

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 1100 species of wild fungi are collected worldwide for their 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 Such information is at present sparse, anecdotal and unpublished, in contrast to the situation in many other European countries, where collecting wild edible mushrooms is popular.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.

OBJECTIVES

- To obtain quantitative information on 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

The third sampling of the planned 3-year sampling programme was completed in autumn 2009. Forty-six forest sites, and 114 plots within them, were reselected for surveying in 2009. Each site was surveyed four times between the start of September and December. A small number of plots was lost between 2008 and 2009, mainly due to clearfelling.

Initial results indicate that in 2009 the fruiting season was spread unusually in comparison to previous seasons. Fruiting times were displaced, notably for *Armillaria* spp. which occurred in profusion at the end of September, approximately 3 weeks earlier than usual. 2009 appears slightly less productive than the 2008 or 2007 season. After a promising start, there were early occurrences of edible fungi, notably edible bracket fungi and very early winter chanterelles in August. However, with dry weather in September, fruiting ceased for a time and never fully recovered the volumes of 2008. The season ended quite early, due in part to very high rainfall in November. A small number of plots were inundated with floodwater for the first time during the three year study. Some unusual species appeared in plots for the first time in 2009, for example *Amanita vaginata* (grisette). First records of some rarer fungi were recorded from day forays also, e.g. green *Russulas* close to *Russula cyanoxantha*, such as *Russula vesca* and *R. lanzei*.

Additional work in 2009 included soil sampling from each plot. Environmental data collection was completed this year. Data included:

- Five soil samples from each plot;
- Assessment of ground flora cover in each plot;
- Tree numbers and girths;
- Stand history.



Armillaria mellea - honey fungus.



Boletus edulis - commonly known as penny bun or cep.

ACTIVITIES PLANNED

- Compilation of soil data and other environmental data from plots.
- Detailed analysis of the data from the three year's sampling will commence. The main aims will be:
 - To provide production estimates of edible fungal fruitbodies in different forest types
 - To extrapolate WEFF production from the study sites to larger areas of similar forest in Ireland
 - To assess year-to year variation in fungal production.
 - To examine the relationship WEFF production with environmental and habitat variables.
 - To examine the association between the different species of edible woodland fungi.

OUTPUTS

- A presentation on the project, *Forest fungi as non-timber forest product* was presented on 28/8/2009.
- *Forest Fungi in Ireland*. Woodlands of Ireland lecture, Charleville Castle, October 2009.
- *Identification of Fungi in Ireland*. National Biodiversity Data Centre, Waterford September 2009.
- Cullen, M., Fox, H. and Harrington, T. 2009. *Tuber aestivum/uncinatum in Ireland*. First Conference on the European Truffle *Tuber aestivum*, University of Vienna, November 2009. (To be published in the Austrian Journal of Mycology).
- Radio interview with Michael Lemass during identification course, Avondale 2009. www.growitcookiteatit.ie/2009
- *Eye on Nature*, 30 May 2009, Michael Viney article mentioned the Forest Fungi project.