

The international conservation importance of Welsh 'waxcap' grasslands

Authors

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Corresponding author Gareth W. Griffith - gwg@aber.ac.uk Abstract

The large decline in plant and animal diversity of semi-natural grasslands resulting from the introduction of modern agricultural practices in the 1940's has been well documented and such changes are also suspected of causing the decline in the abundance and diversity of macrofungi in these habitats. We conducted repeated surveys at 48 selected grassland sites around Wales to record the presence and abundance of fruitbodies (FBs) of grassland macrofungi belonging to the taxa *Clavariaceae*, *Hygrocybe*, *Entoloma*, *Geoglossaceae*, *Dermoloma* (also *Porpoloma* and *Camarophyllopsis* spp.) which are grouped collectively as "CHEGD" fungi (acronym of group names) and considered typical of nutrient poor 'waxcap' grasslands. A total of 111 CHEGD species (of the ca. 200 species previously found in UK/Ireland) were recorded. That these included one species unknown to science, 14 new to Wales including two new to the UK attests to the extent of past under-recording. Phenological differences in fruiting were found between *Entoloma* and *Hygrocybe* spp., and patterns of occurrence at the sites correlated well with numbers of records from the Fungal Records Database of Britain and Ireland. The recent post-glacial history and high human population densities have generally resulted in lower levels of biological diversity in north-western Europe than in other parts of the world. Compared with current data from other European countries and globally, Welsh grasslands host particularly diverse macrofungal communities, yet the organisms continue to attract little attention from mainstream conservation bodies, whilst much conservation effort is lavished on species which are relatively common elsewhere.

Keywords

EU habitats directive – macrofungal diversity – red data list – species richness – UK biodiversity action plan (BAP)