Plas Bodfa Grassland Fungi

6th November 2023

Crimson Waxcap *Hygrocybe punicea* on lawn

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Scarlet Waxcap *Hygrocybe coccinea*

SUMMARY

This mini report describes the Grassland Fungi, the 'CHEGD' species recorded during a walk over the north lawn at Plas Bodfa, Llangoed on 6th November 2023. The lawn is small in size, level, fairly closely mown and herb rich with a large moss content. It has no inputs and is regarded as unimproved grassland.
The lawn has been identified from previous studies to be an excellent habitat for Grassland Fungi and lists of the fungi recorded there in 2021 and 2022 are posted on the Plas Bodfa website.
On this visit a total of 27 CHEGD species were recorded on the site, including a total of 14 Waxcap *Hygrocybe* species and 8 Grassland Fungi species of International conservation concern. Six species were recorded which are new to the site list comprised of 3 Waxcap species, 1 Fairy Club and 2 Pinkgills. This small lawn ranks as at least of Regional Importance for its suite of Grassland Fungi.

Introduction to the CHEGD species

The fungal recording concentrated on the suite of Grassland Fungi, known as the **'CHEGD'** species which only thrive in undisturbed, semi-improved or unimproved grassland. This is typically fairly short, grazed, or mown with cuttings removed, well drained and often with a high moss content. This habitat and consequently the fungi it supports are now rare in much of lowland Britain as a result of agricultural intensification and both are of conservation concern. These fungi are intolerant of improvement with the use of fertilisers, ploughing, reseeding, disturbance including compaction etc. They will quickly disappear and may not return for decades if at all. The '**CHEGD'** group is comprised of members of the genera ***H****ygrocybe* (Waxcaps) and ***E****ntoloma* (Pinkgills); and the families ***C****lavariaceae* (Fairy Clubs) and

G*eoglossaceae* (Earth Tongues). The **D** element includes the genera ***D****ermoloma*, *Pseudotricholoma* and *Camarophyllopsis.* These groups of fungi are unrelated but appear to have similar ecological requirements. The colourful and charismatic Hygrocybes, called waxcaps because of the waxy texture of the fruiting bodies, are the most visible component of the Grassland Fungi and can come in a range of bright colours. They have attracted the most attention and good sites have become known as 'Waxcap Grasslands'. Optimum fruiting of all these fungi can be very weather dependent as they do not tolerate dry, windy or frosty weather very well, and fruiting may be inhibited or any fungi present quickly desiccate or rot if weather conditions are unsuitable. The fruiting season generally ranges from September to December with October usually being the optimum month for most species. However, different species of fungi may fruit at different times during the autumn season and more than one visit and a spread of dates will often increase the number of species recorded. Some fungi also do not fruit regularly and may need special conditions to promote fruiting. A single visit will only take a 'snapshot' of the fungi present on that day and it may take several years to obtain a full list for a site.

Citrine Waxcap *Hygrocybe citrinovirens*

RESULTS from 6th November

Twenty seven CHEGD species were recorded comprised of 6 Clavarioids Fairy Clubs, 14 Waxcaps Hygrocybes, 3 Pinkgills Entolomas, 2 Earthtongues Geoglossaceae, a Crazed Cap *Dermoloma* and a Fan Vault *Camarophyllopsis.*
Of note on the lawn for their beauty were the troupes of Scarlet Waxcap *Hygrocybe coccinea*; this quite common Waxcap species is very charismatic appearing like bright-red jewels in the grassland. Also of note were the numerous groups of Smoky Spindles *Clavaria fumosa* appearing all over the lawn indicating that the fungal mycelium in the soil must cover most of the area and conditions must have been ideal for it to fruit so prolifically.

Smoky Spindles *Clavaria fumosa*

Citrine Waxcap *Hygrocybe citrinovirens* is a beautiful greenish-yellow Waxcap with contrasting white gills, a pointed cap and fibrous stipe. Three individuals were recorded and this is a new species to the site list. Two further species of *Waxcap Hygrocybe* new to the site list were recorded, Orange Waxcap *Hygrocybe aurantiosplendens* and Spangle Waxcap *Hygrocybe insipida*. Straw Club *Clavaria straminea* a pale yellow club with a darker yellow base, Star-Pinkgill *Entoloma conferendum* with star shaped spores and the pale Mealy Pinkgill *E. prunuloides* with a damp flour or mealy smell, were also new to the list.
Crimson Waxcaps *Hygrocybe punicea*, the largest species of Waxcap were just starting to appear; this is a late fruiting species and often persists well in to November and December. In contrast there were still some Fibrous Waxcap *Hygrocybe intermedia* on the lawn which can fruit very early, even in July.
There were several fruitbodies of Yellow-foot Waxcap *Cuphophyllus flavipes* with a violet-brown cap, decurrent gills (running down the stipe) and a yellow base to the stipe, the diagnostic feature of this species.
A number of yellow species were recorded including Golden Waxcap *Hygrocybe chlorophana*, Oily Waxcap *Hygrocybe quieta* and Butter Waxcap *Hygrocybe ceracea*.
Fairy Clubs were well represented with 6 species recorded. Meadow Coral *Clavulinopsis corniculata* has a yellow branched structure, the other species recorded all have simple unbranched clubs either white or a shade of yellow/orange.
Two species of Earthtongue Geoglossaceae were recorded including Glutinous Earthtongue *Glutinoglossum glutinosum* easily identified in the field by the very viscid fruitbodies. Most species of earthtongue however, require microscopic identification. Some green *Microglossum* species of earthtongue have been recorded in previous years but these were either not fruiting or were missed on this visit.
The Crazed Cap *Dermoloma cuneifolium* and Matt Fan Vault *Camarophyllopsis schulzeri* were both recorded; the latter species is uncommon to rare and of conservation concern.

Full results are shown in Table 2. Eight of the species recorded are on the global IUCN Red List of Threatened Species and are assessed as 'Vulnerable' and thus of International conservation concern. (Indicated in Table 2).

Site Evaluation Methods
It has been suggested that the importance of a site can be evaluated by the number of Waxcap *Hygrocybe* species recorded, both on a single visit and over multiple visits. A site classification system was proposed by Rald, (1985) and was adapted by Vesterholt *et al*, (1999), (Table 1).

Using these criteria the lawn at Plas Bodfa is at least of Regional Importance for its Waxcaps *Hygrocybe* spp. alone with 14 species recorded on this visit and a total of 14 species between 2021 and 2023.

Table 1. The site classification system of Rald, (1985), adapted by Vesterholt *et al*, (1999).

Conservation Value	*Hygrocybe* spp. in one visit	Total no. of *Hygrocybe* spp.
Internationally important	15+ (?)	22+
Nationally important	11-14	17-21
Regionally important	6-10	9-16
Locally important	3-5	4-8
Of no importance	1-2	1-3

Fibrous Waxcap *Hygrocybe intermedia*

Orange Waxcap *Hygrocybe aurantiosplendens*

Conclusions

The lawn at Plas Bodfa is very special for its Grassland Fungi assemblage and further species will probably be recorded in future years. It ranks as Regionally Important for its Waxcaps alone and supports 8 species of Grassland Fungi with International conservation concern. With the continued sympathetic management by Julie and Jonathan it should be well protected and enjoyed for years to come.

White Spindles *Clavaria fragilis*

Meadow Coral *Clavulinopsis corniculata*

Straw Club *Clavaria straminea*

Meadow Waxcap *Cuphophyllus pratensis*

10. References

BMS, (2021). Recommended English names, British Mycological Society (britmycolsoc.org.uk)

Brown, D. J., *et al*, (yn y wasg 2015). Ffyngau a Heintiau Planhigion. Cymdeithas Edward Llwyd (Cyh.)

Index Fungorum. http://www.indexfungorum.org/

IUCN, International Union for Conservation of Nature's Red List of Threatened Species, https://www.iucnredlist.org/

Rald, E., (1985). Vokshatte som indikatorarter for mykologisc vaerdifulde overdrevslokaliteter. Svampe, 11, pp. 1-9

Vesterholt, J., Boertmann, D., & Tranberg, H. (1999). Et usaedvanlig godt ar for overdrevssvampe. Svampe, 40, pp. 36-44.

Table 2. All CHEGD Species recorded on Site 6th November 2023: Latin, English & Welsh names

LATIN NAME	ENGLISH NAME	WELSH NAME	CONSERVATION STATUS
Clavariaceae (C)	**Fairy Clubs**	**Cwrel a Phastyynnau**	
Clavaria fragilis	White Spindles	gwerthyd wen	
Clavaria fumosa	Smoky Spindles	gwerthyd fygliw	
Clavaria straminea	Straw Club	pastwn gwellt	
Clavulinopsis corniculata	Meadow Coral	cwrel corniog	
Clavulinopsis laeticolor	Handsome Club	pastwn siriol	
Clavulinopsis luteoalba	Apricot Club	pastwn melynwyn	
Hygrocybes (H)	**Waxcaps**	**Capiau Cŵyr**	
Cuphophyllus flavipes	Yellow Foot Waxcap	cap cŵyr troed melyn	**IUCN 'globally Vul'**
Cuphophyllus pratensis	Meadow Waxcap	cap cŵyr y ddôl	
Cuphophyllus virgineus	Snowy Waxcap	cap cŵyr claerwyn	
Gliophorus psittacinus	Parrot Waxcap	cap cŵyr y parot	
Hygrocybe aurantiosplendens	Orange Waxcap	cap cŵyr oren	**IUCN 'globally Vul'**
Hygrocybe ceracea	Butter Waxcap	cap cŵyr ymenyn	
Hygrocybe chlorophana	Golden Waxcap	cap cŵyr euraidd	
Hygrocybe citrinovirens	Citrine Waxcap	cap cŵyr lemon	**IUCN 'globally Vul'**
Hygrocybe coccinea	Scarlet Waxcap	cap cŵyr coch	
Hygrocybe conica	Blackening Waxcap	cap cŵyr duol	
Hygrocybe insipida	Spangle Waxcap	cap cŵyr sbanglaidd	
Hygrocybe intermedia	Fibrous Waxcap	cap cŵyr ffibraidd	**IUCN 'globally Vul'**
Hygrocybe punicea	Crimson Waxcap	cap cŵyr rhuddgoch	**IUCN 'globally Vul'**
Hygrocybe quieta	Oily Waxcap	cap cŵyr olewog	**IUCN 'globally Vul'**
Entolomataceae (E)	**Pinkgills**	**Tegyll Pinc**	
Entoloma conferendum	Star Pinkgill	tagel binc sbôr serog	
Entoloma infula	A Pinkgill		
Entoloma prunuloides	Mealy Pinkgill	tagell binc blodiog	**IUCN 'globally Vul'**
Geoglossaceae (G)	**Earth Tongues**	**Tafodau'r Ddaear**	
Geoglossum fallax	Deceptive Earthtongue	tafod y ddaear coesyn garw	
Glutinoglossum glutinosum	Glutinous Earthtongue	tafod y ddaear gludiog	
***Dermoloma* etc. (D)**	**Crazed Caps etc.**	**Capiau Craciog ayyb.**	
Dermoloma cuneifolium	Crazed Cap	cap craciog	
Camarophyllopsis schulzeri	Matt Fan Vault	ffanfowt afloyw	**IUCN 'globally Vul'**

SUMMARY: CHEGD species C x 6; H x 14; E x 3; G x 2; D x 2 = 27 species

Snowy Waxcap *Cuphophyllus virgineus*

Parrot Waxcap *Gliophorus psittacinus*

Golden Waxcap *Hygrocybe chlorophana*

Yellow Foot Waxcap *Cuphophyllus flavipes*

Oily Waxcap *Hygrocybe quieta*

Spangle Waxcap *Hygrocybe insipida*

Blackening Waxcap *Hygrocybe conica*

Crimson Waxcap *Hygrocybe punicea*

Glutinous Earthtongue *Glutinoglossum glutinosum*

Deceptive Earthtongue *Geoglossum fallax*

Star Pinkgill *Entoloma conferendum*

Mealy Pinkgill *Entoloma prunuloides*

Crazed Cap *Dermoloma cuneifolium*

Matt Fanvault *Camarophyllopsis schulzeri*

Scarlet Waxcap *Hygrocybe coccinea*