

FORESTFUNGI

Assessment of wild edible fungal production in selected Irish forest sites, and an evaluation of the commercial potential of harvesting

PROJECT TEAM

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BACKGROUND

At least 1,100 species of wild fungi are collected worldwide for culinary or medicinal use. In Europe, the most highly valued commercially collected fungi are truffles (*Tuber* species), ceps (*Boletus edulis* and related species) and chanterelle (*Cantharellus cibarius*), but many more species may actually be collected for consumption depending on regional preferences.

Harvesting of edible fungi in Irish forests was traditionally rather insignificant, but interest in collecting edible fungi for culinary use has increased greatly in recent years. Information is needed on the potential of edible fungi as a secondary forest product in Ireland. Such information is at present sparse, anecdotal and unpublished, in contrast to the situation in many other European countries where collecting wild edible mushrooms is popular. The aim of this project is to obtain this information, which will provide an objective basis for assessing the commercial and recreational potential of edible fungal harvesting in Irish forests.



Cantharellus cibarius.

Photo: Louis Smith

OBJECTIVES

- To obtain quantitative information on the production of wild edible fungi in forest study sites that are representative of larger areas of forest in Ireland.
- To establish a framework for long term monitoring of the selected sites beyond the lifetime of the project.
- To extrapolate production from the study sites to larger areas of similar forest in Ireland.
- To assess year to year variation in fungal production.
- To correlate fungal production with environmental and habitat variables.

PROGRESS

In 2007, 53 forest sites were selected for surveying in counties Limerick, Clare, Cork, Kerry, Waterford, Tipperary, Wexford, Wicklow, Dublin, Westmeath, Mayo, Galway, Roscommon, Sligo, Leitrim, Cavan, Offaly, Laois and Donegal. The sites comprised replicate stands of the following range of tree types, generally in single-species, mature stands: beech, birch, Douglas fir, hazel, lodgepole pine, Norway spruce, noble fir, oak (*Q. robur* and *Q. petraea*) and Sitka spruce. In 2007 each site was visited and surveyed between three and four times during the period the first week of September and the last week in November.

In the run up to the 2008 season, the sites sampled in 2007 were re-evaluated for their suitability for long term monitoring. This resulted in the exclusion of approximately 10% of the 2007 sites and their replacement with potentially more suitable sites. The retained sites were resampled and additional sites were also sampled, commencing in mid-August and finishing at the end of November. Each site was sampled at least four times.

Levels of production recorded in the 2008 season were similar to the 2007 season. Both seasons were poor compared to the last productive season in 2006. Hedgehog fungus (*Hydnum repandum*) and different species of chanterelle (*Cantharellus* species) were again the most abundant edible types, and were present at some sites in commercial quantities. Summer truffles (*Tuber aestivum*) were found for the first time in the project, located in a woodland site in the Midlands. Collection of environmental and habitat variables (soil and vegetation) continues, and work has commenced on relating fruit body production and distribution patterns to environmental variables.



Boletus edulis.

Photo: Pat McClelland

Progress was made towards establishing a framework for a long term monitoring of edible woodland fungi. In relation to this also, the website is nearing completion.

ACTIVITIES PLANNED

- The third round of sampling for fruit body production will be carried out commencing in August 2009. A small number of sites will be sampled earlier in the year, to check for production of morels, St George's mushroom and early-fruiting ceps (*Boletus edulis*).
- Sampling for summer truffles will be carried out on a more systematic basis in the 2009 season.
- Collection of environmental data from the sites will be completed.
- Preliminary multivariate analysis of factors influencing edible fungal production will commence in January 2009.

OUTPUTS

Maria Cullen took part in the *Mooney Goes Wild* programme on RTÉ Radio 1 in October 2008 describing the project, and she and John O'Connell appeared in the *Ear to the Ground* television programme broadcast by RTÉ on 6 November 2008.