopy invertebrates, thermal fogging offers a unique tool in the assessment of fauna in our forest canopies, and has been directly responsible for the discovery of this species in Ireland.

**ACTIVITIES PLANNED**

Much of the fieldwork on FORESTBIO is now complete; however, Lepidoptera and canopy invertebrate sampling will continue through the next reporting period.

Sorting and identification of plant and invertebrate samples collected during 2007 and 2008 fieldwork will be completed. Detailed statistical analysis of data will be a priority with a view to the production of manuscripts for submission to international journals.
Preliminary data will be presented at conferences and workshops, nationally and internationally.

**OUTPUTS**

*Popular articles*


*Peer-reviewed papers*


*Presentations at workshops and conferences (including posters)*


*Theses*


*Inputs to curriculum development and teaching*


Anne Oxbrough and Mark Wilson have lectured to the MSc Ecosystem Conservation and Landscape Management run by the ZEPS department, University College Cork.

Oisin Sweeney, Mark Wilson and John O’Halloran gave lectures on the Biodiversity Components of Forestry course at UCC.

*Project website*

http://www.ucc.ie/en/planforbio/Projects/FORESTBIO/