Survey of the Grassland Fungi of County Clare

David Mitchel

October – November 2006

This project has received support from the Heritage Council under the 2006 Wildlife Grant Scheme

Contents

Contents 2
Background 3
  Assessing site quality from fungal data 3
Aims of this project 4
Methodology 4
Results 5
  Weather 5
  Summary Results 5
  Notable Finds 6
    New Irish Records 6
    Other Notable Records 8
  Notable Absentees 12
  10km square and Site Rankings 12
  Species Rankings 15
  Comparisons to other areas 17
    Species 17
    Sites 17
  Conclusions 17
  Images 17
  Acknowledgements 18
Bibliography 18
Appendix 1 - 10km and Site Reports 19
Appendix 2 – Species Distribution Maps 55
  Grassland Target Species 55
  Non-Grassland Target Species 74

Background

Waxcaps have been described as the orchids of the world of fungi. They are often startling in colour from reds, oranges and yellows to whites and browns. They can smell of honey or cedar wood or, less pleasantly, oily or nitrous. They are usually found in grasslands although they can also be found in woods. They are one of the groups of grassland fungi that are now recognised as excellent indicators of ancient unfertilised grassland. Other grassland types are the Entolomas (pink spored gill fungi), the Clavarioids (fairy clubs) and *Geoglossaceae* or earth tongues. They can all be found in a range of grassland types from dunes to uplands, from lowlands to gardens. Indeed some of the best species like *Hygrocybe calyptriformis* (see photo below) are more often found in gardens than other grassland types. *Hygrocybe calyptriformis* was on the list of fungal species proposed for inclusion onto the Berne Convention.

Hygrocybe calyptriformis

These species are sensitive to the application of artificial fertilisers, especially those containing phosphorus. It may take a considerable time for fertilised sites to be rehabilitated even if managed positively for nature conservation arguably making grassland fungi better indicators of ancient unfertilised grasslands than higher plants.

The great unknown however is just what these species are actually doing in the soil. A recent paper ((Griffith 2002)) points to some possible answers based on stable isotope analysis. Stable isotopes of Carbon (13C) and Nitrogen (13C) occur naturally and work looking at the patterns of 13C and 13C enrichment in ectomycorrhizal and saprophytic fungi have shown quite different enrichment patterns. Waxcaps, however, appear different to normal saprophytic fungi as they are more depleted in 13C and more enriched in 13N. Clavarioids and Geoglossaceae are even more different, but Entolomas are more typical of saprophytic fungi. This could mean that Hygrocybe spp., Clavarioids and Geoglossaceae could be deep humic decayers rather than normal surface litter decayers. The fact that Entolomas are more typical saprophytes supports the idea that sites good for Waxcaps are not necessarily good for Entolomas.

Assessing site quality from fungal data

The first recognition of grassland fungi in Ireland was a paper in 1992 (Feehan 1992)on the Curragh and since then, interest has been growing as it has been recognised that this unique community is seriously threatened across Europe.

Various systems have been proposed to rank sites for grassland sites for their fungal conservation value. Rald in Denmark (Rald 1985) proposed a system based on the number of species of *Hygrocybe* and Rotheroe proposed a system that included a weighted score for

rarer species that are restricted to species rich sites (Rotheroe 1999). This was further developed by myself and others (McHugh 2001) when we proposed a weighted scoring system for Ireland. In this paper we presented a list of the best sites for grassland fungi in Ireland, but no sites in County Clare were included as they had not been surveyed. A three year survey of grassland sites was concluded in Northern Ireland in which every 10km square in Northern Ireland was surveyed (see www.nifg.org.uk/waxcaps.htm). This is still being written up, but this new data will lead to a further refinement of the weighted scoring system.

Aims of this project

The main aim of this survey was to provide a baseline of information on this potentially mycologically rich county. This would be done by covering at least 12 sites in at least 10 different 10km squares over a two week period between 22/10/06 and 04/11/06. From experience, this is usually the best period for fruiting for grassland fungi in Ireland as this group always fruits later than woodland fungi. The target group of species were the Waxcaps (genus *Hygrocybe*), the non-woodland Fairy Clubs (*Clavariaceae*), the Pink gills (*Entolomaceae*), the earth tongues (*Geoglossaceae*) and the genera *Camaraphyllopsis, Dermoloma* and *Porpoloma.* These species would be thoroughly searched for.

The data collected was to be compared with the Northern Ireland data, a recent Welsh survey in which I was also involved to provide a British Isles context for the County Clare sites. This data and interpretation would also feed into the County Clare Biodiversity Strategy and is being provided to the Clare Biological Records Centre and their associated website. Images collected during this survey and presented in this report have also been provided for unlimited used on this website (www.clarebiodiversity.ie).

An additional aim was to provide more data from the Republic of Ireland to refine the Irish scoring system which is based heavily on data from Northern Ireland.

Methodology

Local mycologists (Tom Harrington, University College Limerick, Sharon Parr of the Burren LIFE project, Stephen Ward, Howard Fox of the National Botanic Gardens, Roland McHugh of the Dublin Institute of Technology and Hubert Fuller of UCD) and Clare County Council staff (Elaine Keegan and John Murray) were contacted before or during the survey for information on known sites. The sites suggested were invaluable as it saved time searching.

The 1:50,000 maps were studied and target squares and possible sites within each identified. The sites were chosen due to information provided by those above, personal knowledge of the sites, likelihood of site quality and ease of access. In many squares, there were no obvious sites as the squares were dominated by agricultural grassland, but in such squares, churchyards are well known as refugia for grassland fungi as there is often no requirement (or funding) to fertilise the lawns. In addition, *Hygrocybe calyptriformis* had not been recorded before in County Clare and as this species in particular is well known to fruit in churchyards, a special effort made to visit a wide range of churchyards to search for this species.

Each site was visited for as long as was necessary. Whilst the target groups were searched for as priority, all species of fungi encountered were recorded. However many of these latter records were of a casual nature and many of the species maps produced for these species are very unrepresentative as they were only recorded if seen and were often not searched for.

When notable species were found, specimens were taken for microscopical examination. Herbarium specimens were dried on a continental fruit drier and are being passed to the National Botanic Gardens in Glasnevin as well as the Royal Botanic Gardens in Kew. The target species are listed in the Species Reports.

The literature used to identify the grassland target groups were as follows:

- Boertmann, D. (1995).*The Genus Hygrocybe* (Fungi of Northern Europe – I). Danish Mycological Society.
- Henrici, A. (1997) *Keys to British Clavariaceae*. Privately circulated.
- Noordeloos, M.E. (1992) *Entoloma, s.l.* (Fungi Europaea 5 and 5a). Saronno: Libreria editrice Giovanna Biella.
- Silverside, A.J. (1997) *Keys to the British Geoglossaceae (draft).* Privately circulated.
- Spooner, B. (1998).) *Keys to the British Geoglossaceae (draft).* Privately circulated
- Watling, R. & Turnbull, E. (1998) 8. *Cantharellaceae, Gomphaceae and Amyloid and Xeruloid members of the Tricholomataceae: British Fungus Flora Vol.8.* Royal Botanic Gardens, Edinburgh

Results

Weather

The fruiting of fungi is particularly affected by weather. Fruiting requires moisture but too much rain can hinder fruiting. Although some species of waxcaps can fruit in July (even June), the main flush is usually in October and November. In coastal areas in Ireland, the fruiting period can continue through December even into January due to the infrequency of frosts. Entolomas are known to generally fruit earlier than waxcaps (Newton 2002) and earth tongues are probably the latest of all, often not appearing at all until November on some sites.

2006 was a warm summer and it was followed by a wet autumn. The two week survey period was marked by generally mild but often very wet weather in the first week followed by a fine settled period in the second week which featured the first frosts at the end of the week.

Summary Results

The original plan was to visit at least 12 10km squares and it was estimated that the mileage during the two weeks would be 400 miles. In the end, 35 10km squares were visited and 835 miles were covered. Whilst the sites visited in a number of the squares were small churchyards, this was done either because these were the only likely sites in that square and/or a particular (but unsuccessful) effort was made to find the first record of *Hygrocybe calyptriformis* for Clare.

Overall, whilst 155 species of fungi were recorded, with 23 of the 40 Irish species of *Hygrocybe* found in a two week period, the overall feeling was that of slight disappointment. The best site found was Black Head on the Burren with 16 species of *Hygrocybe* which is good and better than any site found in the Northern Ireland survey, but this was more of the exception and finding good sites was difficult.

This could be because there are either few good sites or this was not the best fruiting time. Fungi are a difficult group to survey as for most of the year, they are virtually invisible living under the soil. They are only obvious when they fruit and the conditions for this vary from year to year. In Wales, this two week period was the main fruiting season in 2006 but September had been fairly dry in southern Wales unlike western Ireland. Hence it is possible

that the main fruiting period was missed, but two sites were visited twice during the two week period and both were better on the second visit. Hence, it is possible that the main fruiting period was still to come. Some fungi seem to need a cold period or a drop below a particular temperature to trigger fruiting and the mild autumn could have meant a delay in fruiting.

For sites outside the Burren, much of the land is intensive agriculture and is generally not suitable for waxcaps which depend on old unfertilised grassland. Even the coastal areas often have intensive agriculture right up to the cliff edge leaving the fungal interest restricted to a small strip along the cliff edge. Upland acidic grassland is often an excellent habitat for waxcaps, but the potential areas visited (Slievecallan, Ballycroum) had coniferous plantations or improved fields adjacent to bog with no transitional acidic grassland which are so good in Northern Ireland and Wales. Slieve Bearnagh might offer more possibilities but lack of time prevented this area from being visited.

It was surprising that the best churchyard only yielded 4 species of *Hygrocybe* despite the habitat appearing good. This would suggest that this was not the main fruiting period.

However, despite this overall feeling, this survey did find 6 new Irish records as reported below and has created a solid baseline from which to make repeat visits to sites with good potential. An additional aim was awareness raising and with radio coverage on Clare FM, this report and all records and images going to the Clare Records Centre website, this hopefully will have achieved this aim.

Notable Finds

New Irish Records

There are no published records, notes as occurring in Ireland in the Checklist of the British & Irish Basidiomycota (Legon, N. & Henrici, A., 2005) or records in the Fungus Records Database for the British Isles (FRDBI) hosted by the British Mycological Society for the following species:

Camarophyllopsis micacea (Berk. & Broome) Arnolds. This was found in three sites; Mullagh churchyard (27/10/06 - R046730), Milton Malbay churchyard (2/11/06 - R057796) and Cross churchyard(31/10/06 - Q799511). This is uniformly brown species with distant decurrent chocolate brown gills and a cellular cap structure.

Entoloma ochromicaceum **Noordel. & Liiv.** An ochreous brown Entoloma in the Leptonia group. Marked by a jagged serrulatum like gill edge. Found on Cliffs of Moher (23/10/06 - R03029079)

***Entoloma rhombisporum var. floccipes* Noordel.** A small species with distinctive rhomboid spores and a floccose stipe. Fund on Rine Point (28/10/06 - M210101).

***Cortinarius nanceiencis* Maire** Found on Turlough Hill (29/10/06 - M29830643) associated with *Dryas octopetala.* A yellow slimy capped species marked by a violet reaction on the flesh with KOH.

***Cortinarius urbicus* (Fr.) Fr.** Found in coniferous plantation with Salix on a forest road edge at Ballycroum (27/10/06 - R52768842)

***Hebeloma fragilipes* Romagn.** A small delicate species found in coniferous plantation with Salix on a forest road edge at Ballycroum (27/10/06 - R52988856)

Other Notable Records

Chamaemyces fracidus (Fr.) Donk
Found on Mullagh More, this species is rarely recorded in Ireland. It is distinguished by dark spots on the stipe.

Clavulinopsis umbrinella (Sacc.) Corner
A grey brown densely branched Fairy Club that is one of the rarer species in this group. Found in the churchyard at Inagh.

Hygrocybe aurantiosplendens R. Haller Aar.
A rarer species of waxcap that is often over-recorded. It was illustrated in David Boertmann's book with a white pruinous apex to the stipe but the common *H.chlorophana* also shares this character but it has very different gill trama. Found on a number of Burren sites and it was this frequency of records that was most notable.

Hygrocybe calciphila Arnolds
This species is usually restricted to sand dune sites and there are only a handful of Irish sites for this species. Noted by its dry scaly cap and spore size.

Hypocreopsis lichenoides (Tode) Seaver
A very distinctive species known as Hazel Gloves. A UK BAP species, it is usually restricted to undisturbed coastal hazel woods but on the Burren found in inland sites on colonising hazel as well as older hazel woodlands. Sharon Parr (Burren LIFE project) has found this on 17 sites making it one of the best areas in the British Isles for this species.


Photo: Ray Woods

Lactarius lacunarum Romagn. ex Hora
Not an unusual species of milkcap as such, it is usually found in wet woodland. However, here it was found at Ballard Bay and Loop Head associated with *Salix repens* in coastal heath.

Lepista irina (Fr.) H.E. Bigelow
This is a large white *Lepista* that could be confused for a large *Clitocybe* except that it has pink spiny spores. Rarely recorded in Ireland and found here high on Black Head on the limestone pavement.

***Lepista panaeolus (Fr.) P. Karst*.**
A large *Lepista* found in a number of sites near the coast. A fairly non-descript grey-brown colour, it can have rings of watery spots near the cap margin. Rarely recorded in Ireland.

Leucoagaricus leucothites (Vittad.) M.M. Moser ex Bon
Rarely recorded in Ireland, this is more commonly found in the south of GB. A large white spored fungus with free gills and a prominent ring. Found on the dune edge at Liscannor beach.

Pluteus plautus (Weinm.) Gillet
Rarely recorded in Ireland, this large white to grey *Pluteus* was found on buried wood (probably *Ulex europeus)* near the summit of Rehy Hill.

Schizophyllum commune (L.) Fr.
Not mentioned here because it is rare, but because if its potential commercial damage. Found bursting out of silage bales on 6 locations without any systematic looking. These observations were made purely when driving past hence this species will be very common on silage bales, curiously much more so in Clare than observed in Wales. This species can make the silage unpalatable to cattle (Brady 2005).

Tulostoma brumale Pers.
The Winter Stalk Puffball. Rarely recorded in Ireland with, for example, only one record from Northern Ireland. This is its first record for Clare and was found on Rine Point.

The Fungi associated with Mountain Avens, *Dryas octopetala* and *Carex* spp on the Burren

Ectomycorrhizal fungi are normally found associated with trees. These species form a sheath around the root tips and form a symbiotic relationship with the tree providing nutrients and protection against soil pathogens in return for carbon produced by photosynthesis. Occasionally, ectomycorrhizal fungi form partnerships with non tree species like Rock rose*, Helianthemum* spp or Mountain Avens, *Dryas octopetala.* Tom Harrington from University College Limerick has researched the fungi associated with *Dryas* on the Burren for some years (Harrington 2003) and has shown that this is a very distinctive community. Many of the species are normally associated with coniferous species and when Scots Pine disappeared from the Burren, it is possible these species switched host to *Dryas octopetala*. It is always fun to see the fungal part of this relationship towering over its vascular plant partner. Species forming ectomycorrhizal relationships with *Dryas octopetala* on this survey were *Cantharellus lutescens, Cortinarius brunneus, Cortinarius calochrous, Cortinarius cinnamomeus, Cortinarius infractus, Cortinarius nanceiensis, Cortinarius odorifer, Cortinarius venetus, Hebeloma sinapizans, Hebeloma velutipes* and *Tricholoma scalpturatum.*

Cortinarius odorifer

Further work by Tom Harrington and Derek Mitchell of UCD (Harrington 2002), (Harrington 2002) has shown that some of the species of Cortinarius (here *C. cinnamomeus*) can also form mycorrhizal like associations with species of *Carex* on the Burren. One further species of *Cortinarius* that is often found in grasslands where there is no obvious mycorrhizal partner is *C.croceus*. This species is very similar to *C.cinnamoneus* but it has more yellow gills and longer paracystidia. *C.croceus* was found on three sites in this survey – Loop Head, Doomore and Carrickmacnaghten.

Cortinarius croceus

Notable Absentees

The most obvious notable absentees in terms of the target grassland fungi were *Hygrocybe calyptriformis* and *Hygrocybe irrigata.* Extensive efforts were made to find *Hygrocybe calyptriformis* with over 30 churchyards visited without success. It is very possible it is present and it could be a good species to involve the public in looking for as it is so distinctive. Quite why *Hygrocybe irrigata* was not found is a mystery as it is not an unusual fungus in Northern Ireland or Great Britain. It is a grey brown species that is very viscid.

Hygrocybe irrigate

The most notable non-waxcap absentee was the brown earth tongue, *Microglossum olivaceum*. A Biodiversity Action Plan species in the UK, this is noted by its colour (although variable from brown to blue-green), it is not black like most earth tongues and is very different under the microscope.

10km square and Site Rankings

Both the total 10km squares and individual sites were ranked according to numbers of species of *Hygrocybe* and the individual sites were also ranked according to their Irish Score. Map 1 shows the distribution of the 10km squares surveyed and the number of species of *Hygrocybe* found in each square. Appendix 1 gives full 10km and site species

lists. The map shows the importance of the Burren for grassland fungi with the other important area being the coastal grasslands to the south of the Burren.

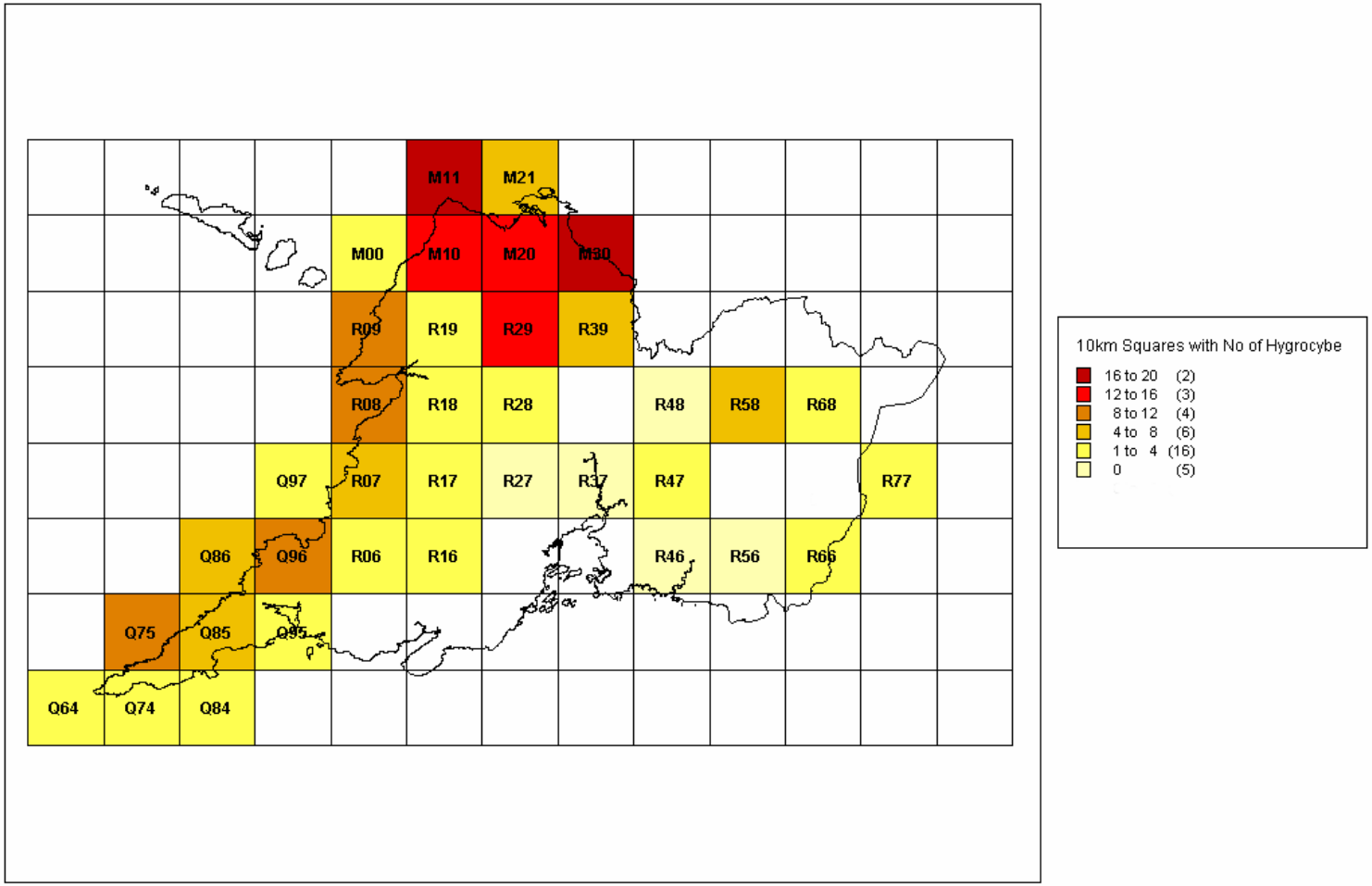
It must be noted that varieties are not counted separately so while in the species lists, there may be more than one variety of say *Hygrocybe virginea* is listed, it was only counted once in the list.

10km Squares Ranked by Number of species of Hygrocybe

Ranking	10km Square	Type	No. Hygrocybe
1	M11	Burren	16
1	M30	Burren	16
3	R29	Burren	14
4	M10	Burren	13
4	M20	Burren	13
6	Q96	Coastal	11
7	R08	Coastal	10
8	R09	Coastal	9
9	Q75	Coastal	6
9	Q86	Coastal	6
11	R39	Burren	5

The other important feature of this table is how quickly the numbers of Hygrocybe tail off. Anything below 10 is really quite average.

County Clare - 10km squares visited with number of species of Hygrocybe



Sites Ranked by Number of species of Hygrocybe

Ranking	Site	10k	Hygrocybe	IrishScore
1	Black Head	M11	16	30
2	Turlough Hill	M20	13	23
3	Doomore	M30	12	20
4	Tullycomman, Carran	R29	11	19
4	Cliffs of Moher	R09	11	16
6	Ballard Bay	Q96	10	15
6	Carrickmacnaghten	M10	10	15
8	Fahee North	M30	9	11
9	Rehy Hill	Q74	6	5
9	Caher Valley	M10	6	15
9	Bridge of Ross	Q75	6	10
12	Mullagh More	R39	5	7
12	George's Head	Q86	5	8
12	Fanore dunes	M10	5	8

It is again noticeable that the number of good sites found was disappointing. Rald estimates that any site with more than 11 species of Hygrocybe in one visit is of national importance and while this is probably on the low side for the British Isles, this would mean only 5 sites are potentially of high value for grassland fungi. The value of the Irish scoring system which includes a species quality score is that in Ireland, where there are few mycologists, it highlights sites that may have been visited outside the optimum period but which contain better indicator species. These sites in particular need to be visited again and the Caher Valley and Bridge of Ross jump out in this list. No churchyards made the top 12 sites.

Species Rankings

The grassland target species were ranked according to the number of 10km squares at which they were found and compared to their rank in Northern Ireland. The species in the Irish scoring system are ranked in three categories with 4 points given to the category A species (the best indicators), 2 points to the B species and 1 point to the C species. If a species has no score, it is not included in the present scoring.

Rank	Species	10km	Type	Irish Score	NI Rank
1	Hygrocybe conica	25	H	1	3
2	Hygrocybe virginea	20	H	1	1
3	Hygrocybe chlorophana	18	H	1	6
4	Hygrocybe quieta	13	H	2	10
5	Hygrocybe russocoriacea	12	H	1	10
6	Hygrocybe insipida	11	H	1	7
7	Hygrocybe coccinea	10	H	1	5
7	Hygrocybe psittacina	10	H	1	2
9	Hygrocybe pratensis	9	H	1	4
9	Hygrocybe punicea	9	H	4	8
11	Clavulinopsis helvola	8	C	0	13
12	Geoglossum cookeanum	6	G	2	28

Rank	Species	10km	Type	Irish Score	NI Rank
12	Hygrocybe reidii	6	H	1	9
12	Trichoglossum hirsutum	6	G	2	24
15	Dermoloma cuneifolium	5	O	2	30
15	Geoglossum fallax	5	G	1	17
15	Hygrocybe persistens	5	H	1	52
18	Entoloma poliopus	4	E	0	108
18	Hygrocybe aurantiosplendens	4	H	2	35
18	Hygrocybe colemanniana	4	H	2	44
18	Hygrocybe fornicata	4	H	2	19
18	Hygrocybe mucronella	4	H	1	32
23	Clavaria acuta	3	C	0	30
23	Clavulinopsis corniculata	3	C	0	15
23	Clavulinopsis fusiformis	3	C	1	22
23	Geoglossum umbratile	3	G	2	43
27	Camarophyllopsis micacea	2	O	0	-
27	Clavaria fragilis	2	C	0	34
27	Clavaria fumosa	2	C	2	25
27	Clavulinopsis luteoalba	2	C	0	23
27	Entoloma corvinum	2	E	0	85
27	Entoloma incanum	2	E	0	65
27	Hygrocybe cantharellus	2	H	1	25
27	Hygrocybe nitrata	2	H	4	36
35	Clavaria argillacea	1	C	0	42
35	Clavulinopsis laeticolor	1	C	0	29
35	Clavulinopsis umbrinella	1	C	2	55
35	Entoloma anatinum	1	E	0	108
35	Entoloma bloxamii	1	E	4	60
35	Entoloma conferendum	1	E	0	20
35	Entoloma ochromicaceum	1	E	0	-
35	Entoloma rhombisporum	1	E	0	-
35	Entoloma sericellum	1	E	0	36
35	Entoloma sericeum	1	E	0	44
35	Entoloma tenellum	1	E	0	65
35	Entoloma turci	1	E	0	108
35	Geoglossum glutinosum	1	G	2	33
35	Hygrocybe calciphila	1	H	2	60
35	Hygrocybe ceracea	1	H	1	14
35	Hygrocybe flavipes	1	H	2	39
35	Hygrocybe glutinipes	1	H	2	33
35	Hygrocybe laeta	1	H	1	12

These results will be fed into the ongoing revision of the Irish scoring system. These results would question if *H.quieta* should be a category B species and if *H.punicea* should be a category A species.

Comparisons to other areas

Species

If the above table is studied looking at the comparative rankings between Northern Ireland and Clare, it is interesting to note that *H.psittacina, H.laeta* and *H.pratensis* are not as abundant in Clare compared to Northern Ireland and that *H.quieta* is more abundant. These observations are however very tentative due to the small amount of data from Clare.

Sites

The best site found in this survey, Black Head had 16 species of *Hygrocybe* which is better than any site found in the three year survey in Northern Ireland. The best site found in that survey was 15. In terms of other sites in the Republic of Ireland, Black Head would rank 6th according to the Irish scoring system. The Curragh (Kildare) is the top site followed by Ballyprior (Laois), Aghadachor (West Donegal), Clonmantagh Hill (Kilkenny) and Keem Machair (Mayo) (McHugh 2001). There are 13 sites in Northern Ireland that are better.

From the author's experience, Irish sites are not as good as Welsh sites at which 20+ species of *Hygrocybe* are not uncommon (Griffith 2006). Vesterholt et al (Vesterholt 1999) however advise that sites with 22 or more species of *Hygrocybe* indicate that the site is of international importance and it is possible with further investigation that Black Head could reach this number.

Conclusions

The overall feeling after the survey was that of disappointment in that only Black Head was a really good waxcap site. The county is dominated by intensive agriculture where there are few places where these special grassland fungi can exist and the best sites may be estate house lawns which were not visited in this survey due to difficulties in arranging access. The Burren and the coastal grasslands will always be the best areas but even then the coastal grasslands are squeezed between the cliffs grasslands that are too soaked by salt spray and the intensively managed fields.

It was not easy finding good sites on the Burren either. Many of the sites are becoming a little rank due to undergrazing and the encroachment of hazel scrub is an additional threat to these grassland sites. Waxcaps and their allies do not seem to occur at higher altitudes on the Burren where *Dryas octopetala* dominates even though they are commonly found at these altitudes elsewhere in the UK. It is also noticeable that the best sites are found where there was summer grazing as well as winter grazing hence the sward height was significantly shorter. Thanks must go to Sharon Parr of the Burren LIFE project for pointing out where some of these sites were. Further changes in grazing patterns leading to more undergrazing would be worrying.

As waxcaps are so bright and colourful, they are eye catching species. Being indicators of old unfertilised grassland, they can be a very useful group to involve the public and other non-mycologists with. Plantlife organised a survey of *Hygrocybe calyptriformis* in the UK which was very successful and a similar project could be done in Clare.

Images

All images of species that were taken have been passed to Clare County Council for use on their website and images of all the species named in this report with some few exceptions are available at www.nifg.org.uk/photos.asp.

Acknowledgements

Thanks must go to Tom Harrington, University College Limerick, Sharon Parr of the Burren LIFE project, Howard Fox of the National Botanic Gardens, Roland McHugh of the Dublin Institute of Technology and Hubert Fuller of UCD and Clare County Council staff (Elaine Keegan and John Murray) all for giving local advice on sites and access.

The financial support of the Heritage Council is also gratefully acknowledged as without this, this survey would not have been possible and I can only hope that it helps to raise awareness of this wonderful group of fungi and this beautiful county.

Bibliography

Brady, K. C., O'Kiely, P., Forristal, P.D. & Fuller, H. (2005). "Schizophyllum commune on big-bale grass silage in Ireland." Mycological Research **19**(1): 30-35.

Feehan, J. M., R. (1992). "The Curragh of Kildare as a Hygrocybe grassland." Ir.Nat.J. **24**(1): 13-17.

Griffith, G., Holden, L., Mitchel, D., Evans, D.E., Aron, C., Evans, S. & Graham, A. (2006). Mycological Survey of selected semi-natural grasslands in Wales, Countryside Council for Wales.

Griffith, G. W., Easton, G.L. & Jones, A.W. (2002). "Ecology and Diversity of Waxcap (Hygrocybe spp.) Fungi." Bot.J.Scotl. **54**(1): 7-22.

Harrington, T. (2003). "Relationships Between Macrofungi and Vegetation in the Burren." Biology and Environment: Proceedings of the Royal Irish Academy **103B**(3): 147-159.

Harrington, T. M., D.T. (2002). "Characterization of *Dryas octopetala* ectomycorrhizas from limestone karst vegetation, western Ireland." Canadian Journal of Botany **80**: 970-982.

Harrington, T. M., D.T. (2002). "Colonization of root systems of *Carex flacca* and *C.pilulifera* by *Cortinarius* (*Dermocybe*) *cinnamomeus*." Mycological Research **106**: 452-9.

McHugh, R., Mitchel, D., Wright, M. & Anderson, R. (2001). "The fungi of Irish Grasslands and their value for nature conservation." Biology & Environment **101B**(3): 225-242.

Newton, A. C., Davy, L.M., Holden, E., Silverside, A., Watling, R. & Ward, S.D. (2002). "Status, distribution and definition of mycologically important grasslands in Scotland." Biological Conservation **111**(11-23).

Rald, E. (1985). "Vokshatte som indikatorarter for mykologisk vaerdifulde overdrevslokaliteter." Svampe(11): 1-9.

Rotheroe, M. (1999). Mycological survey of selected semi-natural grasslands in Carmarthenshire, Countryside Council for Wales.

Vesterholt, J., Boertmann, D. & Tranberg, H. (1999). "1998 - et usaedvanlig godt ar for overdrevssvampe." Svampe(40): 36-44.

Appendix 1 - 10km and Site Reports

M00

Sites Searched: Poulsallagh

Hygrocybe: 2 ***Clavariaceae*** 0 ***Entolomaceae:*** 0 ***Geoglossaceae:*** 0 ***Others:*** 0

A Burren square. Although there is not much land in this square, much of it is limestone pavement and it should be more productive but it will be dependant on sufficient grazing keeping the thatch down.

Grassland Target Species Recorded

Hygrocybe conica var. conica
Hygrocybe virginea var. virginea

Site Details:

Site: *Poulsallagh*

Date 24/10/2006 **GridRef:** M08800195
H: 2 **C:** 0 **E:** 0 **G** 0 **O:** 0 **IrishScore:** 2

This area of lowland limestone pavement was disappointing for waxcaps or indeed any fungi. The vegetation was a little rank in places although there was good tight coastal turf near the sea where the only waxcaps were found. Probably no summer grazing.

Hygrocybe conica var. conica
Hygrocybe virginea var. virginea
Panaeolus papilionaceus var. papilionaceus

M10

Sites Searched: Fanore dunes, Cahar Valley, Cahermacnaghten

Hygrocybe: 14 ***Clavariaceae*** 2 ***Entolomaceae:*** 3 ***Geoglossaceae:*** 2 ***Others:*** 1

A Burren square. This will be a much better square with many potential sites. Other areas to aim for are more in the Caher Valley where the drift is thick especially the steep river sites near Fanore itself or other areas of limestone pavement where sufficient grazing has kept the vegetation short.

Grassland Target Species Recorded

Clavaria acuta
Clavulinopsis laeticolor
Dermoloma cuneifolium
Entoloma incanum
Entoloma poliopus
Geoglossum cookeanum
Hygrocybe aurantiosplendens
Hygrocybe calciphila
Hygrocybe chlorophana
Hygrocybe coccinea
Hygrocybe conica var. conica
Hygrocybe insipida
Hygrocybe mucronella
Hygrocybe nitrata

Hygrocybe persistens
Hygrocybe pratensis
Hygrocybe punicea
Hygrocybe quieta
Hygrocybe russocoriacea
Hygrocybe virginea var. fuscescens
Hygrocybe virginea var. ochraceopallida
Hygrocybe virginea var. virginea
Trichoglossum hirsutum

Site Details:

Site: *Caher Valley*

Date 28/10/2006 **GridRef:** M1609

H: 6 **C:** 0 **E:** 1 **G** 2 **O:** 1 **IrishScore:** 15

Enclosed fields in the Caher Valley on glacial drift below the open pavement. These fields are cattle grazed.

Cantharellus lutescens
Geoglossum cookeanum
Trichoglossum hirsutum
Cortinarius brunneus
Cortinarius calochrous
Cortinarius infractus
Cortinarius venetus
Dermoloma cuneifolium
Entoloma poliopus
Hebeloma sinapizans
Hygrocybe conica var. conica
Hygrocybe mucronella
Hygrocybe nitrata
Hygrocybe persistens
Hygrocybe russocoriacea
Hygrocybe virginea var. virginea
Mycena alcalina
Mycena pura
Phragmidium violaceum

Site: *Carrickmacnaghten*

Date 02/11/2006 **GridRef:** M197001

H: 10 **C:** 1 **E:** 2 **G** 0 **O:** 0 **IrishScore:** 15

Fields to the east of the cashel along the new green road. These have been grazed in summer and are limestone pavement with short mossy turf. 10 species found with some common ones like psittacina missing so it should be checked again.

Note this site covers two 10km squares. Species marked [1] were recorded in M10 and those marked [2] were recorded in R09

Clavaria acuta[1]
Rhytisma acerinum[1]
Cortinarius croceus[1]
Hygrocybe aurantiosplendens[1]
Hygrocybe chlorophana[1 2]
Hygrocybe coccinea[1]
Hygrocybe conica var. conica[1]
Hygrocybe insipida[1 2]
Hygrocybe pratensis[1 2]
Hygrocybe punicea[1 2]
Hygrocybe quieta[1]
Hygrocybe russocoriacea[1 2]
Hygrocybe virginea var. virginea[1]
Lepista nuda[1 2]
Lepista panaeolus
Mycena pura[1]
Panaeolus papilionaceus var. parvisporus[1]
Psilocybe semilanceata[1]
Phragmidium violaceum[1]

Site: *Fanore dunes*

Date 24/10/2006 **GridRef:** M1308

H: 5 **C:** 1 **E:** 1 **G** 1 **O:** 0 **IrishScore:** 8

The dunes were dominated by fruiting of H.conica (as is often typical in dune grassland) and the earth tongue, Geoglossum cookeanum. Both were abundant. Hygrocybe calciphila was also recorded which is a rare species with only very scattered records in Ireland and the UK.

Clavulinopsis laeticolor
Geoglossum cookeanum
Entoloma incanum
Hygrocybe calciphila
Hygrocybe coccinea
Hygrocybe conica var. conica
Hygrocybe persistens
Hygrocybe virginea var. fuscescens
Hygrocybe virginea var. ochraceopallida
Hygrocybe virginea var. virginea
Panaeolus acuminatus

M11

Sites Searched: Black Head

Hygrocybe: 16 ***Clavariaceae*** 1 ***Entolomaceae:*** 3 ***Geoglossaceae:*** 3 ***Others:*** 0

A Burren square. The best grasslands are likely to continue along the base of Black Head between the coast and the green road.

Grassland Target Species Recorded

Clavulinopsis fusiformis
Entoloma poliopus
Entoloma turci
Geoglossum cookeanum
Geoglossum glutinosum
Hygrocybe aurantiosplendens
Hygrocybe cantharellus
Hygrocybe ceracea
Hygrocybe chlorophana
Hygrocybe coccinea
Hygrocybe colemanniana
Hygrocybe conica var. conica
Hygrocybe fornicata
Hygrocybe insipida
Hygrocybe mucronella
Hygrocybe psittacina var. psittacina
Hygrocybe punicea
Hygrocybe quieta
Hygrocybe reidii
Hygrocybe russocoriacea
Hygrocybe virginea var. fuscescens
Hygrocybe virginea var. virginea
Trichoglossum hirsutum

Site Details:

Site: *Black Head*

Date 24/10/2006 **GridRef:** M1450, M1510

H: 16 **C:** 1 **E:** 3 **G** 3 **O:** 0 **IrishScore:** 30

The western slopes of Black Head were searched. The waxcap interest was confined to the lower slopes between the road and the green road. Above this, the Dryas community dominated and there were no waxcaps found. The vegetation was also thicker here and there was little short turf favoured by waxcaps. The steep grassy slopes right under the summit of Dobhach Bhrainin were also searched but the vegetation was deep here and not favourable for waxcaps.

However, the lower slopes were good with a good range of waxcaps. Some of the common species like H.pratensis were missing so this square is likely to contain many more species if more visits are made. Notable finds were H.colemanniana, H.fornicata, H.mucronella and H.aurantiosplendens.

Some ectomycorrhizal species were also found associated with Dryas octopetala, namely Cortinarius odifera, Cortinarius calochrous var. coniferarum and an unidentified Cortinarius of the Dermocybe group.

Clavulinopsis fusiformis
Geoglossum cookeanum
Geoglossum glutinosum
Trichoglossum hirsutum
Collybia dryophila
Cortinarius calochrous
Cortinarius odorifer
Entoloma poliopus
Entoloma turci
Hygrocybe aurantiosplendens
Hygrocybe cantharellus
Hygrocybe ceracea
Hygrocybe chlorophana
Hygrocybe coccinea
Hygrocybe colemanniana
Hygrocybe conica var. conica
Hygrocybe fornicata
Hygrocybe insipida
Hygrocybe mucronella
Hygrocybe psittacina var. psittacina
Hygrocybe punicea
Hygrocybe quieta
Hygrocybe reidii
Hygrocybe russocoriacea
Hygrocybe virginea var. fuscescens
Hygrocybe virginea var. virginea
Lepiota cristata
Lepista irina
Lepista nuda
Lepista panaeolus
Leucopaxillus giganteus
Marasmius oreades
Melanoleuca polioleuca
Mycena pura
Panaeolus papilionaceus var. papilionaceus
Phragmidium violaceum

M20

Sites Searched: Turlough Hill

Hygrocybe: 13 ***Clavariaceae*** 3 ***Entolomaceae:*** 4 ***Geoglossaceae:*** 2 ***Others:*** 0

A Burren square. Fields with summer grazing that means a tighter sward are the areas that should be searched in this square.

Grassland Target Species Recorded

Clavaria fragilis
Clavulinopsis corniculata

Clavulinopsis helvola
Entoloma bloxamii
Entoloma corvinum
Geoglossum cookeanum
Geoglossum umbratile
Hygrocybe chlorophana
Hygrocybe coccinea
Hygrocybe conica var. conica
Hygrocybe fornicata
Hygrocybe insipida
Hygrocybe mucronella
Hygrocybe persistens
Hygrocybe pratensis
Hygrocybe psittacina var. psittacina
Hygrocybe quieta
Hygrocybe reidii
Hygrocybe russocoriacea
Hygrocybe virginea var. ochraceopallida

Site Details:

Site: *Turlough Hill*

Date 29/10/2006 **GridRef:** M2905
H: 13 **C:** 2 **E:** 3 **G** 1 **O:** 0 **IrishScore:** 23

The fields between the Burren Outdoor Pursuits Centre and Turlough Hill were searched. The fields in the valley before the slopes were good as was the higher enclosed fields to the right of the centre on the slopes of Turlough Hill itself. The less "green" grassland above this on the spur was deeper clay and while Entoloma bloxamii and E.corvinum occurred here, there were few waxcaps.

Cantharellus lutescens
Clavaria fragilis
Clavulinopsis corniculata
Clavulinopsis helvola
Geoglossum cookeanum
Geoglossum umbratile
Trochila ilicina
Bolbitius vitellinus

Coprinus niveus
Cortinarius brunneus
Cortinarius calochrous
Cortinarius cinnamomeus
Cortinarius infractus
Entoloma bloxamii
Entoloma corvinum
Hebeloma velutipes
Hygrocybe chlorophana
Hygrocybe coccinea
Hygrocybe conica var. conica
Hygrocybe fornicata
Hygrocybe insipida
Hygrocybe mucronella
Hygrocybe persistens
Hygrocybe pratensis
Hygrocybe psittacina var. psittacina
Hygrocybe quieta
Hygrocybe reidii
Hygrocybe russocoriacea
Hygrocybe virginea var. ochraceopallida
Leucopaxillus giganteus
Mycena pura
Panaeolus papilionaceus var. papilionaceus
Stropharia semiglobata
Tricholoma scalpturatum
Mucilago crustacea
Phragmidium violaceum

M21

Sites Searched: Rine Point

Hygrocybe: 4 ***Clavariaceae*** 0 ***Entolomaceae:*** 2 ***Geoglossaceae:*** 1 ***Others:*** 0

The short turf of Rine Point offers excellent possibilities for waxcaps and similar areas like Aughinish, Finvarra Point and Scanlans Island all could be good.

Grassland Target Species Recorded

Entoloma incanum
Entoloma rhombisporum var. floccipes
Geoglossum cookeanum
Hygrocybe colemanniana
Hygrocybe conica var. conica
Hygrocybe insipida
Hygrocybe virginea var. ochraceopallida

Site Details:

Site: *Rine Point*

Date 29/10/2006 **GridRef:** M210101

H: 4 **C:** 0 **E:** 2 **G** 1 **O:** 0 **IrishScore:** 7

The low lying closely cropped turf of this shingle spit should be much better. The first Geoglossaceae were fruiting and this is likely to be an excellent spot for this group. Notable finds were Entoloma rhombisporum var. floccipes (only previously recorded in Scotland) and Tulostoma brumale at probably its first site for Clare.

Geoglossum cookeanum
Trochila ilicina
Entoloma incanum
Entoloma rhombisporum var. floccipes
Hygrocybe colemanniana
Hygrocybe conica var. conica
Hygrocybe insipida
Hygrocybe virginea var. ochraceopallida
Lepista nuda
Panaeolina foenisecii
Panaeolus papilionaceus var. papilionaceus
Panaeolus papilionaceus var. parvisporus
Tulostoma brumale

M30

Sites Searched: Fahee North, Doomore

Hygrocybe: 16 ***Clavariaceae*** 0 ***Entolomaceae:*** 2 ***Geoglossaceae:*** 2 ***Others:*** 0

A Burren square. The best areas for waxcap interest will be restricted to well grazed areas of grassland on the limestone pavement. These are likely to be those areas with summer grazing and there appears to be more of these areas in this area than other parts of the Burren.

Grassland Target Species Recorded

Geoglossum fallax
Hygrocybe aurantiosplendens
Hygrocybe chlorophana
Hygrocybe coccinea
Hygrocybe colemanniana
Hygrocybe conica var. conica
Hygrocybe fornicata
Hygrocybe glutinipes var. glutinipes
Hygrocybe insipida
Hygrocybe mucronella
Hygrocybe pratensis
Hygrocybe psittacina var. psittacina
Hygrocybe punicea
Hygrocybe quieta
Hygrocybe reidii
Hygrocybe russocoriacea
Hygrocybe virginea var. fuscescens
Hygrocybe virginea var. ochraceopallida
Hygrocybe virginea var. virginea
Trichoglossum hirsutum

Site Details:

Site: *Doomore*

Date 01/11/2006 **GridRef:** M312027

H: 12 **C:** 0 **E:** 2 **G** 1 **O:** 0 **IrishScore:** 20

Well grazed fields (with summer grazing?) on the limestone pavement around the road in the valley sides to the east of the road on the slopes of Doomore. This site is likely to be better than was found and is worth revisiting.

Hymenochaete corrugata
Geoglossum fallax
Trichoglossum hirsutum
Agaricus arvensis
Cortinarius croceus
Cystoderma amianthinum
Hygrocybe aurantiosplendens
Hygrocybe chlorophana
Hygrocybe coccinea
Hygrocybe colemanniana
Hygrocybe conica var. conica
Hygrocybe insipida
Hygrocybe pratensis
Hygrocybe psittacina var. psittacina
Hygrocybe punicea
Hygrocybe reidii
Hygrocybe russocoriacea
Hygrocybe virginea var. fuscescens
Hygrocybe virginea var. ochraceopallida
Hygrocybe virginea var. virginea
Inocybe geophylla var. lilacina
Leucopaxillus giganteus
Melanoleuca polioleuca
Mycena galericulata
Panaeolus acuminatus

Site: *Fahee North*

Date 01/11/2006 **GridRef:** M304007

H: 9 **C:** 0 **E:** 0 **G** 0 **O:** 0 **IrishScore:** 11

Well grazed fields (with summer grazing?) on the limestone pavement around the road in the valley floor to the west of the hill in Fahee North. This site is likely to be better than was found and is worth revisiting. Notable record of Hygrocybe glutinipes var. glutinipes at its first site in this survey.

Collybia butyracea
Hygrocybe colemanniana
Hygrocybe conica var. conica
Hygrocybe fornicata
Hygrocybe glutinipes var. glutinipes
Hygrocybe insipida
Hygrocybe mucronella
Hygrocybe quieta
Hygrocybe russocoriacea
Hygrocybe virginea var. fuscescens
Hygrocybe virginea var. ochraceopallida
Hygrocybe virginea var. virginea
Leucopaxillus giganteus
Mycena pura
Panaeolus acuminatus
Panaeolus papilionaceus var. papilionaceus
Stropharia semiglobata
Phragmidium violaceum

Q64

Sites Searched: Loop Head

Hygrocybe: 2 ***Clavariaceae*** 0 ***Entolomaceae:*** 1 ***Geoglossaceae:*** 0 ***Others:*** 0

The only land within this square was around Loop Head.

Grassland Target Species Recorded

Entoloma sericeum
Hygrocybe conica var. conica
Hygrocybe russocoriacea

Site Details:

Site: *Loop Head*

Date 31/10/2006 **GridRef:** Q690472

H: 2 **C:** 0 **E:** 1 **G** 0 **O:** 0 **IrishScore:** 2

The grassland and coastal heath around Loop Head was disappointing and is likely to be better than today's results. However, it is often either too rank or soaked by salt spray and dominated by Thrift to be good but still large areas of grassland are potentially good for waxcaps.

Lepus timidus subsp. hibernicus
Agaricus arvensis
Collybia butyracea
Cortinarius croceus
Entoloma sericeum
Hygrocybe conica var. conica

Hygrocybe russocoriacea
Lepista panaeolus
Mycena pura
Mucilago crustacea

Q74

Sites Searched: Kilbaha Bay, Kilbaha Church, Rehy Hill (west)

Hygrocybe: 3 ***Clavariaceae*** 0 ***Entolomaceae:*** 0 ***Geoglossaceae:*** 0 ***Others:*** 1

Much of this square is intensive agriculture and any good areas might be field edges or individual fields that haven't been fertilised and that are well grazed. The west end of Rehy Hill was the best spot but it consisted mainly of agricultural fields or gorse heath with waxcap interest very scattered.

Grassland Target Species Recorded

Dermoloma cuneifolium var. cuneifolium
Hygrocybe insipida
Hygrocybe pratensis
Hygrocybe psittacina var. psittacina

Site Details:

Site: *Kilabaha Church*

Date 31/10/2006 **GridRef:** Q734491

H: 1 **C:** 0 **E:** 0 **G** 0 **O:** 0 **IrishScore:** 1

A small moss rich churchyard with good potential for more waxcaps. The only species found was Dermoloma cuneifolium so this site is likely to yield some waxcaps as well.

Dermoloma cuneifolium var. cuneifolium

Site: *Kilbaha Bay*

Date 31/10/2006 **GridRef:** Q7648

H: 0 **C:** 0 **E:** 0 **G** 0 **O:** 0 **IrishScore:** 0

Very disappointing. The strip between the fields and the coast is largely taken up by the road with the grassland being very disturbed or rank. Nothing found at all bar some rusts on flowers.

Erysiphe sordida
Miyagia pseudosphaeria

Site: *Rehy Hill*

Date 03/11/2006 **GridRef:** Q799484
H: 6 **C:** 0 **E:** 0 **G** 0 **O:** 0 **IrishScore:** 5

One of the only high areas on the peninsula. Much of the hill is intensive agriculture with the seaward site having occasional gorse heath. The waxcap interest was restricted to a few patches amongst the gorse heath especially on rock outcrops and a few field edges.

Note this site covers two 10km squares. Species marked [1] were recorded in Q74 and those marked [2] were recorded in Q84

Xylaria hypoxylon[1]
Agaricus moelleri [2]
Hygrocybe conica var. conica [2]
Hygrocybe insipida[1]
Hygrocybe laeta var. laeta [2]
Hygrocybe pratensis[1] [2]
Hygrocybe psittacina var. psittacina[1]
Lepista flaccida [2]
Lycoperdon nigrescens [2]
Macrolepiota procera [2]
Omphalina ericetorum [2]
Panaeolus acuminatus[1]
Panaeolus semiovatus [2]
Pluteus plautus [2]
Stropharia semiglobata[1] [2]
Phragmidium violaceum[1] [2]

Q75

Sites Searched: Bridge of Ross, Cross Church

Hygrocybe: 8 ***Clavariaceae*** 1 ***Entolomaceae:*** 1 ***Geoglossaceae:*** 0 ***Others:*** 1

The coastal strip between the fields and the cliffs is likely to the best spot for waxcaps in this square. Cross Church was the only church in the square.

Grassland Target Species Recorded

Camarophyllopsis micacea
Clavulinopsis helvola
Hygrocybe cantharellus
Hygrocybe chlorophana
Hygrocybe coccinea
Hygrocybe insipida
Hygrocybe punicea
Hygrocybe quieta
Hygrocybe russocoriacea
Hygrocybe virginea var. virginea

Site Details:

Site: *Bridge of Ross*

Date 31/10/2006 **GridRef:** Q734505

H: 7 **C:** 0 **E:** 1 **G** 0 **O:** 0 **IrishScore:** 10

A narrow coastal strip between the fields and cliffs. There were some patches of heath with Salix repens. Lactarius lacunarum was found again on the S.repens.

Agaricus arvensis
Hygrocybe cantharellus
Hygrocybe chlorophana
Hygrocybe coccinea
Hygrocybe insipida
Hygrocybe punicea
Hygrocybe russocoriacea
Hygrocybe virginea var. virginea
Lactarius lacunarum
Marasmius oreades
Panaeolus acuminatus

Site: *Cross Church*

Date 31/10/2006 **GridRef:** Q799511

H: 3 **C:** 1 **E:** 0 **G** 0 **O:** 1 **IrishScore:** 4

A small moss rich churchyard with good potential for more waxcaps. The species of most interest was the rare Camarophyllopsis micacea at its second Clare (and Irish) site.

Clavulinopsis helvola
Camarophyllopsis micacea
Hygrocybe chlorophana
Hygrocybe quieta
Hygrocybe virginea var. virginea

Q84

Sites Searched: Rehy Hill (east), Kilcredaun Point

Hygrocybe: 3 ***Clavariaceae*** 0 ***Entolomaceae:*** 0 ***Geoglossaceae:*** 0 ***Others:*** 0

Rinevella Bay is not suitable for waxcaps and much of the rest of the square is intensive agriculture. The east end of Rehy Hill was the best part with some waxcaps scattered in the gorse heath. Kilcredaun Point could be good but it was not possible to organise access at this point in time.

Grassland Target Species Recorded

Hygrocybe conica var. conica
Hygrocybe laeta var. laeta
Hygrocybe pratensis

Site Details:

Site: *Kilcredaun Point*

Date 31/10/2006 **GridRef:** Q845495

H: 0 **C:** 0 **E:** 0 **G** 0 **O:** 0 **IrishScore:** 0

Signs everywhere for private land (including that belonging to the Commissioner for Irish Lights whose land has the most potential)

Bolbitius vitellinus

Site: *Rehy Hill (east). See Q74*

Q85

Sites Searched: Kilkee Churches, Carrigaholt Church, Bishop's Island to Castle Point

Hygrocybe: 4 ***Clavariaceae*** 2 ***Entolomaceae:*** 1 ***Geoglossaceae:*** 1 ***Others:*** 1

Much of this square is intensive agriculture and the best places for waxcaps are the northern coastal strip and churchyards. The Kilkee churches were particularly disappointed with either no lawns, unmanaged rank lawns or lawns that were too wet. Only the Catholic church had any interest with two waxcaps. The coastal strip was also very restricted with fertilised fields right up to the cliff edge and the remaining grassland a thick mat of grass soaked by salt spray. The patches of coastal heath might have a few waxcaps.

Grassland Target Species Recorded

Clavaria acuta
Clavulinopsis helvola
Dermoloma cuneifolium
Entoloma tenellum
Geoglossum umbratile
Hygrocybe conica var. conica
Hygrocybe psittacina var. psittacina
Hygrocybe quieta
Hygrocybe virginea var. ochraceopallida
Hygrocybe virginea var. virginea

Site Details:

Site: *Bishop's Island to Castle Point Cliffs*

Date 03/11/2006 **GridRef:** Q850582

H: 1 **C:** 0 **E:** 1 **G** 0 **O:** 0 **IrishScore:** 1

The coastal strip is very restricted with fertilised fields right up to the cliff edge and the remaining grassland is a thick mat of grass soaked by salt spray. The patches of coastal heath might have a few waxcaps, but none were found on this visit.

Entoloma tenellum
Hygrocybe virginea var. ochraceopallida
Panaeolus acuminatus

Panaeolus semiovatus

Site: *Carrigaholt Church*

Date 31/10/2006 **GridRef:** Q842516

H: 3 **C:** 2 **E:** 0 **G** 1 **O:** 1 **IrishScore:** 8

A small moss rich churchyard with good potential for more waxcaps. This is the first churchyard where Clavaria acuta has been recorded from.

Clavaria acuta
Clavulinopsis helvola
Geoglossum umbratile
Rhytisma acerinum
Dermoloma cuneifolium
Hygrocybe psittacina var. psittacina
Hygrocybe quieta
Hygrocybe virginea var. virginea

Site: *Kilkee RC Church*

Date 30/10/2006 **GridRef:** Q887597

H: 2 **C:** 0 **E:** 0 **G** 0 **O:** 0 **IrishScore:** 2

A moss rich churchyard that is probably too wet for much waxcap interest.

Hygrocybe conica var. conica
Hygrocybe virginea var. virginea

Q86

Sites Searched: George's Head, Knockroe Point

Hygrocybe: 6 ***Clavariaceae*** 2 ***Entolomaceae:*** 1 ***Geoglossaceae:*** 2 ***Others:*** 0

The only waxcap interest is coastal grassland along the cliff edges.

Grassland Target Species Recorded

Clavulinopsis fusiformis
Clavulinopsis helvola
Geoglossum fallax
Hygrocybe coccinea
Hygrocybe conica var. conica
Hygrocybe pratensis
Hygrocybe punicea
Hygrocybe russocoriacea
Hygrocybe virginea var. ochraceopallida
Hygrocybe virginea var. virginea
Trichoglossum hirsutum

Site Details:

Site: *George's Head*

Date 30/10/2006 **GridRef:** Q887614

H: 5 **C:** 1 **E:** 0 **G** 1 **O:** 0 **IrishScore:** 8

Coastal grassland restricted to a small strip on the head between the golf course and the cliffs.

Clavulinopsis helvola

Geoglossum fallax
Trichoglossum hirsutum
Agaricus arvensis
Agaricus urinascens
Clitocybe rivulosa
Coprinus comatus
Hygrocybe coccinea
Hygrocybe conica var. conica
Hygrocybe pratensis
Hygrocybe russocoriacea
Hygrocybe virginea var. virginea
Lepista nuda

Site: *Knockroe Point*

Date 30/10/2006 **GridRef:** Q870602
H: 3 **C:** 2 **E:** 1 **G** 1 **O:** 0 **IrishScore:** 8

Coastal grassland restricted to a small strip on the head between improved fields and the cliffs.

Clavulinopsis fusiformis
Clavulinopsis helvola
Geoglossum fallax
Agaricus arvensis
Bolbitius vitellinus
Collybia dryophila
Hygrocybe punicea
Hygrocybe russocoriacea
Hygrocybe virginea var. ochraceopallida
Hygrocybe virginea var. virginea
Lepista nuda
Lepista panaeolus
Marasmius oreades
Panaeolus acuminatus
Vascellum pratense

Q95

Sites Searched: Corlis Point, Moanmore Church

Hygrocybe: 3 ***Clavariaceae*** 0 ***Entolomaceae:*** 0 ***Geoglossaceae:*** 1 ***Others:*** 0

Much of the square is intensive agriculture and the only semi-natural habitat that is of interest for grassland fungi is Corlis Point. Churchyards are the other potential habitat.

Grassland Target Species Recorded

Clavaria fumosa
Hygrocybe chlorophana
Hygrocybe psittacina var. psittacina
Hygrocybe virginea var. ochraceopallida
Hygrocybe virginea var. virginea

Site Details:

Site: *Corlis Point*

Date 03/11/2006 **GridRef:** Q920534
H: 1 **C:** 0 **E:** 0 **G** 0 **O:** 0 **IrishScore:** 1

An interesting sand and shingle point stretching over a kilometre in length. The vegetation is however quite deep but there are good areas of shorter turf especially at the far end and this site should really be better for waxcaps than was found on this visit.

Calocera cornea
Hygrocybe virginea var. ochraceopallida
Mucilago crustacean
Panaeolus acuminatus
Panaeolus semiovatus

Site: *Moanmore Church*

Date 03/11/2006 **GridRef:** Q977597

H: 2 **C:** 0 **E:** 0 **G** 1 **O:** 0 **IrishScore:** 4

A small moss rich churchyard. Should yield some more species. A potential site for H.calyptriformis.

Clavaria fumosa
Hygrocybe chlorophana
Hygrocybe psittacina var. psittacina
Hygrocybe virginea var. virginea

Q96

Sites Searched: White Strand, Doonbeg RC Church, Ballard Bay

Hygrocybe: 11 ***Clavariaceae*** 1 ***Entolomaceae:*** 2 ***Geoglossaceae:*** 1 ***Others:*** 0

A mix of coastal sand dunes, cliff top coastal grassland and churchyards.

Grassland Target Species Recorded

Clavulinopsis helvola
Entoloma anatinum
Geoglossum fallax
Hygrocybe chlorophana
Hygrocybe coccinea
Hygrocybe conica var. conica
Hygrocybe insipida
Hygrocybe persistens
Hygrocybe pratensis
Hygrocybe psittacina var. psittacina
Hygrocybe punicea
Hygrocybe quieta
Hygrocybe russocoriacea
Hygrocybe virginea var. virginea

Site Details:

Site: *Ballard Bay*

Date 30/10/2006 **GridRef:** Q910658

H: 10 **C:** 2 **E:** 1 **G** 1 **O:** 0 **IrishScore:** 15

The area between the end of the road at Ballard Bay and Leim Chaite was searched. The waxcap interest is restricted to a very strip along the field edge or in the coastal heath beside the cliffs. The best area was the first field running up to the old signal tower but the interest was very much only along the earth bank marking the field boundary. Out at Leim Chaite itself, the flora was almost pure Thrift and was not so interesting for waxcaps. One interesting record in the coastal heath was of Lactarius associated with Salix repens.

Clavulinopsis helvola
Cordyceps militaris
Geoglossum fallax
Bolbitius vitellinus
Entoloma anatinum
Hygrocybe chlorophana
Hygrocybe coccinea
Hygrocybe conica var. conica
Hygrocybe insipida
Hygrocybe pratensis
Hygrocybe psittacina var. psittacina
Hygrocybe punicea
Hygrocybe quieta
Hygrocybe russocoriacea
Hygrocybe virginea var. virginea
Hypholoma fasciculare
Lactarius lacunarum
Panaeolus acuminatus
Panaeolus papilionaceus var. papilionaceus

Site: *Bealaha RC Church*

Date 30/10/2006 **GridRef:** Q927637

H: 4 **C:** 0 **E:** 0 **G** 0 **O:** 0 **IrishScore:** 5

A good moss rich churchyard. It should yield some more species of waxcap. A potential site for H.calyptriformis.

Rhytisma acerinum
Hygrocybe conica var. conica
Hygrocybe quieta
Hygrocybe russocoriacea
Hygrocybe virginea var. virginea

Site: *Doonbeg RC Church*

Date 30/10/2006 **GridRef:** Q967655

H: 3 **C:** 0 **E:** 0 **G** 0 **O:** 0 **IrishScore:** 3

A good moss rich churchyard. It should yield some more species of waxcap. A potential site for H.calyptriformis.

Cystoderma amianthinum
Hygrocybe chlorophana
Hygrocybe conica var. conica
Hygrocybe virginea var. virginea
Panaeolus fimicola
Mucilago crustacea

Site: *White Strand*

Date 22/10/2006 **GridRef:** Q9968

H: 2 **C:** 0 **E:** 0 **G** 0 **O:** 0 **IrishScore:** 2

Area of visit: From the carpark at the Golf club hotel north in the dunes. This site was disappointing. Appeared more hopeful, but there was virtually no fruiting in the dunes. The dune slacks are quite rank and overall, there are very few places with open turf. No rabbit grazing? Some cattle were present but generally the grass was too deep and thick for fruiting.

Lepus timidus subsp. hibernicus
Coprinus niveus
Hygrocybe conica var. conica
Hygrocybe persistens
Stropharia semiglobata
Puccinia pygmaea var. ammophilina

Q97

Sites Searched: Seafield Strand

Hygrocybe: 2 ***Clavariaceae*** 0 ***Entolomaceae:*** 0 ***Geoglossaceae:*** 0 ***Others:*** 0

Mutton Island is likely to be the best site but it is not readily accessible. The only bit of mainland within this square is Seafield Strand.

Grassland Target Species Recorded

Hygrocybe persistens

Hygrocybe virginea var. ochraceopallida

Site Details:

Site: *Seafield*

Date 22/10/2006 **GridRef:** Q9973

H: 3 **C:** 0 **E:** 0 **G** 2 **O:** 0 **IrishScore:** 7

Area visited: From rough car park at Lurga Point south along beach edge and the grassland to the east behind the beach stretching towards Quilty. This latter area has the most potential. The grassland behind the beach stretching south was not mycologically interesting - either virtually totally sand and Marram or fertilised grassland.

Note this site covers two 10km squares. Species marked [1] were recorded in Q97 and those marked [2] were recorded in R07

Geoglossum cookeanum [2]
Geoglossum umbratile [2]
Clitocybe fragrans [1] [2]
Hygrocybe conica var. conica [2]
Hygrocybe persistens [1]
Hygrocybe virginea var. ochraceopallida [1] [2]
Lepista nuda [1]
Panaeolus acuminatus [1]
Volvariella gloiocephala [1]
Puccinia poarum [2]

R06

Sites Searched: Cooraclare RC Church

Hygrocybe: 2 ***Clavariaceae*** 2 ***Entolomaceae:*** 1 ***Geoglossaceae:*** 0 ***Others:*** 1

This square is predominantly intensive agriculture and the only sites are likely to be churchyards and lawns.

Grassland Target Species Recorded

Clavaria fragilis
Clavulinopsis helvola
Dermoloma cuneifolium
Entoloma conferendum
Hygrocybe chlorophana
Hygrocybe conica var. conica

Site Details:

Site: *Corraclare RC Church*

Date 25/10/2006 **GridRef:** R041622

H: 2 **C:** 2 **E:** 1 **G** 0 **O:** 1 **IrishScore:** 4

A small moss rich churchyard. Should yield some more species. A potential site for H.calyptriformis. Notable record of Clavaria fragilis.

Clavaria fragilis
Clavulinopsis helvola
Rhytisma acerinum
Armillaria gallica
Dermoloma cuneifolium

Entoloma conferendum
Hygrocybe chlorophana
Hygrocybe conica var. conica

R07

Sites Searched: Milton Malbay RC Church, Knockdarragh RC Church, Seafield (east),

Hygrocybe: 5 ***Clavariaceae*** 0 ***Entolomaceae:*** 1 ***Geoglossaceae:*** 2 ***Others:*** 2

This square is predominantly intensive agriculture. The east end of the grassland at Seafield is most likely to the best site, but a number of the churchyards offer good potential.

Grassland Target Species Recorded

Camarophyllopsis micacea
Dermoloma cuneifolium
Entoloma sericellum
Geoglossum cookeanum
Geoglossum umbratile
Hygrocybe chlorophana
Hygrocybe conica var. conica
Hygrocybe quieta
Hygrocybe reidii
Hygrocybe virginea var. virginea
Hygrocybe virginea var. ochraceopallida

Site Details:

Site: *Knockdarragh RC Church*

Date 24/10/2006 **GridRef:** R093736
H: 1 **C:** 0 **E:** 1 **G** 0 **O:** 0 **IrishScore:** 1

A small moss rich churchyard. Should yield some more species. A potential site for H.calyptriformis.

Coprinus comatus
Entoloma sericellum
Hygrocybe conica var. conica

Site: *Milton Malbay RC Church*

Date 23/10/2006 **GridRef:** R057796
H: 3 **C:** 0 **E:** 0 **G** 0 **O:** 2 **IrishScore:** 5

A small mossy lawn surrounding the church. The notable species was Camarophyllopsis micacea.

Camarophyllopsis micacea
Dermoloma cuneifolium
Hygrocybe conica var. conica
Hygrocybe reidii
Hygrocybe virginea var. virginea
Melanoleuca polioleuca

Site: *Mullagh RC Church*

Date 27/10/2006 **GridRef:** R046730
H: 4 **C:** 0 **E:** 0 **G** 0 **O:** 0 **IrishScore:** 5

A good moss rich churchyard. It should yield some more species of waxcap. A potential site for H.calyptriformis.

Camarophyllopsis micacea
Hygrocybe chlorophana
Hygrocybe conica var. conica
Hygrocybe quieta
Hygrocybe virginea var. virginea

Site: *Seafield (east) See Q97*

R08

Sites Searched: Liscannor Strand, Cliffs of Moher south

Hygrocybe: 10 ***Clavariaceae*** 2 ***Entolomaceae:*** 2 ***Geoglossaceae:*** 0 ***Others:*** 0

Lehinch Golf Course is also a potential site but access difficulties prevented this site from being searched.

Grassland Target Species Recorded

Clavulinopsis corniculata
Clavulinopsis luteoalba
Hygrocybe chlorophana
Hygrocybe coccinea
Hygrocybe conica var. conicoides
Hygrocybe insipida
Hygrocybe persistens
Hygrocybe pratensis
Hygrocybe psittacina var. psittacina
Hygrocybe punicea
Hygrocybe russocoriacea
Hygrocybe virginea var. virginea

Site Details:

Site: *Cliffs of Moher South*

Date 23/10/2006 **GridRef:** R015897

H: 8 **C:** 2 **E:** 1 **G** 0 **O:** 0 **IrishScore:**

The stretch of coastal path from the northern part of this 10km square to Hag's Head is good for waxcaps with H.punicea fruiting in large quantities. See R09 for site details.

Site: *Liscannor Strand*

Date 23/10/2006 **GridRef:** R080889

H: 2 **C:** 0 **E:** 0 **G** 0 **O:** 0 **IrishScore:** 1

Dunes have been developed as pitch and putt course or with fertilised fields to dune edge. The only species of interest were found in the very narrow strip of dune edge between the fence and the beach. The ruined church and graveyard was also searched with nothing found.

Bolbitius vitellinus
Hygrocybe conica var. conicoides
Hygrocybe persistens
Leucoagaricus leucothites
Panaeolus acuminatus
Phragmidium violaceum

R09

Sites Searched: Cliffs of Moher north

Hygrocybe: 9 ***Clavariaceae*** 4 ***Entolomaceae:*** 2 ***Geoglossaceae:*** 0 ***Others:*** 0

This square is a mixture of acidic grassland on the shale and limestone grassland but is largely intensive agriculture.

Grassland Target Species Recorded

Clavaria acuta
Clavulinopsis fusiformis
Clavulinopsis helvola
Clavulinopsis luteoalba
Entoloma ochromicaceum
Hygrocybe chlorophana
Hygrocybe coccinea
Hygrocybe conica var. conica
Hygrocybe insipida
Hygrocybe pratensis
Hygrocybe psittacina var. psittacina
Hygrocybe punicea
Hygrocybe quieta
Hygrocybe reidii
Hygrocybe russocoriacea
Hygrocybe virginea var. virginea

Site Details:

Site: *Cliffs of Moher*

Date 23/10/2006 **GridRef:** R033910

H: 11 **C:** 5 **E:** 3 **G** 0 **O:** 0 **IrishScore:** 16

The strip of grassland along the cliff edge immediately south of the Visitor Centre is of little interest as it is too narrow and heavily used. There were scattered finds along this part but most finds were in the quarries or wider stretches of grassland some distance from the Visitor centre.

Note this site covers two 10km squares. Species marked [1] were recorded in R09 and those marked [2] were recorded in R08

Agaricus silvaticus[1 2]
Bolbitius vitellinus [2]
Calocybe carnea [2]
Clavaria acuta[1]
Clavulinopsis corniculata [2]
Clavulinopsis fusiformis[1]
Clavulinopsis helvola[1]
Clavulinopsis luteoalba[1 2]
Entoloma ochromicaceum[1]
Erysiphe sordida[1]
Hygrocybe chlorophana[1 2]
Hygrocybe coccinea[1 2]
Hygrocybe conica var. conica[1]
Hygrocybe insipida[1 2]
Hygrocybe pratensis [2]
Hygrocybe psittacina var. psittacina [2]
Hygrocybe punicea[1 2]
Hygrocybe quieta[1]
Hygrocybe reidii[1]
Hygrocybe russocoriacea[1 2]
Hygrocybe virginea var. virginea[1 2]
Hygrophoropsis aurantiaca[1]
Lepista nuda[1]
Lycoperdon nigrescens[1]
Mucilago crustacea [2]
Mycena flavoalba[1]
Mycena pura[1]
Paecilomyces marquandii[1]
Panaeolus acuminatus[1]
Puccinia behenis[1 2]
Stropharia semiglobata[1]

R16

Sites Searched: Kilmihil RC Church

Hygrocybe: 3 ***Clavariaceae*** 0 ***Entolomaceae:*** 0 ***Geoglossaceae:*** 0 ***Others:*** 0

This square is predominantly intensive agriculture and the only sites are likely to be churchyards and lawns.

Grassland Target Species Recorded

Hygrocybe chlorophana
Hygrocybe conica var. conica
Hygrocybe quieta

Site Details:

Site: *Kilmihil RC Church*

Date 25/10/2006 **GridRef:** R108643

H: 3 **C:** 0 **E:** 0 **G** 0 **O:** 0 **IrishScore:** 4

A tiny moss rich churchyard. Should yield some more species but not many more.
A potential site for H.calyptriformis.

Hygrocybe chlorophana
Hygrocybe conica var. conica
Hygrocybe quieta

R17

Sites Searched: Slievecallan

Hygrocybe: 1 ***Clavariaceae*** 0 ***Entolomaceae:*** 0 ***Geoglossaceae:*** 0 ***Others:*** 0

This square consists mostly of improved grassland or the upland areas of Slievecallan. The latter areas are too boggy or covered in forestry and any good areas in the improved grassland are likely to be small and difficult to find being a result of a farm using less fertiliser.

Grassland Target Species Recorded

Hygrocybe conica var. conica

Site Details:

Site: *Slievecallan*

Date 25/10/2006 **GridRef:** R142760
H: 1 **C:** 0 **E:** 0 **G** 0 **O:** 0 **IrishScore:** 1

The southern slopes of Slievecallan were searched and bad weather prevented further searching. It was however not promising as the land is extremely boggy with Molinia dominating which is not favourable for waxcaps. The only waxcap found, H.conica, was found along a forest track.

Clavulina rugosa
Rhytisma salicinum
Cystoderma amianthinum
Hygrocybe conica var. conica
Laccaria proxima
Lactarius rufus
Mycena epipterygia var. epipterygia
Phragmidium violaceum

R18

Sites Searched: Ennistymon RC Church

Hygrocybe: 2 ***Clavariaceae*** 0 ***Entolomaceae:*** 0 ***Geoglossaceae:*** 1 ***Others:*** 0

This square is predominantly intensive agriculture or urban development and the only sites are likely to be churchyards and lawns.

Grassland Target Species Recorded

Geoglossum fallax
Hygrocybe conica var. conica
Hygrocybe virginea var. virginea

Site Details:

Site: *Ennistymon Church*

Date 01/11/2006 **GridRef:** R128883
H: 2 **C:** 0 **E:** 0 **G** 1 **O:** 0 **IrishScore:** 3

A small moss rich churchyard with good potential for more waxcaps. A possible site for Hygrocybe calyptriformis.

Geoglossum fallax
Hygrocybe conica var. conica
Hygrocybe virginea var. virginea

R19

Sites Searched: Kilfenora C of I

Hygrocybe: 1 ***Clavariaceae*** 0 ***Entolomaceae:*** 0 ***Geoglossaceae:*** 0 ***Others:*** 0

Churchyards and fields with summer grazing on the limestone pavement are the areas to search for in this square.

Grassland Target Species Recorded

Hygrocybe conica var. conica

Site Details:

Site: *Kilfenora Churches*

Date 29/10/2006 **GridRef:** R182939
H: 0 **C:** 0 **E:** 0 **G** 0 **O:** 0 **IrishScore:** 0

The churchyard in the old church is unlikely to be good and there is no grassland around the other church.

Site: *Lisdoonvarna Church*

Date 02/11/2006 **GridRef:** R131984
H: 1 **C:** 0 **E:** 0 **G** 0 **O:** 0 **IrishScore:** 1

A small moss rich church lawn. Good potential for more waxcap species.

Hygrocybe conica var. conica

R28

Sites Searched: Inagh RC Church, Clare Heritage Centre (Corofin)

Hygrocybe: 1 ***Clavariaceae*** 2 ***Entolomaceae:*** 0 ***Geoglossaceae:*** 0 ***Others:*** 0

This square is predominantly intensive agriculture and the only sites are likely to be churchyards and lawns.

Grassland Target Species Recorded

Clavulinopsis corniculata
Clavulinopsis umbrinella
Hygrocybe conica var. conica

Site Details:

Site: *Clare Heritage Centre, Corofin*

Date 26/10/2006 **GridRef:** R286887

H: 0 **C:** 0 **E:** 0 **G** 0 **O:** 0 **IrishScore:** 0

A tiny moss rich churchyard that is now a Heritage Centre. It should yield some species of waxcap but will not be a good site. A potential site for H.calyptriformis.

Rhytisma acerinum
Coprinus atramentarius

Site: *Inagh RC Church*

Date 26/10/2006 **GridRef:** R208812

H: 1 **C:** 2 **E:** 0 **G** 0 **O:** 0 **IrishScore:** 3

A moss rich churchyard of reasonable size. The notable record, Clavulinopsis umbrinella was found. It should yield some more species but not many more. A potential site for H.calyptriformis.

Clavulinopsis corniculata
Clavulinopsis umbrinella
Rhytisma acerinum
Hygrocybe conica var. conica
Lepiota cristata
Melanoleuca polioleuca

R29

Sites Searched: Tullycomman (Carran), Cahermacnaghten, Carran Field Centre

Hygrocybe: 15 ***Clavariaceae*** 0 ***Entolomaceae:*** 2 ***Geoglossaceae:*** 1 ***Others:*** 0

A Burren square. The best areas for waxcaps are likely to be those areas which have summer grazing and are therefore more closely grazed. The vegetation is just too deep and thick in large areas of what should be good limestone pavement.

Grassland Target Species Recorded

Entoloma poliopus
Hygrocybe aurantiosplendens
Hygrocybe chlorophana
Hygrocybe coccinea
Hygrocybe colemanniana
Hygrocybe conica var. conica
Hygrocybe fornicata
Hygrocybe insipida
Hygrocybe intermedia
Hygrocybe nitrata
Hygrocybe persistens
Hygrocybe pratensis
Hygrocybe punicea
Hygrocybe quieta
Hygrocybe russocoriacea
Hygrocybe virginea var. ochraceopallida
Hygrocybe virginea var. virginea
Trichoglossum hirsutum

Site Details:

Site: *Carran Field Centre*

Date 04/09/2006 **GridRef:**
H: 2 **C:** 0 **E:** 0 **G** 0 **O:** 0 **IrishScore:** 3

These records were made by Ray Woods on an Aberystwyth University fieldtrip and are included as they include a record of Hygrocybe intermedia which is a species that fruits early in the season, usually before the dates of this survey.

Hygrocybe intermedia
Hygrocybe persistens

Site: Cahermacnaghten. See M10

Site: *Tullycomman, Carran*

Date 01/11/2006 **GridRef:** R290984
H: 11 **C:** 0 **E:** 2 **G** 1 **O:** 0 **IrishScore:** 19

The area searched included the fields on the turlough side of the road and the hillside above the road to the hilltop. The best area by far were the fields below the road as these were well grazed limestone pavement whereas the fields above the road were not well grazed and the vegetation was, by in large, too thick to be of interest for waxcaps. Notable species include Hygrocybe aurantiosplendens, Hygrocybe nitrata and the first site for Hygrocybe glutinipes for the first time in this survey. Strangely however, there were no fairy clubs found at all.

Trichoglossum hirsutum
Trochila ilicina
Clitocybe nebularis
Collybia dryophila
Entoloma poliopus
Hygrocybe aurantiosplendens
Hygrocybe coccinea
Hygrocybe colemanniana
Hygrocybe conica var. conica

Hygrocybe fornicata
Hygrocybe insipida
Hygrocybe nitrata
Hygrocybe quieta
Hygrocybe russocoriacea
Hygrocybe virginea var. ochraceopallida
Hygrocybe virginea var. virginea
Melanoleuca polioleuca
Mycena epipterygia var. epipterygia
Mycena pura
Stropharia semiglobata
Phragmidium violaceum

R37

Sites Searched: Ennis Friary, Ennis Church of Ireland, Ennis Cathedral

Hygrocybe: 0 ***Clavariaceae*** 0 ***Entolomaceae:*** 0 ***Geoglossaceae:*** 0 ***Others:*** 0

This square is predominantly intensive agriculture or urban development and the only sites are likely to be churchyards and lawns.

Grassland Target Species Recorded

None

Site Details:

Site: *Ennis Friary*

Date 27/10/2006 **GridRef:** R339776

H: 0 **C:** 0 **E:** 0 **G** 0 **O:** 0 **IrishScore:** 0

A tiny moss rich churchyard. It should yield some species of waxcap but will not be a good site. A potential site for H.calyptriformis.

Rhytisma acerinum
Galerina vittiformis
Hebeloma mesophaeum

R39

Sites Searched: Mullagh More, Gortlecka

Hygrocybe: 5 ***Clavariaceae*** 1 ***Entolomaceae:*** 4 ***Geoglossaceae:*** 0 ***Others:*** 0

A Burren square. Larger areas of grassland amongst the limestone pavement were searched as well as the eastern flanks of Mullagh More to the summit. The vegetation was too thick on much of the area and the best waxcap areas are likely to be those that have summer grazing as well.

Grassland Target Species Recorded

Clavaria fumosa
Entoloma corvinum
Entoloma poliopus
Hygrocybe chlorophana
Hygrocybe conica var. conica
Hygrocybe psittacina var. psittacina
Hygrocybe reidii
Hygrocybe virginea var. virginea

Site Details:

Site: *Gortlecka*

Date 26/10/2006 **GridRef:** R306945

H: 2 **C:** 0 **E:** 0 **G** 0 **O:** 0 **IrishScore:** 2

This was a small field within the limestone pavement. Only H. conica and H.virginea were found.

Coprinus comatus
Hygrocybe conica var. conica
Hygrocybe virginea var. virginea
Lacrymaria lacrymabunda
Lepiota aspera
Phragmidium violaceum

Site: *Mullagh More*

Date 26/10/2006 **GridRef:** R3395

H: 5 **C:** 1 **E:** 4 **G** 0 **O:** 0 **IrishScore:** 7

The eastern flanks of the mountain were searched from the road up to the summit. The site was disappointing in terms of waxcaps as there was only scattered finds of H.conica and H.virginea on the slopes and summit. There were more waxcaps along with Clavaria fumosa however in the reclaimed field below the summit. It must be noted that these were the five most common species of waxcap and no good indicator species were found here. Three species of Entoloma were found in the summit grassland.

In terms of ectomycorrhizal species associated with the Dryas, again only the summit proved to be fruitful. Four ectomycorrhizal species were found along with large numbers of Leucopaxillus gigantea and Melanoleuca polioleuca. Mycena pura was the most common mushroom by far all over the mountain.

Lepus timidus subsp. hibernicus
Cantharellus lutescens
Clavaria fumosa
Helvella atra
Hypoxylon fuscum
Rhopographus filicinus
Chamaemyces fracidus
Collybia dryophila
Cortinarius calochrous
Cortinarius cinnamomeus
Entoloma corvinum
Entoloma poliopus
Hebeloma velutipes
Hygrocybe chlorophana
Hygrocybe conica var. conica
Hygrocybe psittacina var. psittacina
Hygrocybe reidii
Hygrocybe virginea var. virginea
Leucopaxillus giganteus
Melanoleuca polioleuca
Mycena pura
Panaeolus papilionaceus var. papilionaceus
Stropharia semiglobata
Lycoperdon nigrescens
Phragmidium violaceum

R46

Sites Searched: Kilmurray RC Church, Sixmilebridge RC Church

Hygrocybe: 0 ***Clavariaceae*** 0 ***Entolomaceae:*** 0 ***Geoglossaceae:*** 0 ***Others:*** 0

This square is predominantly intensive agriculture and the only sites are likely to be churchyards and lawns.

Grassland Target Species Recorded

None

Site Details:

Site: *Sixmilebridge RC Church*

Date 04/11/2006 **GridRef:** R479657

H: 0 **C:** 0 **E:** 0 **G** 0 **O:** 0 **IrishScore:** 0

A tiny moss rich churchyard. Might yield a few waxcaps but not many.

Rhytisma acerinum

R47

Sites Searched: Clooney RC Church, Tulla RC Church, Quin RC Church

Hygrocybe: 2 ***Clavariaceae*** 0 ***Entolomaceae:*** 0 ***Geoglossaceae:*** 0 ***Others:*** 0

This square is predominantly intensive agriculture and the only sites are likely to be churchyards and lawns.

Grassland Target Species Recorded

Hygrocybe chlorophana
Hygrocybe conica var. conica

Site Details:

Site: *Clooney RC Church*

Date 27/10/2006 **GridRef:** R416795

H: 1 **C:** 0 **E:** 0 **G** 0 **O:** 0 **IrishScore:** 1

A moss rich churchyard with very good potential. It should yield some more species of waxcap and could be a potential site for H.calyptriformis.

Hygrocybe chlorophana
Lactarius pubescens
Lepiota cristata
Melanoleuca polioleuca

Site: *Quin RC Church*

Date 04/11/2006 **GridRef:** R418744

H: 1 **C:** 0 **E:** 0 **G** 0 **O:** 0 **IrishScore:** 1

Potentially a rich churchyard but only Hygrocybe conica found.

Hygrocybe conica var. conica

Mucilago crustacea

Site: *Tulla RC Church*

Date 27/10/2006 **GridRef:** R492797

H: 0 **C:** 0 **E:** 0 **G** 0 **O:** 0 **IrishScore:** 0

A tiny moss rich churchyard. It should yield some species of waxcap and could be a potential site for H.calyptriformis, but is unlikely to be a good site.

Coprinus comatus

R48

Sites Searched: Derryulk RC Church

Hygrocybe: 0 ***Clavariaceae*** 0 ***Entolomaceae:*** 0 ***Geoglossaceae:*** 0 ***Others:*** 0

This square is predominantly intensive agriculture but there are some hills over 200m in the north west of the square. These are very boggy and dominated by heather which is not good habitat for waxcaps and there is little transition between the fertilised fields and the bog. There may be some low quality grasslands in this upland margin, but these are difficult to find and have access difficulties. Hence the churchyards and lawns are likely to be important sites.

Grassland Target Species Recorded

None

Site Details:

Site: *Derryulk RC Church*

Date 27/10/2006 **GridRef:** R482843

H: 0 **C:** 0 **E:** 0 **G** 0 **O:** 0 **IrishScore:** 0

A tiny moss rich churchyard but a bit overgrown. It could yield some species of waxcap but is unlikely to be a good site.

Rhytisma acerinum

R56

Sites Searched: Cloghera RC Church

Hygrocybe: 0 ***Clavariaceae*** 0 ***Entolomaceae:*** 0 ***Geoglossaceae:*** 0 ***Others:*** 0

This square is a mix of intensive agriculture and marginal upland to the south of Slieve Bearnagh. The marginal upland is likely to be the best area but time restrictions meant these were not searched. Coniferous plantations and intensive agriculture have affected waxcap interest and areas of interest will need a detailed search.

Grassland Target Species Recorded

None

Site Details:

Site: *Cloghera RC Church*

Date 04/11/2006 **GridRef:** R587659

H: 0 **C:** 0 **E:** 0 **G** 0 **O:** 0 **IrishScore:** 0

A reasonable area of grassland that should have some waxcaps but unlikely to have many species.

Phragmidium violaceum
Rhytisma acerinum

R58

Sites Searched: Lough Nacally hills, Feakle RC Church, Bodyke RC Church

Hygrocybe: 4 ***Clavariaceae*** 0 ***Entolomaceae:*** 0 ***Geoglossaceae:*** 2 ***Others:*** 0

This square is predominantly intensive agriculture with significant areas over 200m in the north of the square. These are very boggy and dominated by heather or covered by coniferous plantations which are not good habitat for waxcaps. There is little transition between the fertilised fields and the bog. There may be some low quality grasslands in this upland margin, but these are difficult to find and have access difficulties. Hence the churchyards and lawns are likely to be important sites.

Grassland Target Species Recorded

Clavaria argillacea
Geoglossum fallax
Hygrocybe chlorophana
Hygrocybe conica var. conica
Hygrocybe flavipes
Hygrocybe quieta
Trichoglossum hirsutum

Site Details:

Site: *Ballycroum hills*

Date 27/10/2006 **GridRef:** R5288, R5388

H: 2 **C:** 1 **E:** 0 **G** 1 **O:** 0 **IrishScore:** 4

Areas east and west of the road on the East Clare way were searched for pockets of acid grassland amongst the bog or coniferous forestry. These were hardly found and Hygrocybe conica and Geoglossum were both found in mosses alongside forestry tracks. The best possible areas are low quality fields that have not been heavily fertilised but those looked at were heavily poached and had no fruiting bodies. It is like looking for a needle in a haystack and any fields are unlikely to be very good due to restricted size.

Clavaria argillacea
Geoglossum fallax
Peziza badia
Rhytisma salicinum
Xylaria hypoxylon
Cortinarius urbicus
Cystoderma amianthinum
Hebeloma crustuliniforme
Hebeloma fragilipes
Hebeloma mesophaeum
Hygrocybe conica var. conica
Hygrocybe flavipes

Hypholoma fasciculare
Laccaria laccata
Omphalina ericetorum
Paxillus involutus
Tricholomopsis rutilans
Lycoperdon nigrescens
Phragmidium violaceum

Site: *Bodyke RC Church*

Date 27/10/2006 **GridRef:** R597816

H: 2 **C:** 0 **E:** 0 **G** 1 **O:** 0 **IrishScore:** 4

A moss rich churchyard with good potential. It should yield some more species of waxcap and could be a potential site for H.calyptriformis.

Trichoglossum hirsutum
Hygrocybe chlorophana
Hygrocybe conica var. conica
Panaeolus fimicola
Lycoperdon pyriforme

Site: *Feakle RC Church*

Date 27/10/2006 **GridRef:** R656864

H: 1 **C:** 0 **E:** 0 **G** 1 **O:** 0 **IrishScore:** 4

A tiny moss rich churchyard. It should yield some more species of waxcap and could be a potential site for H.calyptriformis, but is unlikely to be a good site.

Trichoglossum hirsutum

Hygrocybe quieta

R66

Sites Searched: Bridgetown RC Church

Hygrocybe: 2 ***Clavariaceae*** 0 ***Entolomaceae:*** 0 ***Geoglossaceae:*** 0 ***Others:*** 0

This square is predominantly intensive agriculture and the only sites are likely to be churchyards and lawns.

Grassland Target Species Recorded

Hygrocybe psittacina var. psittacina
Hygrocybe virginea var. virginea

Site Details:

Site: *Bridgetown RC Church*

Date 04/11/2006 **GridRef:** R645679

H: 2 **C:** 0 **E:** 0 **G** 0 **O:** 0 **IrishScore:** 2

A large area of grassland that is potentially rich in waxcaps and worth another visit. A potential Hygrocybe calyptriformis site.

Hygrocybe psittacina var. psittacina
Hygrocybe virginea var. virginea

R68

Sites Searched: Tuamgraney RC church

Hygrocybe: 3 ***Clavariaceae*** 1 ***Entolomaceae:*** 0 ***Geoglossaceae:*** 0 ***Others:*** 0

This square is predominantly intensive agriculture but with significant areas over 200m in the north and south of the square. These are very boggy and dominated by heather or covered by coniferous plantations which are not good habitat for waxcaps. There is little transition between the fertilised fields and the bog. There may be some low quality grasslands in this upland margin, but these are difficult to find and have access difficulties. Hence the churchyards and lawns are likely to be important sites.

Grassland Target Species Recorded

Clavulinopsis helvola
Hygrocybe chlorophana
Hygrocybe conica var. conica
Hygrocybe quieta

Site Details:

Site: *Tuamgraney RC Church*

Date 27/10/2006 **GridRef:** R635830

H: 3 **C:** 1 **E:** 0 **G** 0 **O:** 0 **IrishScore:** 4

A tiny moss rich churchyard. It should yield some more species of waxcap and could be a potential site for *H.calyptriformis*, but is unlikely to be a good site.

Clavulinopsis helvola
Hygrocybe chlorophana
Hygrocybe conica var. conica
Hygrocybe quieta
Melanoleuca polioleuca
Panaeolus acuminatus

R77

Sites Searched: Killaloe RC Church

Hygrocybe: 3 ***Clavariaceae*** 1 ***Entolomaceae:*** 0 ***Geoglossaceae:*** 0 ***Others:*** 0

There is only a very small area of County Clare in this square and churchyards and lawns will be the only areas of interest.

Grassland Target Species Recorded

Clavaria fumosa
Hygrocybe chlorophana
Hygrocybe psittacina var. psittacina
Hygrocybe virginea var. virginea

Site Details:

Site: *Killaloe RC Church*

Date 04/11/2006 **GridRef:** R701729

H: 3 **C:** 1 **E:** 0 **G** 0 **O:** 0 **IrishScore:** 5

Not a large area of grassland but the presence of Clavaria fumosa suggests that it
A potential *Hygrocybe calyptriformis* site.

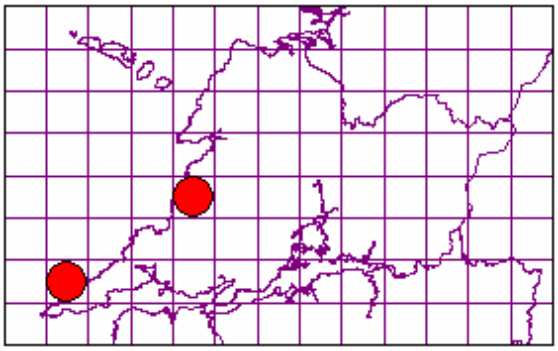
Clavaria fumosa
Hygrocybe chlorophana
Hygrocybe psittacina var. psittacina
Hygrocybe virginea var. virginea

Appendix 2 – Species Distribution Maps

Grassland Target Species

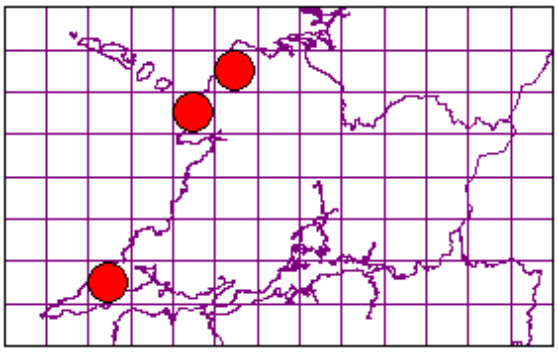
Camarophyllopsis micacea (Berk. & Broome) Arnolds

First record for Ireland found in three churchyards in this survey



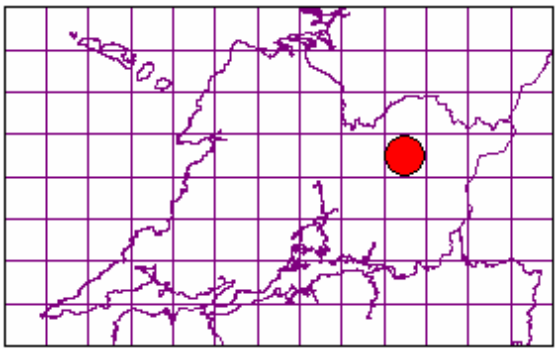
Clavaria acuta Fr.

A Fairy Club



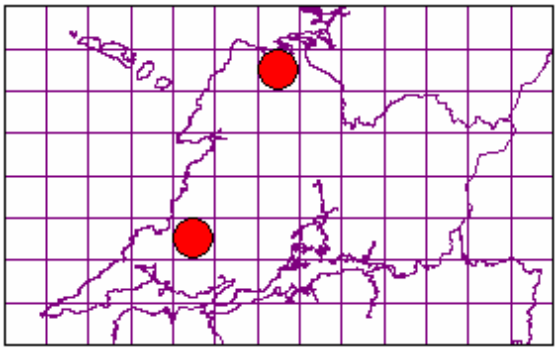
Clavaria argillacea Fr.

A Fairy Club but one usually found on bogs



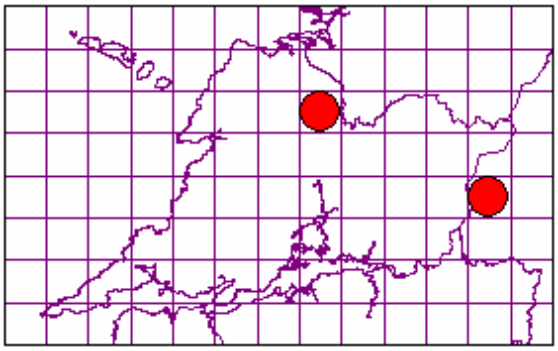
Clavaria fragilis Holmsk.

A Fairy Club



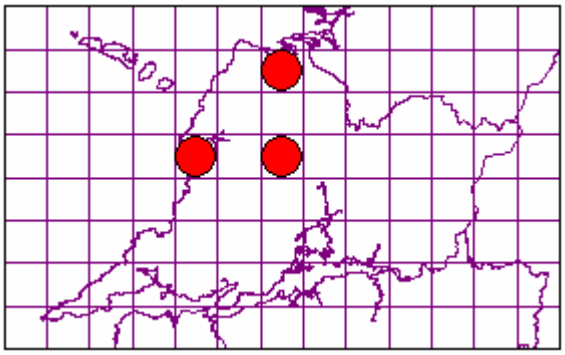
Clavaria fumosa Fr.

A Fairy Club



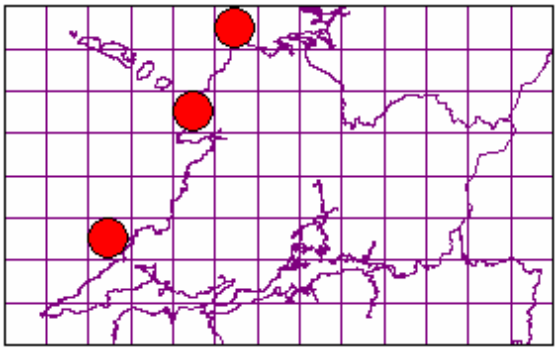
Clavulinopsis corniculata (Fr.) Corner

A common Fairy Club



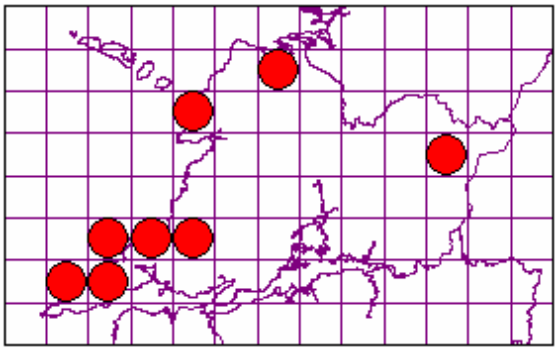
Clavulinopsis fusiformis (Sowerby) Corner

A Fairy Club that is most common in acid grassland



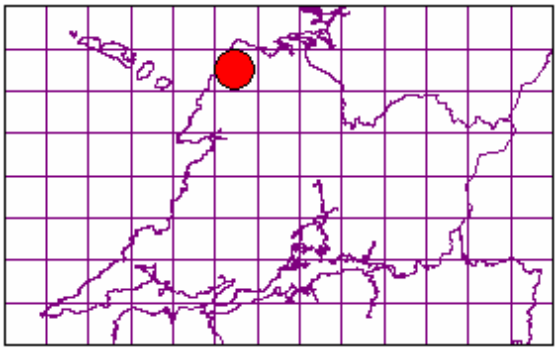
Clavulinopsis helvola (Pers.) Corner

A common Fairy Club



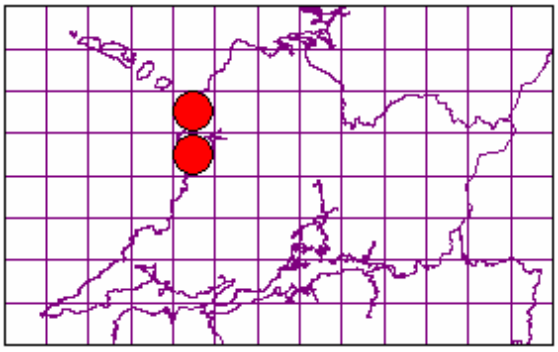
Clavulinopsis laeticolor (Berk. & M.A. Curtis) R.H.

A Fairy Club that needs to be microscopically checked to distinguish from C.luteoalba



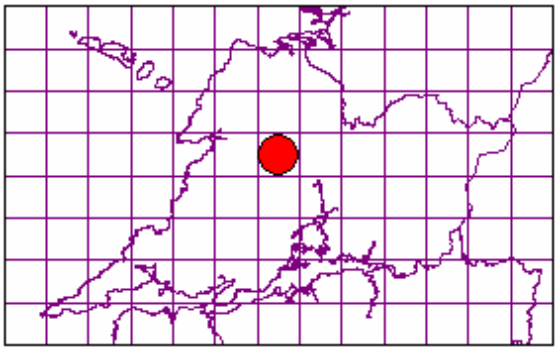
Clavulinopsis luteoalba (Rea) Corner

A common Fairy Club



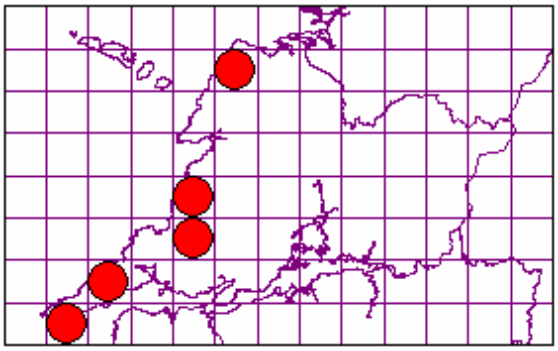
Clavulinopsis umbrinella (Sacc.) Corner

A rarer Fairy Club that appears to be a good indicator of high quality grasslands



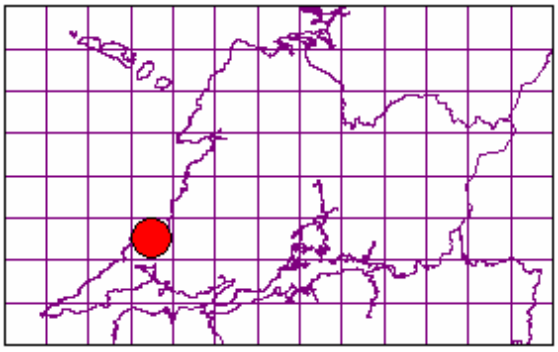
Dermoloma cuneifolium var. cuneifolium (Fr.) Bon

A species found in unfertilised grasslands



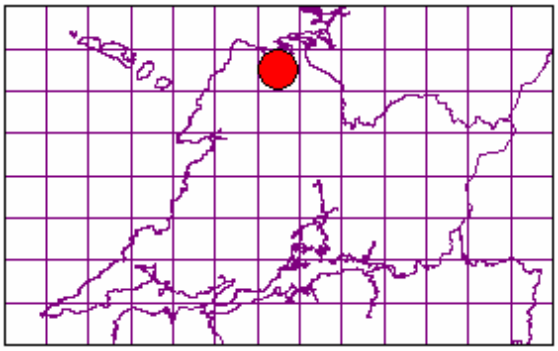
Entoloma anatinum (Lasch) Donk

No other published records for Republic of Ireland or on FRDBI.



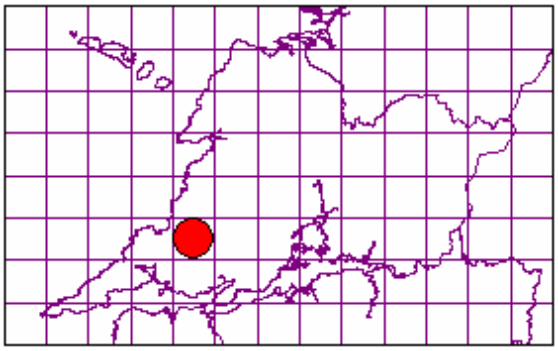
Entoloma bloxamii (Berk.) Sacc.

A large fleshy blue Entoloma



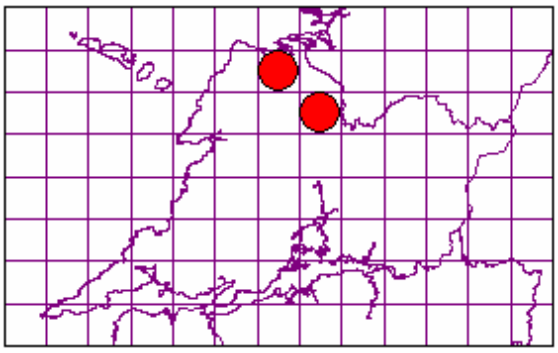
Entoloma conferendum (Britzelm.) Noordel.

A common Entoloma



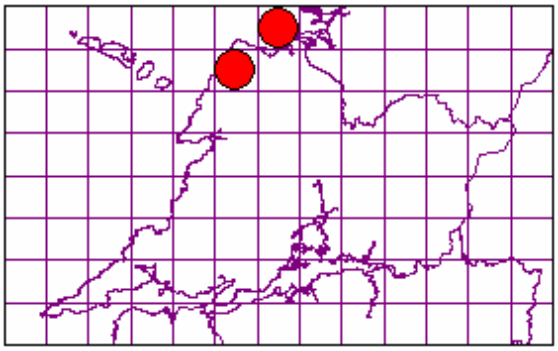
Entoloma corvinum (Kühner) Noordel.

A dark blue Entoloma with a sterile gill edge



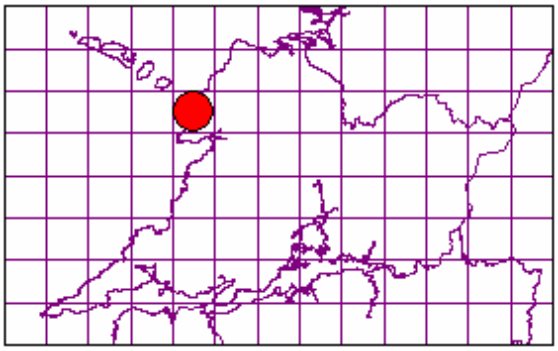
Entoloma incanum (Fr.) Hesler

A very distinctive Entoloma with a yellow green stipe that turns blue green with handling. Smells of mouse droppings



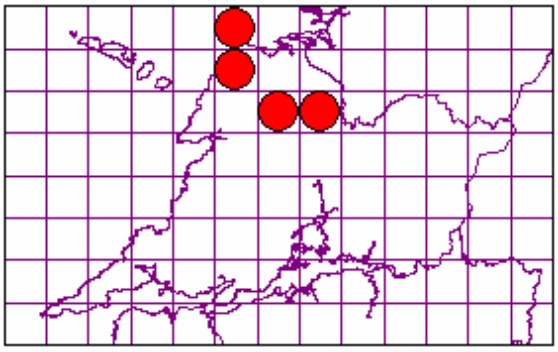
Entoloma ochromicaceum Noordel. & Liiv

No other published records for Republic of Ireland or on FRDBI.



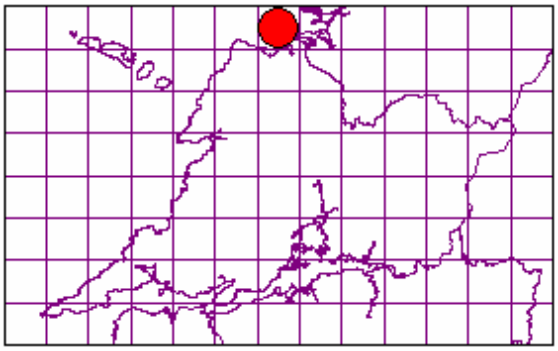
Entoloma poliopus var. poliopus (Romagn.) Noordel.

A relatively common Leptonia in unfertilised grasslands



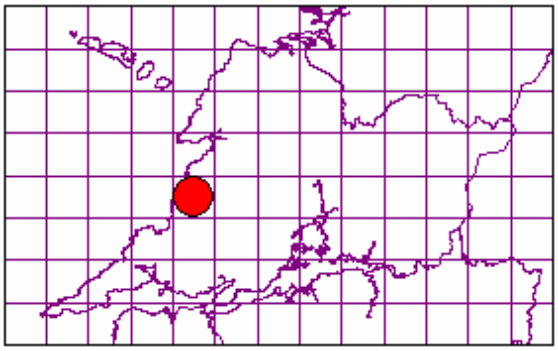
Entoloma rhombisporum var. floccipes Noordel.

No other published records for Ireland or on FRDBI. All other records from the British Isles are from Scotland



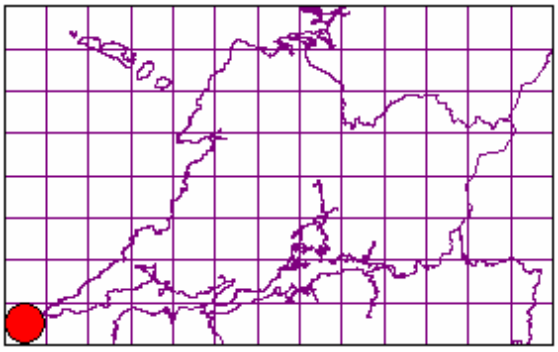
Entoloma sericellum Fr.

A white Leptonia



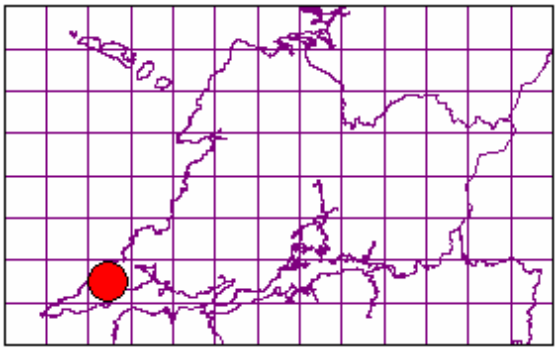
Entoloma sericeum (Bull.) Fr.

A common brown Nolanea



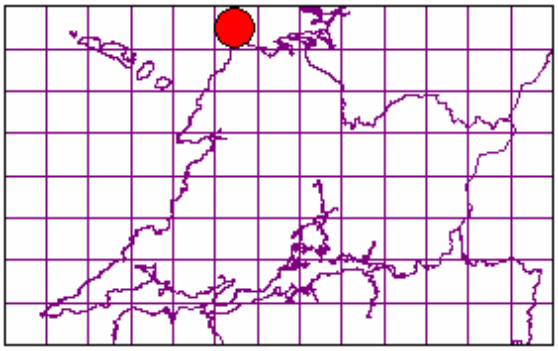
Entoloma tenellum (J. Favre) Noordel.

A brown Nolanea with only scattered Irish records (but possibly under-recorded)



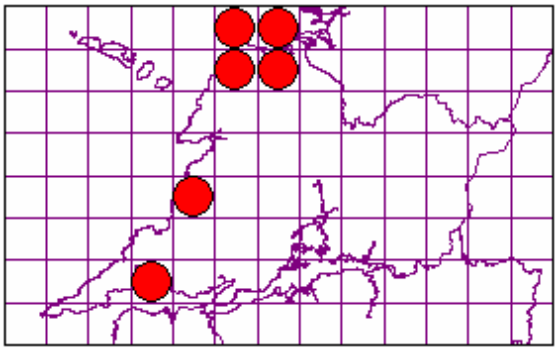
Entoloma turci (Bres.) M.M. Moser

A brown Leptonia with reddening gills



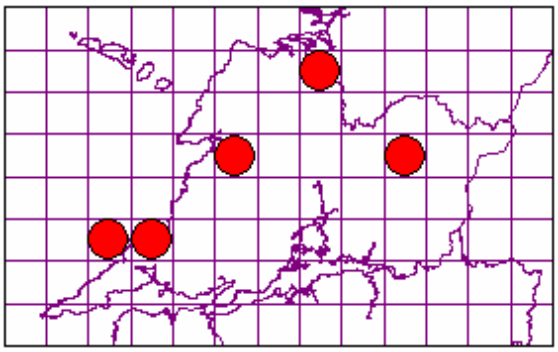
Geoglossum cookeanum Nannf.

Can be the largest species of earth tongue growing to several centimetres tall



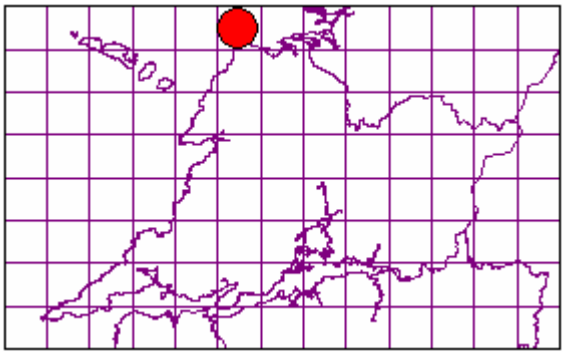
Geoglossum fallax E.J. Durand

An earth tongue



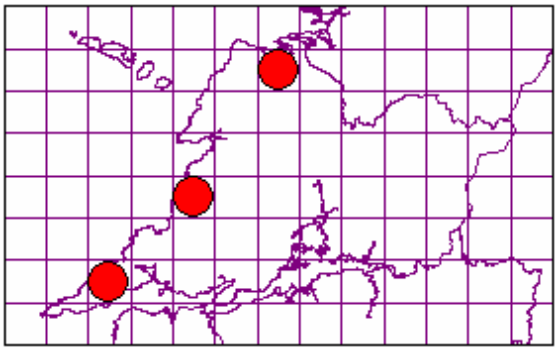
Geoglossum glutinosum Pers.

An earth tongue that is very viscid



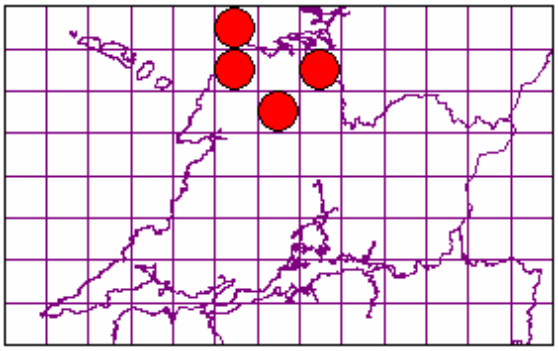
Geoglossum umbratile Sacc.

An earth tongue



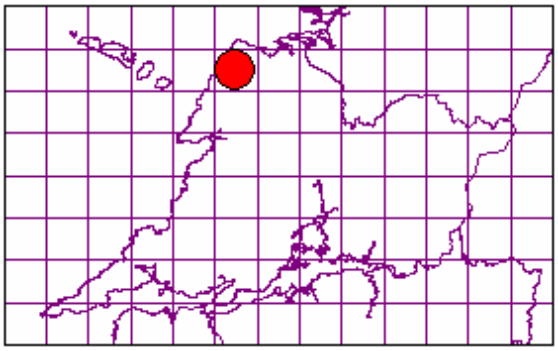
Hygrocybe aurantiosplendens R. Haller Aar.

A rarer waxcap that is often over-recorded.



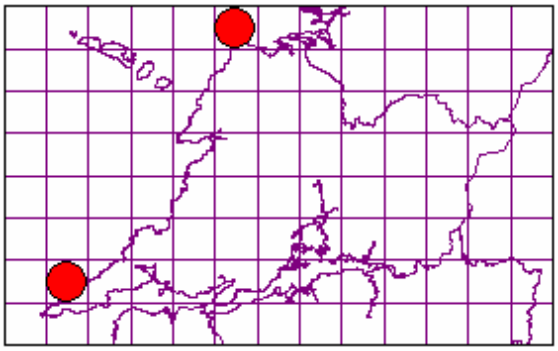
Hygrocybe calciphila Arnolds

A rare waxcap usually found in dune systems. Only a few Irish records



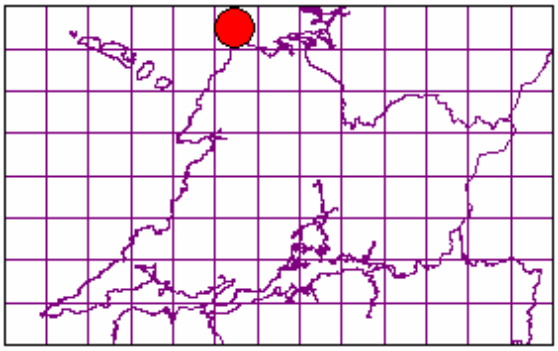
Hygrocybe cantharellus (Schwein.) Murrill

A waxcap usually found in acid grassland



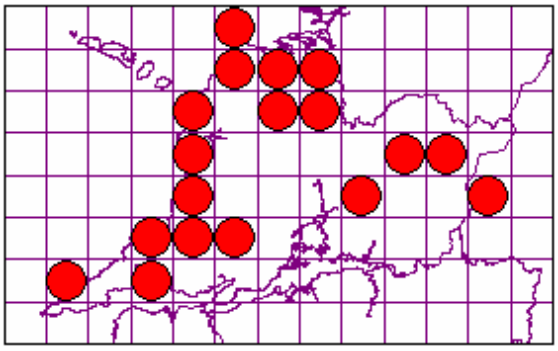
Hygrocybe ceracea (Wulfen) P. Kumm.

A yellow waxcap - not uncommon



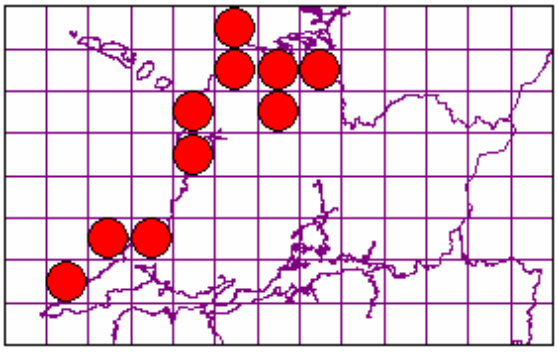
Hygrocybe chlorophana (Fr.) Wünsche

One of the most common waxcaps



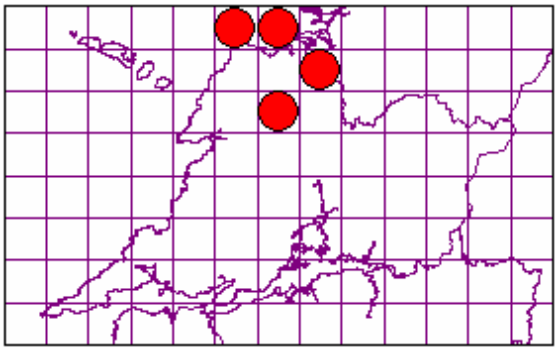
Hygrocybe coccinea (Schaeff.) P. Kumm.

One of the most common waxcaps



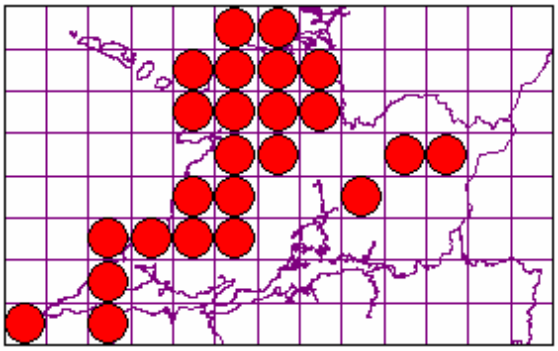
Hygrocybe colemanniana (A. Bloxam) P.D. Orton & Watling

Usually restricted to calcareous grassland



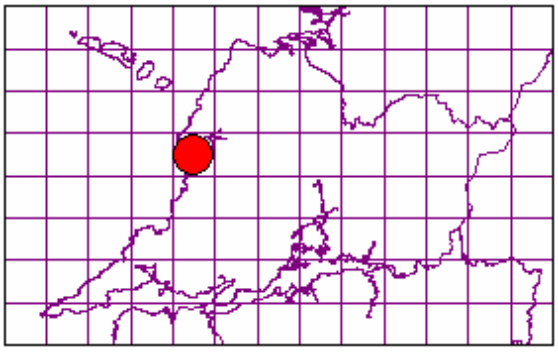
Hygrocybe conica var. conica (Schaeff.) P. Kumm.

Very common



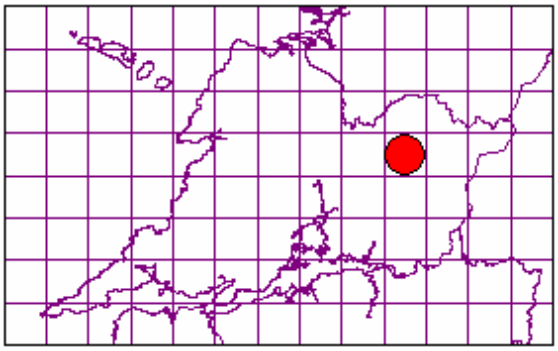
Hygrocybe conica var. conicoides (P.D. Orton) Boertm.

Some authors give this variety species rank. Usually found in sand dunes



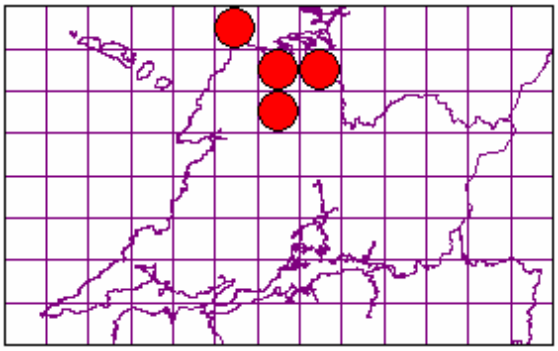
Hygrocybe flavipes (Britzelm.) Arnolds

Found in this survey on bare peat



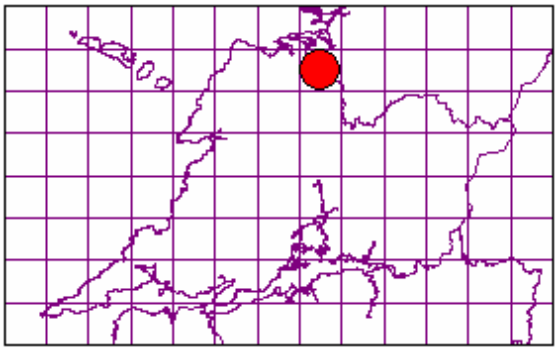
Hygrocybe fornicata (Fr.) Singer

A grey to brown species with ascending gills



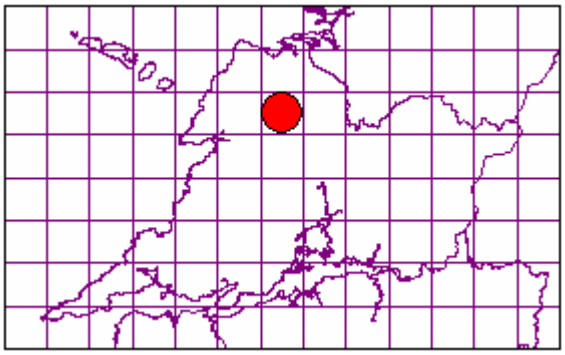
Hygrocybe glutinipes var. glutinipes (J.E. Lange) R. Haller

Very viscid and smaller than H.chlorophana



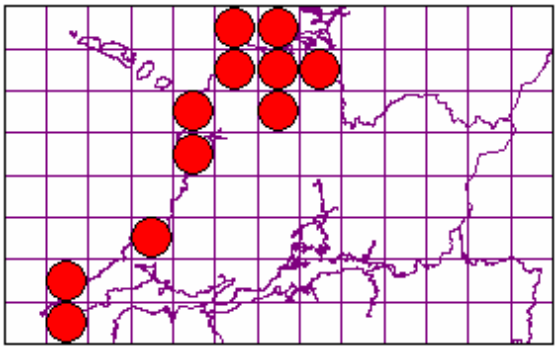
Hygrocybe intermedia (Pass.) Fayod

An early fruiting waxcap with a distinctive dry fibrous red cap



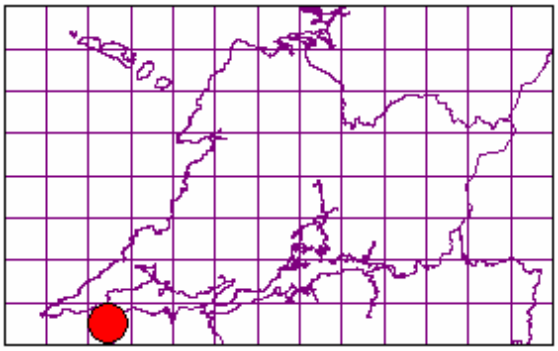
Hygrocybe insipida (Lange ex S. Lundell) M.M. Moser

Very common



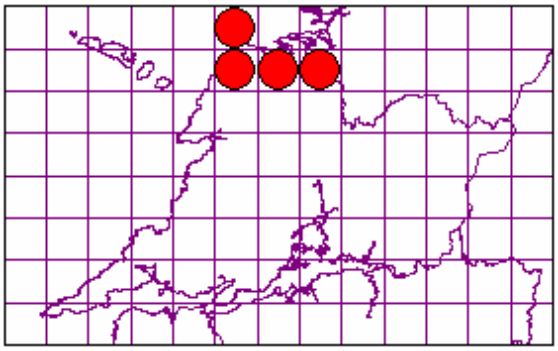
Hygrocybe laeta var. laeta (Pers.) P. Kumm.

Common in acid grassland but surprisingly only found once



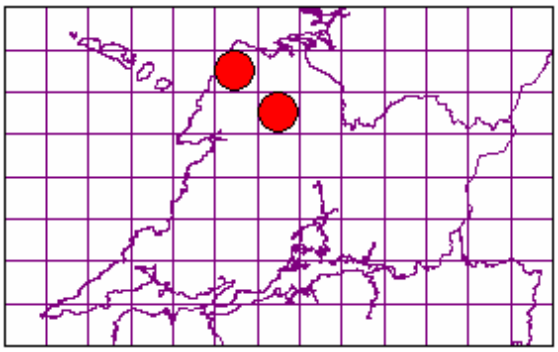
Hygrocybe mucronella (Fr.) P. Karst.

Often overlooked but with a very bitter taste



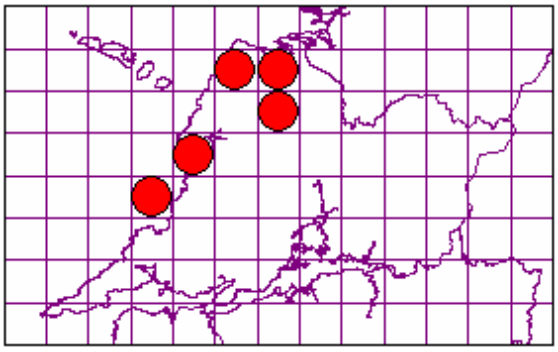
Hygrocybe nitrata (Pers.) Wünsche

One of the more unusual species of waxcap with a strong nitrous smell



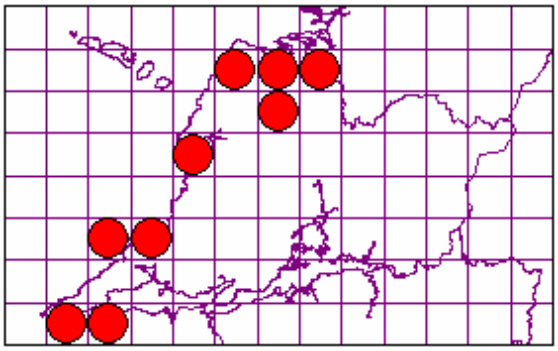
Hygrocybe persistens var. persistens (Britzelm.) Singer

Often confused with H.conica but does not blacken. One of the earlier waxcaps to fruit.



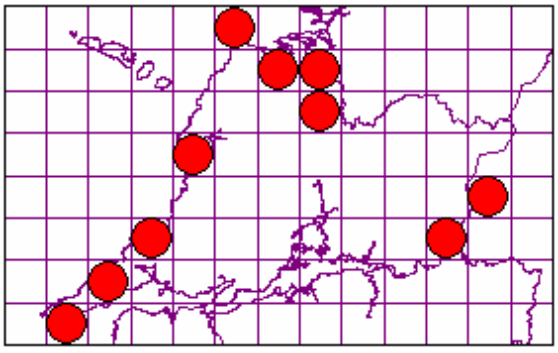
Hygrocybe pratensis (Pers.) Fr.

One of the largest waxcaps that can be very abundant



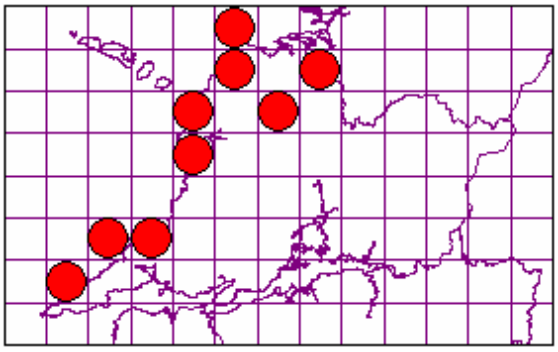
Hygrocybe psittacina var. psittacina (Schaeff.) P. Kumm.

Usually very common and distinguised by its green colours



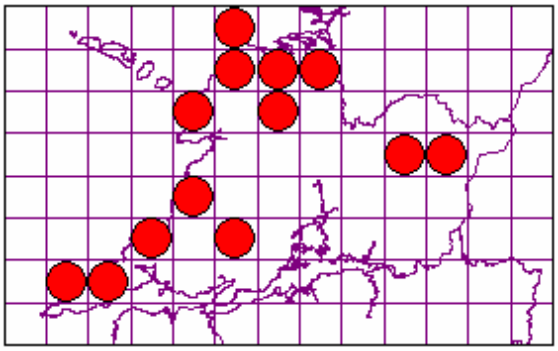
Hygrocybe punicea (Fr.) P. Kumm.

Large and notable with a dull crimson colour and fibrous stipe



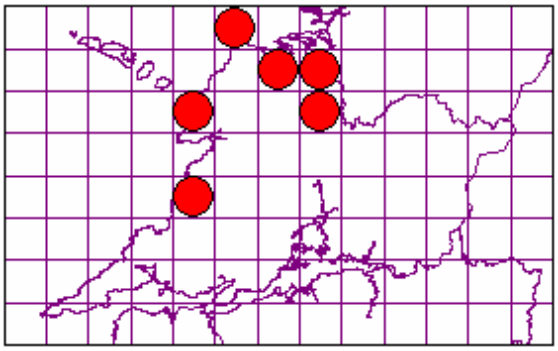
Hygrocybe quieta (Kühner) Singer

Noted for its oily smell



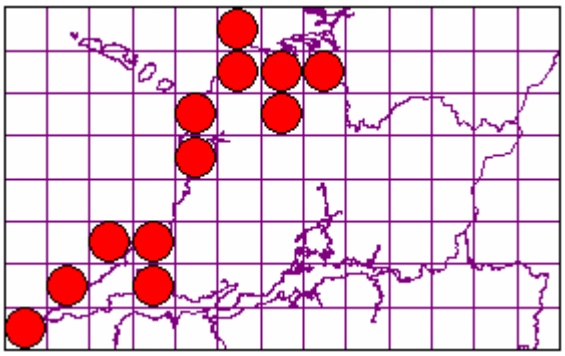
Hygrocybe reidii Kühner

Recognised by its honey smell especially if rubbed. Not uncommon



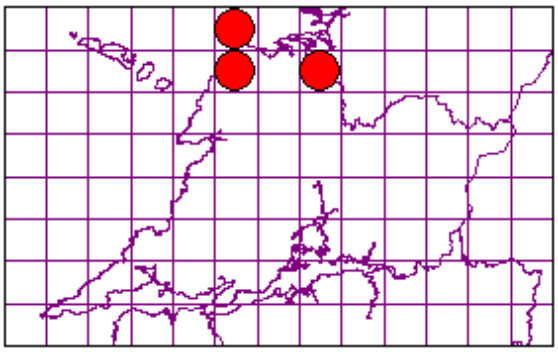
Hygrocybe russocoriacea (Berk. & Mill.) P.D. Orton &

Noted by its amazing smell of cedar wood



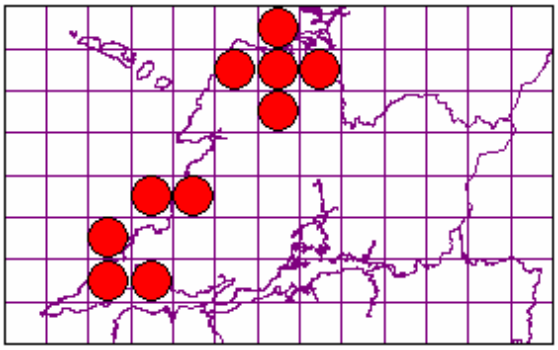
Hygrocybe virginea var. fuscescens (Bres.) Arnolds

A variety with a brown centre to the cap



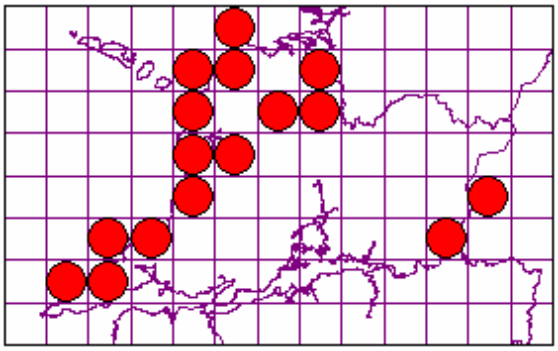
Hygrocybe virginea var. ochraceopallida (P.D. Orton)

This variety is usually found in calcareous grassland



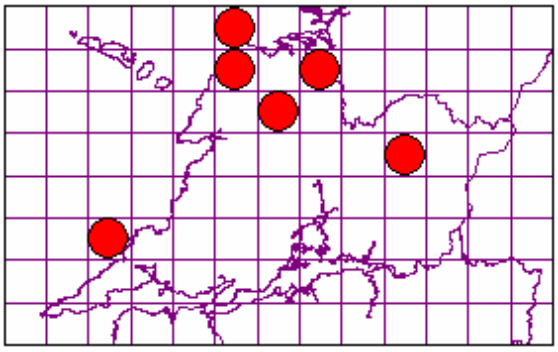
Hygrocybe virginea var. virginea (Wulfen) P.D. Orton &

Very common species



Trichoglossum hirsutum (Pers.) Boud.

An earth tongue with noticeable setae (especially on the stipe) like hairs

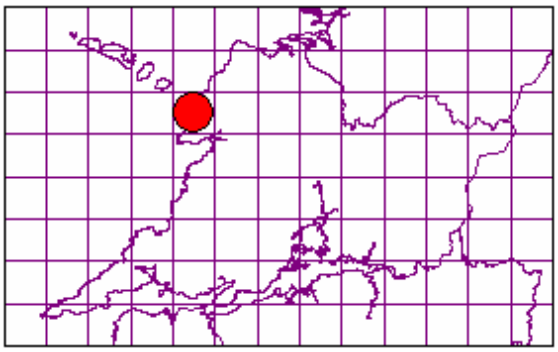


Non-Grassland Target Species

Anamorphic Fungi

Paecilomyces marquandii (Massee) S. Hughes

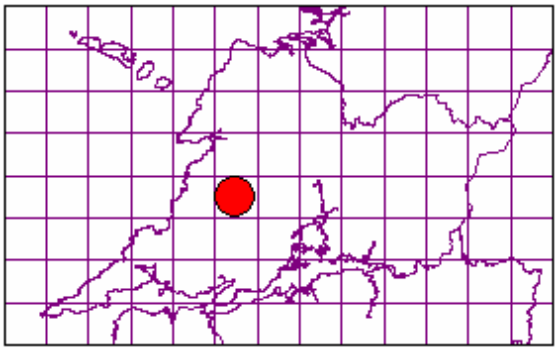
An infection of Hygrocybe virginea that turns the gills lilac. Rarely recorded in Ireland



Aphyllophoroid Fungi - Brackets Chanterelles etc

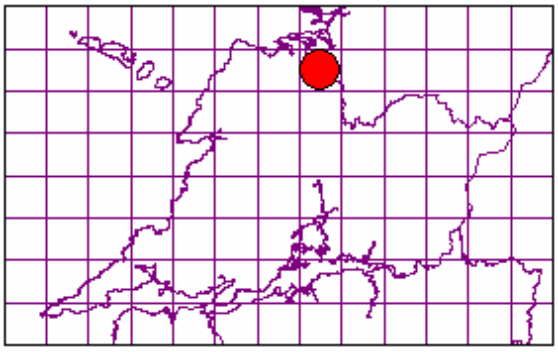
Clavulina rugosa (Bull.) J. Schröt.

A woodland species of Fairy Club



Hymenochaete corrugata (Fr.) Lév.

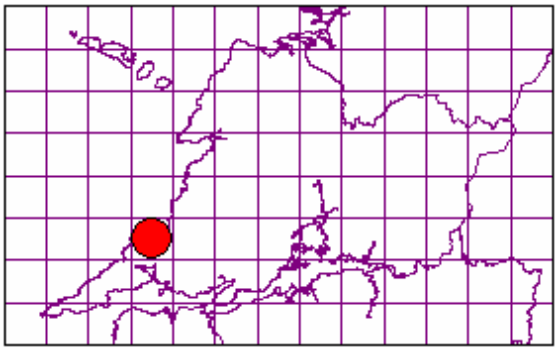
Glues branches of hazel together in the canopy to capture the wood before it falls to the forest floor



Ascomycetes

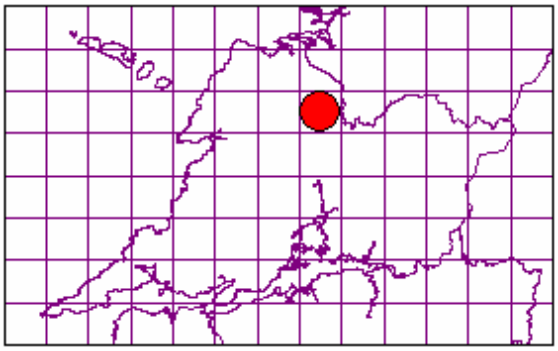
Cordyceps militaris (L.) Link

The Caterpillar Killer which parasitises moth pupae



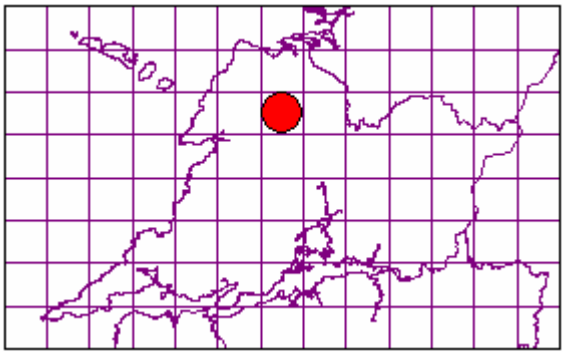
Helvella atra J. König

A very distinctive ascomycete found here in hazel scrub



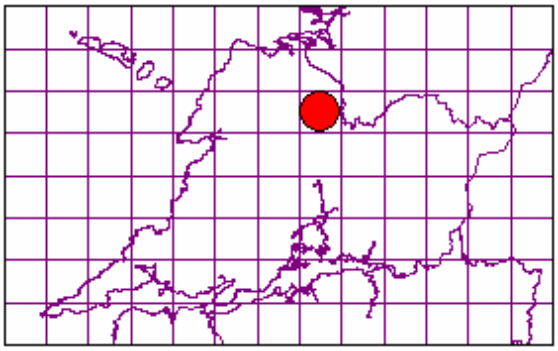
Hypocreopsis lichenoides (Tode) Seaver

A very distinctive species known as Hazel Gloves. A UK BAP species, it is usually restricted to undisturbed coastal hazel woods but on the Burren found in inland sites on colonising hazel as well as older hazel woodlands.



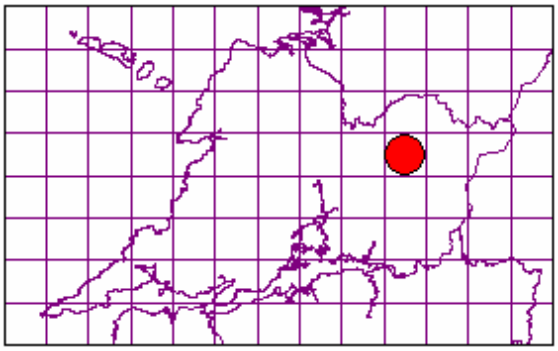
Hypoxylon fuscum (Pers.) Fr.

Very common on Hazel and will be ubiquitous on any site with Hazel.



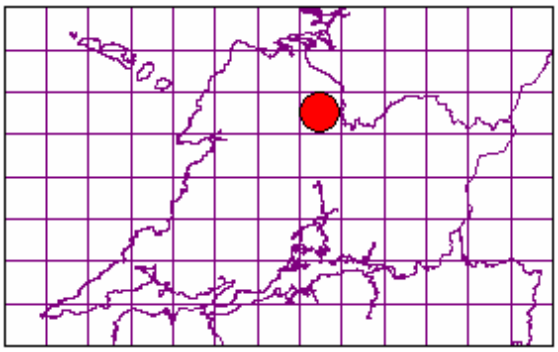
Peziza badia Pers.

A dark cup fungus found in profusion on the gravel on a forest road



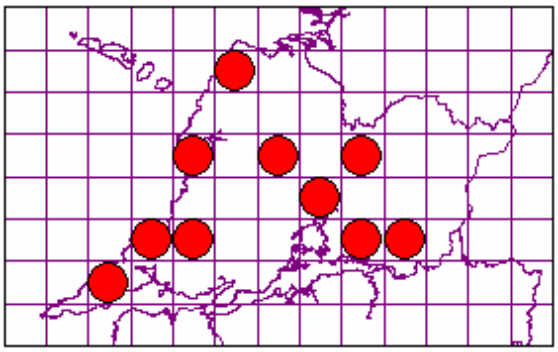
Rhopographus filicinus (Fr.) Nitschke ex Fuckel

A ubiquitous species on Bracken. Will be much more common as not systematically looked for.



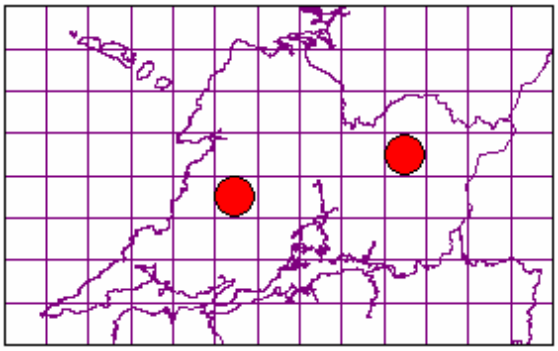
Rhytisma acerinum (Pers.) Fr.

Tar spot fungus found on Sycamore leaves



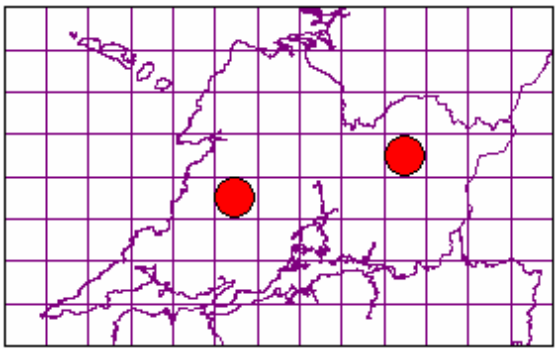
Rhytisma salicinum (Pers.) Fr.

Found on Salix leaves



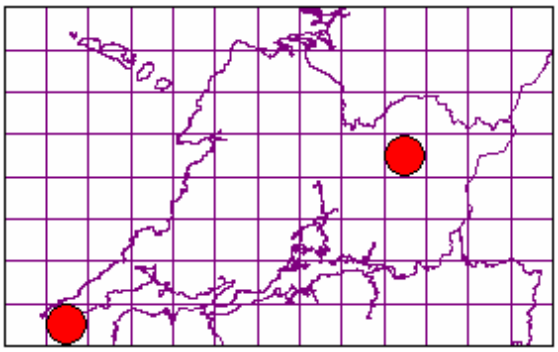
Trochila ilicina (Nees) Greenh. & Morgan-Jones

Very common on Holly leaves



Xylaria hypoxylon (L.) Grev.

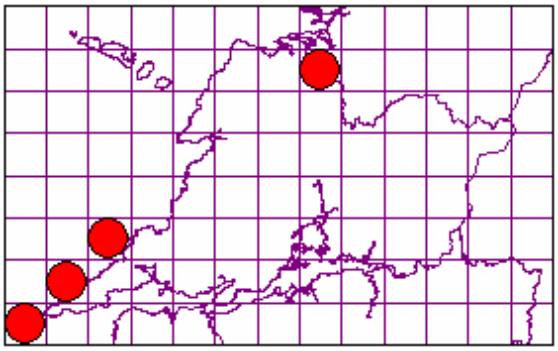
Candle Snuff Fungus. Very common on wood



Boletes and Agarics

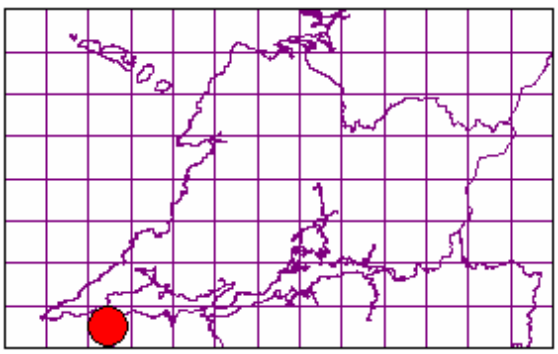
Agaricus arvensis Schaeff.

A common agaric with an aniseed smell. Possibly over-recorded mistaken for similar species, like *A.macrocarpus*



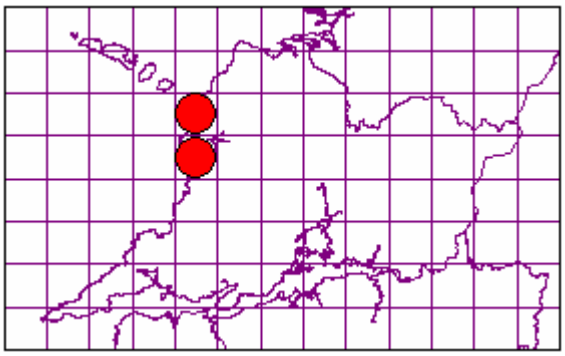
Agaricus moelleri Wasser

A more unusual (in Ireland) yellowing agaric with a strong unpleasant smell. Only published records for Ireland are from Northern Ireland. In Britain, it has a strong southern bias in distribution.



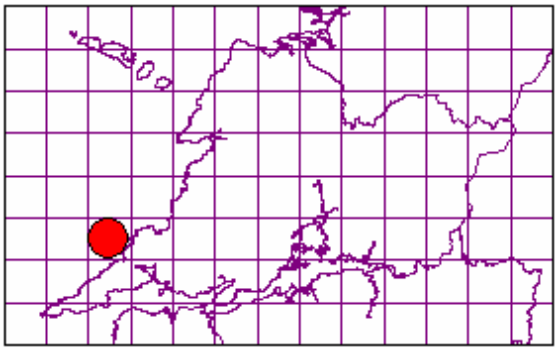
Agaricus silvaticus Schaeff.

A strongly reddening agaric usually found in woodland but also in grassland



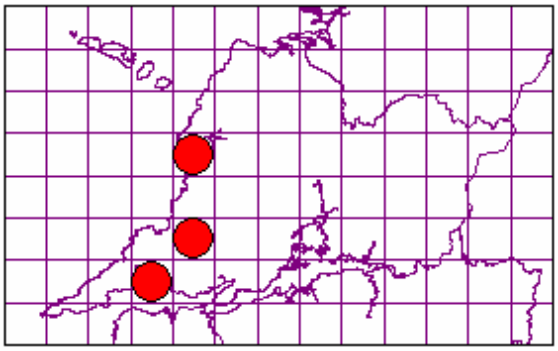
Agaricus urinascens (F.H. Møller & Jul. Schäff.) Singer

More commonly known as Agaricus macrosporus that can grow to very large sizes



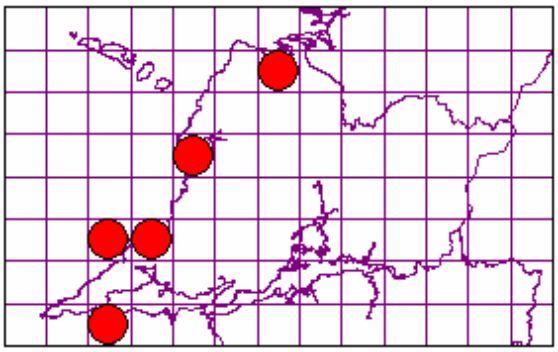
Armillaria gallica Merxm. & Romagn.

The most common Honey Fungus with a bulbous base. Not as pathogenic as A.mellea.



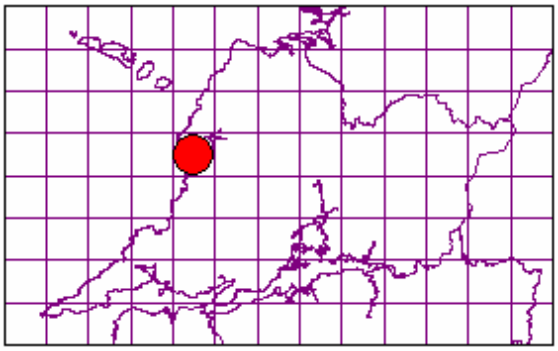
Bolbitius vitellinus (Pers.) Fr.

A common species found on decaying grass or dung



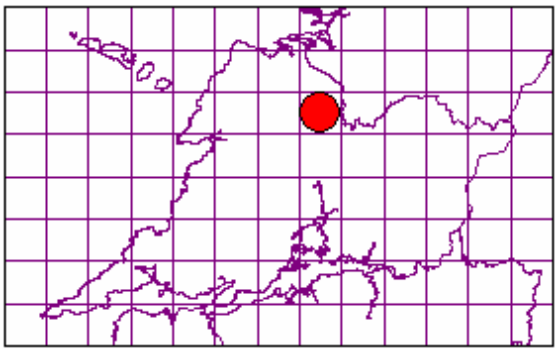
Calocybe carnea (Bull.) Donk

Not uncommon in grasslands



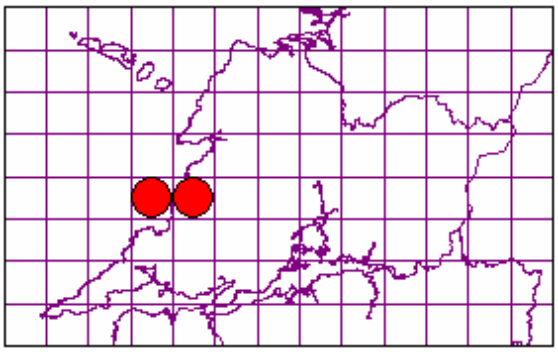
Chamaemyces fracidus (Fr.) Donk

Rarely recorded in Ireland - a notable record



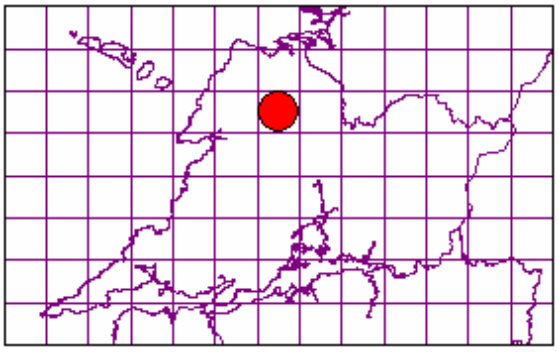
Clitocybe fragrans Sowerby

Not uncommon in grasslands



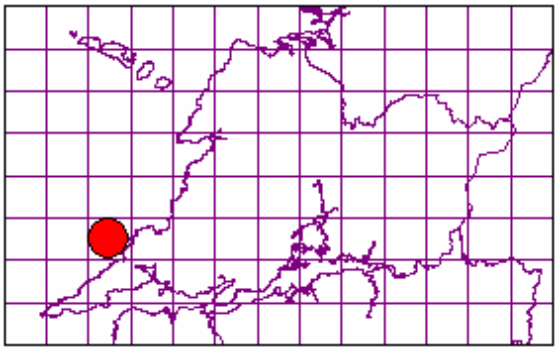
Clitocybe nebularis (Batsch) Quél.

The Clouded Agaric



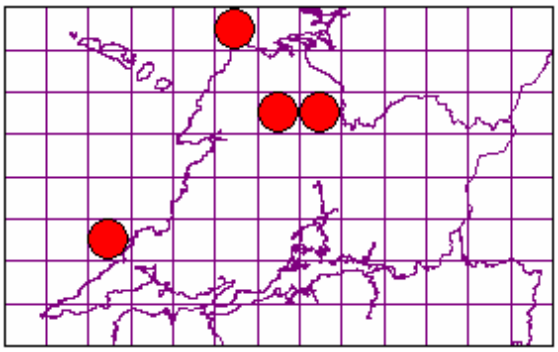
Clitocybe rivulosa (Pers.) Fr.

A poisonous species more commonly known as *C.dealbata*



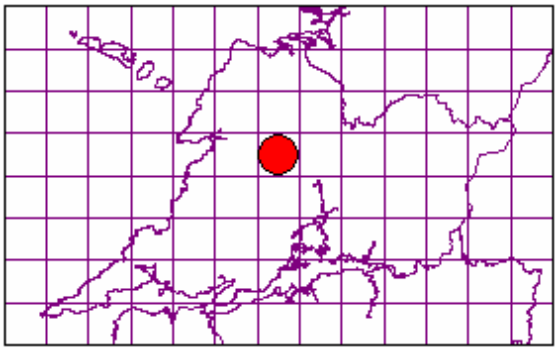
Collybia dryophila (Bull.) P. Kumm.

A very common species



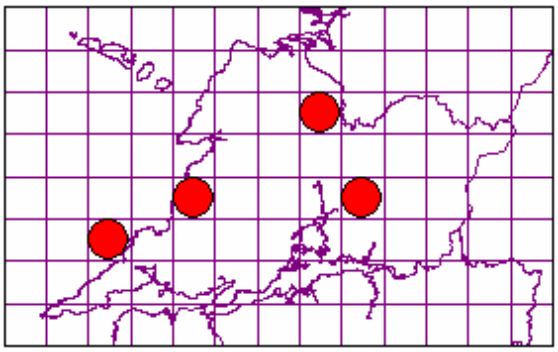
Coprinus atramentarius (Bull.) Fr.

The Common Inkcap



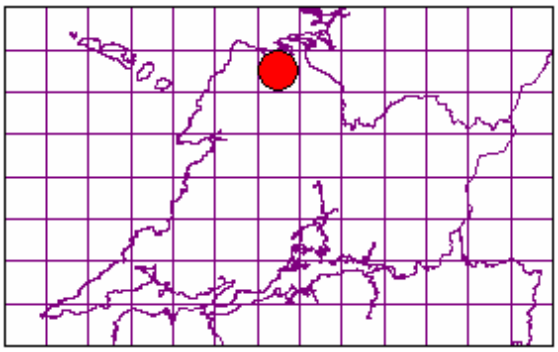
Coprinus comatus (O.F. Müll.) Gray

The Shaggy Inkcap



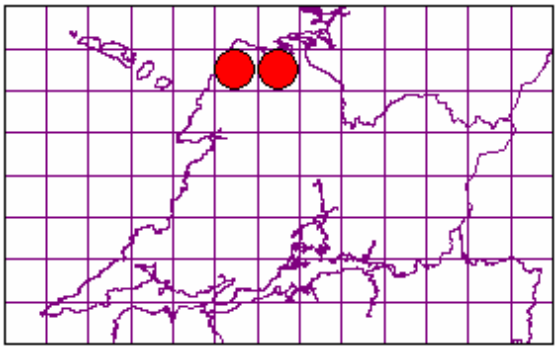
Coprinus niveus (Pers.) Fr.

A snowy white inkcap on dung



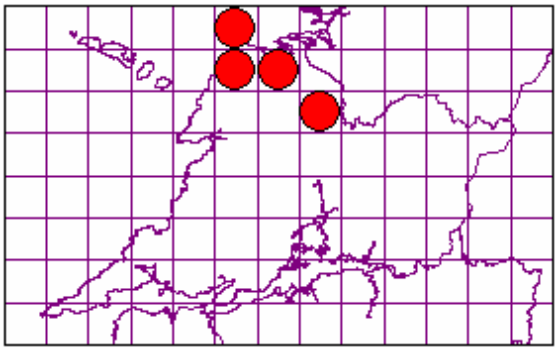
Cortinarius brunneus (Pers.) Fr.

An ectomycorrhizal species associated here with *Dryas octopetala*. Normally a pine associate



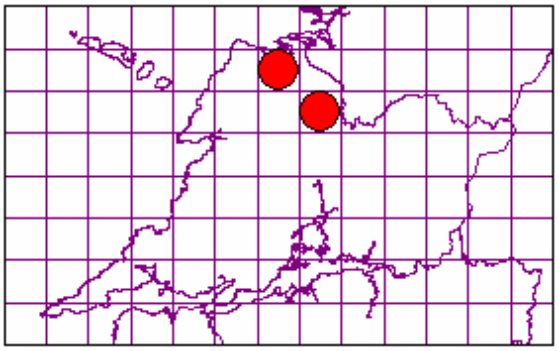
Cortinarius calochrous var. coniferarum (Pers.) Fr.

An ectomycorrhizal species associated here with *Dryas octopetala*. Normally a pine associate. Found with *Helianthemum nummularium* in Britain.



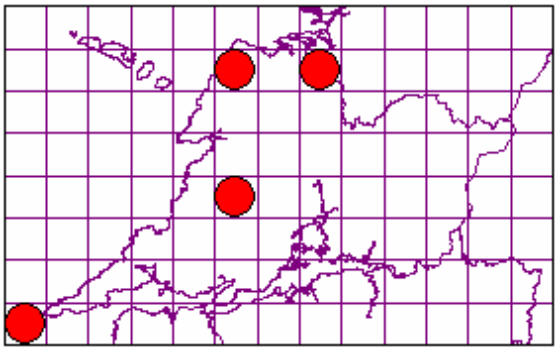
Cortinarius cinnamomeus (L.) Fr.

An ectomycorrhizal species associated here with *Dryas octopetala*. Normally associated with a variety of softwood and hardwood trees



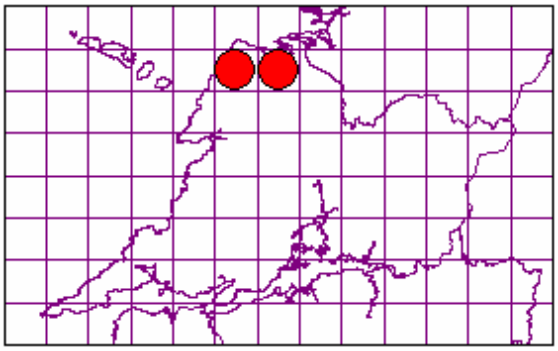
Cortinarius croceus Fr.

An ectomycorrhizal species often found in open grassland with no "usual" ectomycorrhizal species nearby. Possibly mycorrhizal with Carex species. Very similar to *C.cinnamomeus*



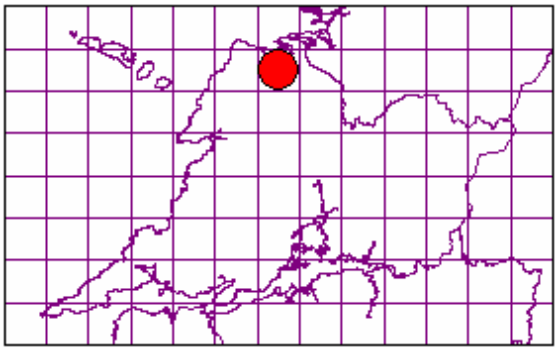
Cortinarius infractus Berk.

An ectomycorrhizal species associated here with *Dryas octopetala*.



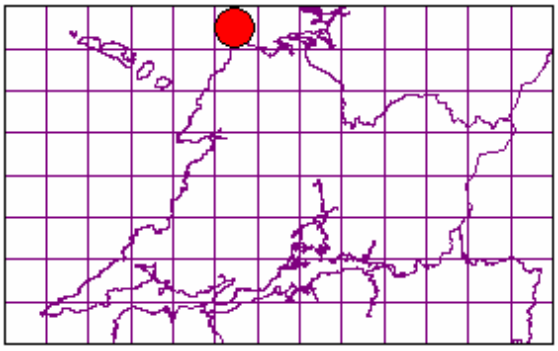
Cortinarius nanceiencis Maire

No other published records for Ireland or on FRDBI. Normally with Pine but found in England on *Helianthemum*. Goes purple with KOH on the flesh.



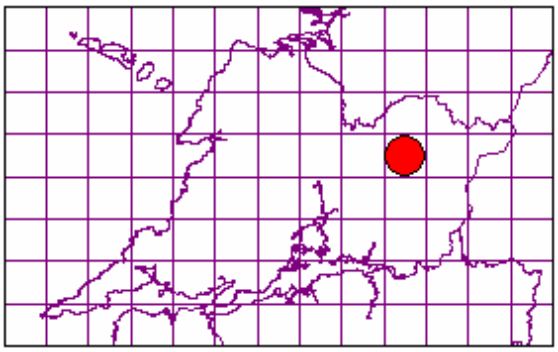
Cortinarius odorifer Britzelm.

An ectomycorrhizal species associated here with *Dryas octopetala*. Normally a pine associate. Smells strongly of aniseed.



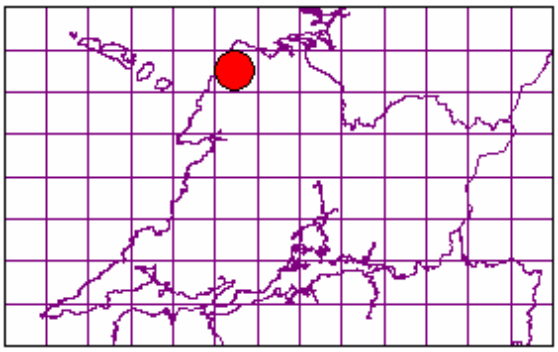
Cortinarius urbicus (Fr.) Fr.

Associated with Salix in conifer woodland. First record for Ireland but unfortunately, the dried specimen rehydrated and was lost.



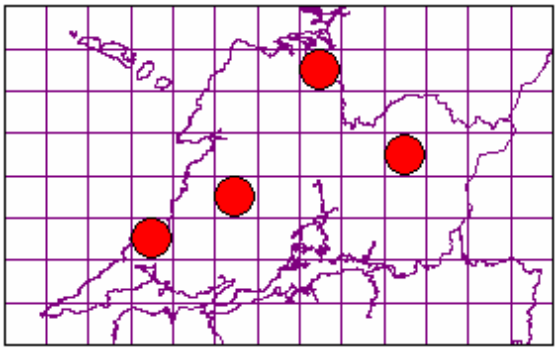
Cortinarius venetus (Fr.) Fr.

An ectomycorrhizal species associated here with *Dryas octopetala*.



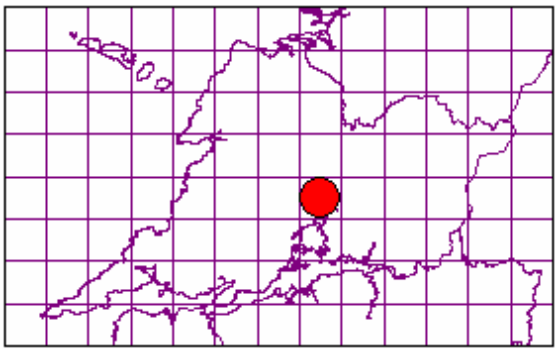
Cystoderma amianthinum (Scop.) Fr.

A common grassland species



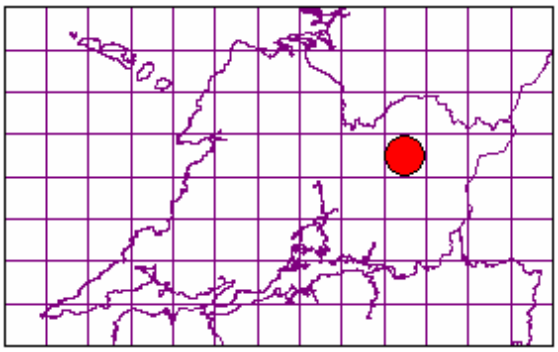
Galerina vittiformis (Fr.) Singer

Will be more common as it was not systematically looked for.



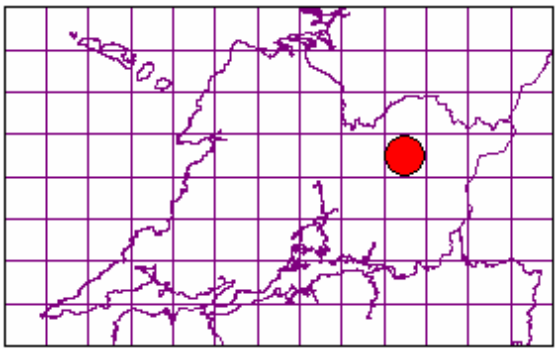
Hebeloma crustuliniforme (Bull.) Quél.

Often over-recorded with a strong radish smell. Spores are non-dextrinoid



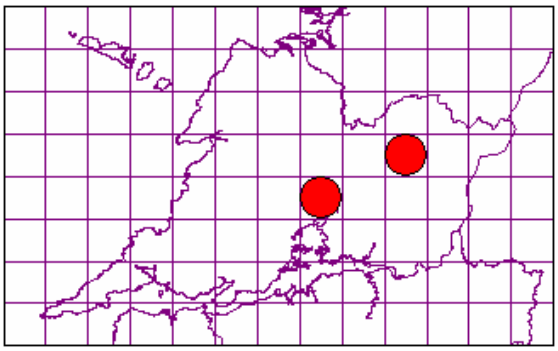
Hebeloma fragilipes Romagn.

A small delicate species. No other published records for Ireland or on FRDBI and found here in coniferous woodland with Betula.



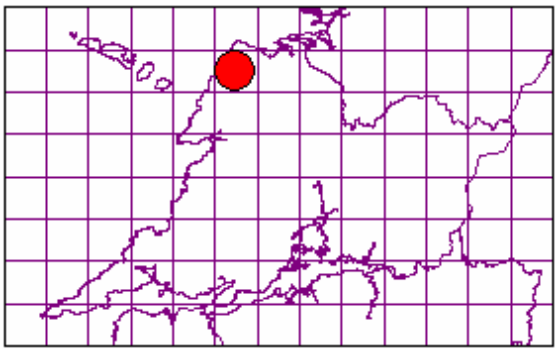
Hebeloma mesophaeum (Fr.) Fr.

A variable species with velar remnants on the cap.



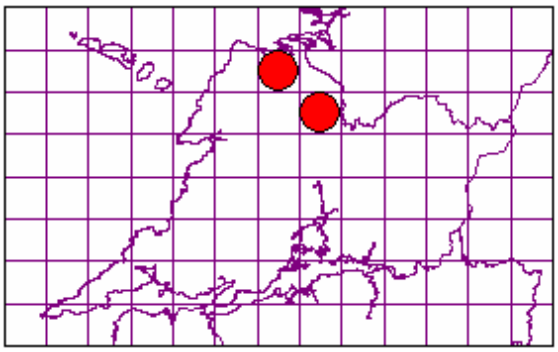
Hebeloma sinapizans (Fr.) Sacc.

One of the largest Hebelomas here found associated with *Dryas octopetala*



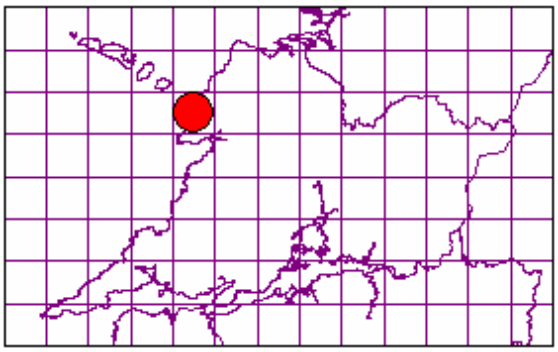
Hebeloma velutipes Bruchet

One of the most common species of Hebeloma with spores that are strongly dextrinoid. Found here with *Dryas octopetala*



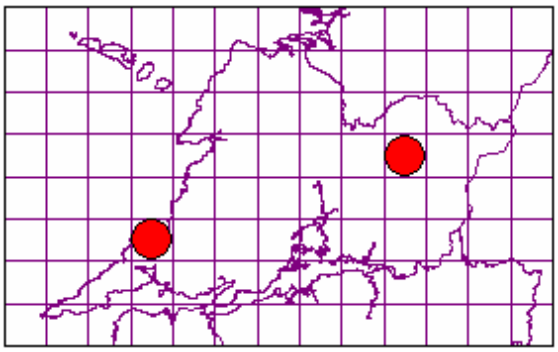
Hygrophoropsis aurantiaca (Wulfen) Maire

The False Chanterelle with orange gills like tuning forks



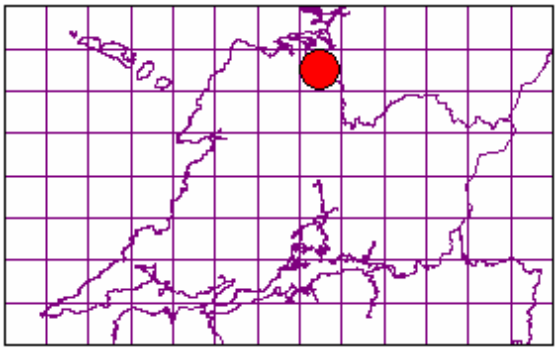
Hypholoma fasciculare (Huds.) P. Kumm.

The Sulphur Tuft. Very common



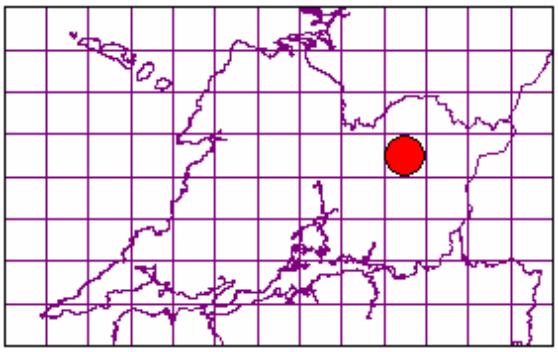
Inocybe geophylla var. lilacina Gillet

Common purple ectomycorrhizal species with brown spore print



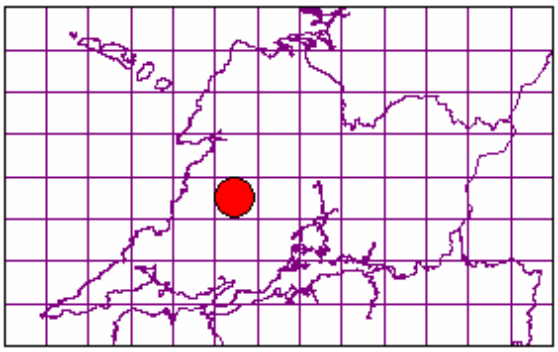
Laccaria laccata (Scop.) Fr.

The Deceiver which as its name suggests is very variable



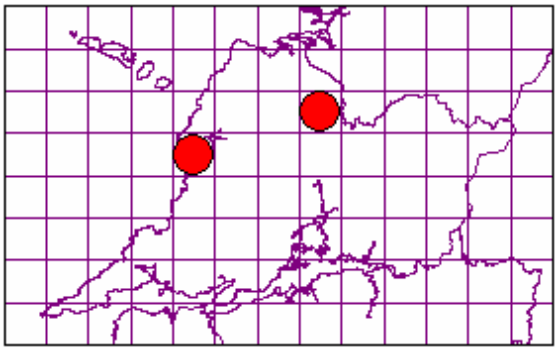
Laccaria proxima (Boud.) Pat.

Similar to the Deceiver but with a long fibrous stipe and different spores



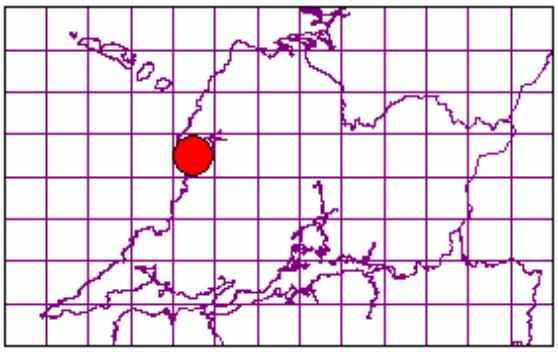
Lacrymaria lacrymabunda (Bull.) Pat.

The Weeping Widow with dark drops on the gills



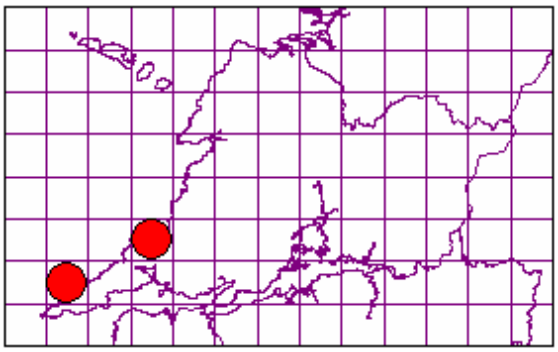
Lactarius glyciosmus (Fr.) Fr.

A coconut smelling milk cap usually found with Betula



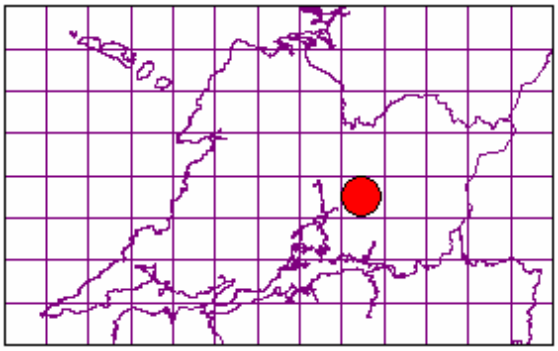
Lactarius lacunarum Romagn. ex Hora

Notably found on the Salix repens in coastal heath in this survey. Usually in damp woodland



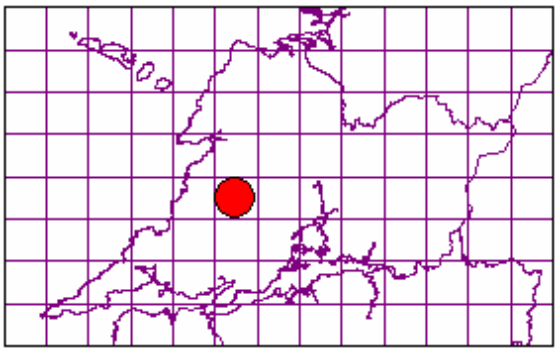
Lactarius pubescens Fr.

Commonly associated with young Betula



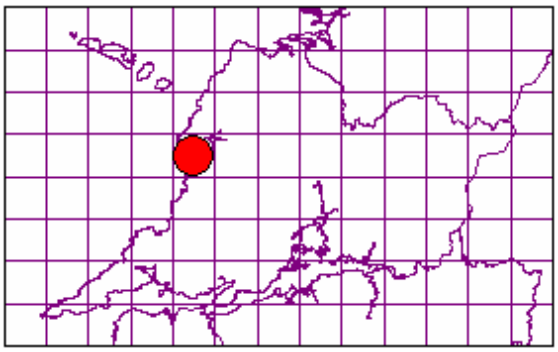
Lactarius rufus (Scop.) Fr.

A dark red milk cap with fiery tasting milk under conifers



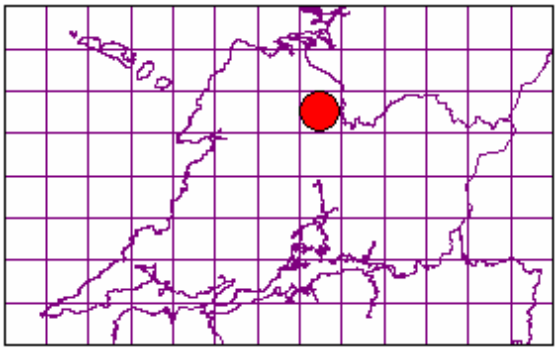
Lactarius tabidus Fr.

Usually with Betula. Milk is white turning yellow on a handkerchief



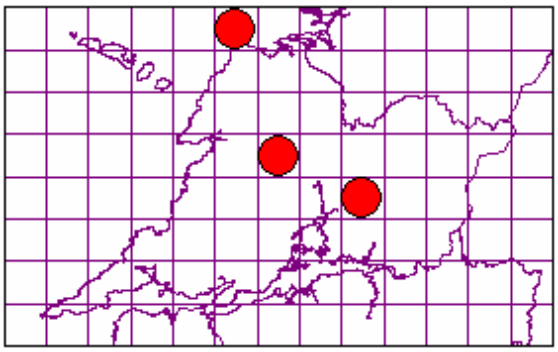
Lepiota aspera (Pers.) Quél.

A large unusual species with a very scaly cap



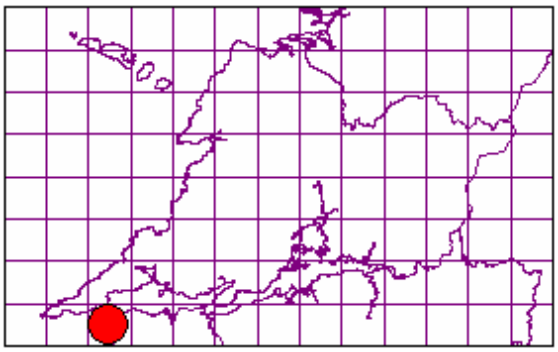
Lepiota cristata (Alb. & Schwein.) Quél.

A small species with a brown scaly cap and a very strong distinctive smell



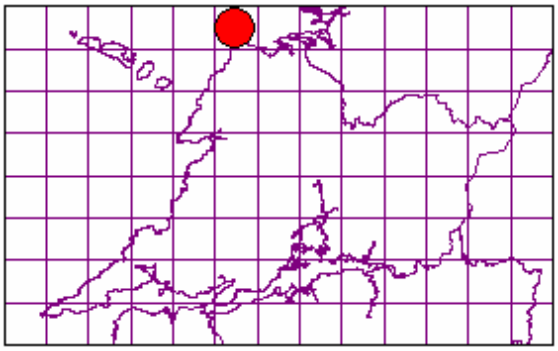
Lepista flaccida (Sowerby) Pat.

Common in woodland



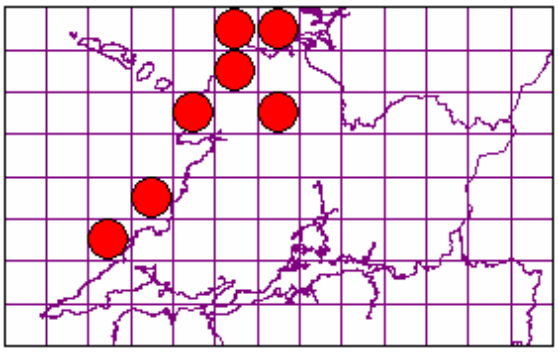
Lepista irina (Fr.) H.E. Bigelow

Large pale species with a pink spore print. A notable record for Ireland



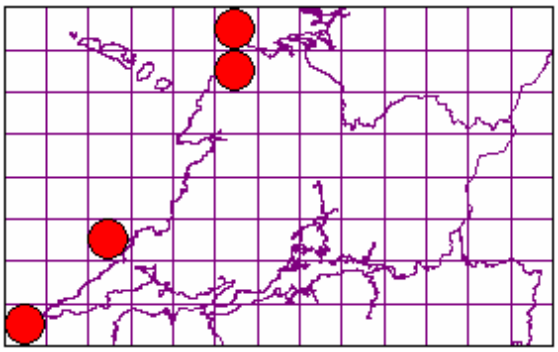
Lepista nuda (Bull.) Cooke

Wood Blewit - very common



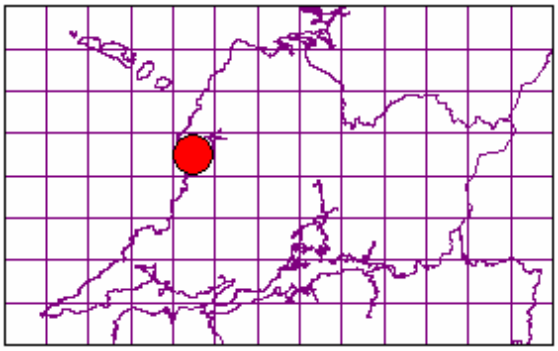
Lepista panaeolus (Fr.) P. Karst.

Unusual species of Lepista with grey brown colours



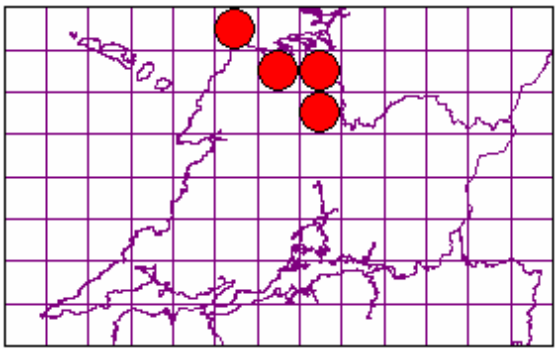
Leucoagaricus leucothites (Vittad.) M.M. Moser ex Bon

A notable record for Ireland of a large distinctive species



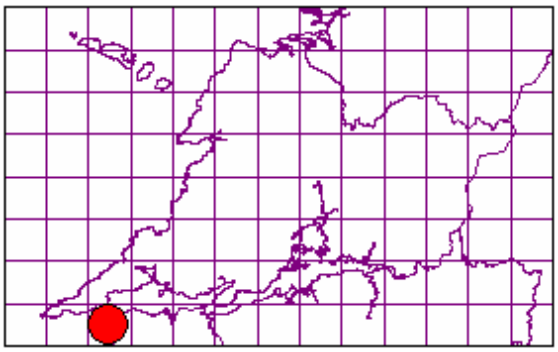
Leucopaxillus giganteus (Sowerby) Singer

A large species occasionally found in grassland but usually in woodland



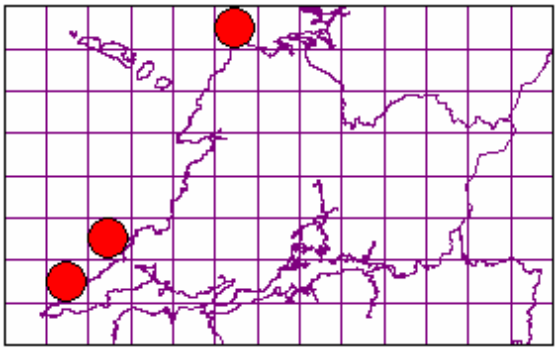
Macrolepiota procera (Scop.) Singer

Large species with a scaly cap and stipe



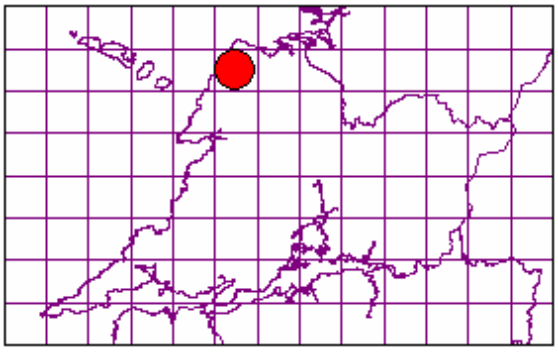
Marasmius oreades (Bolton) Fr.

The Fairy Ring Champignon with a very tough stipe



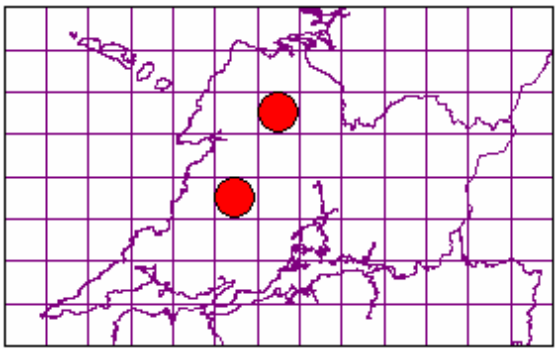
Mycena alcalina (Fr.) P. Kumm.

With a strong nitrous smell



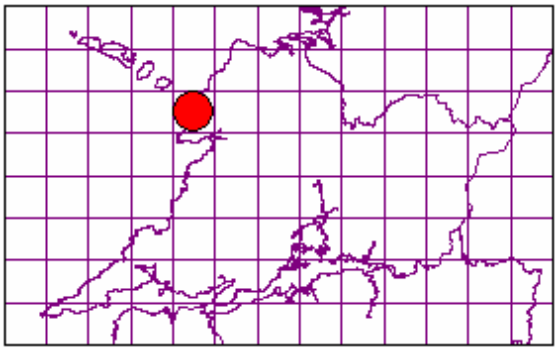
Mycena epipterygia var. epipterygia (Scop.) Gray

Has a cap with a viscid layer that can peel off.



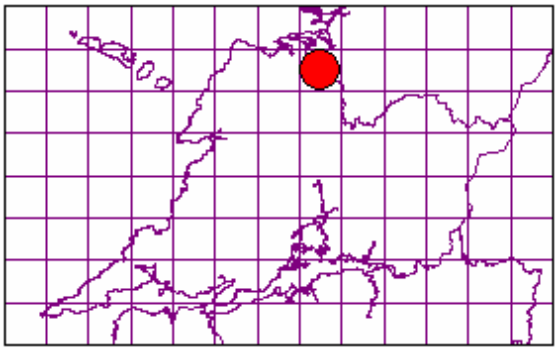
Mycena flavoalba (Fr.) Quél.

A small common white species in grassland



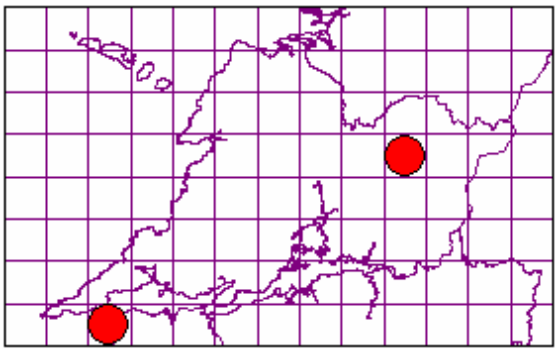
Mycena galericulata (Scop.) Schaeff.

Common on wood



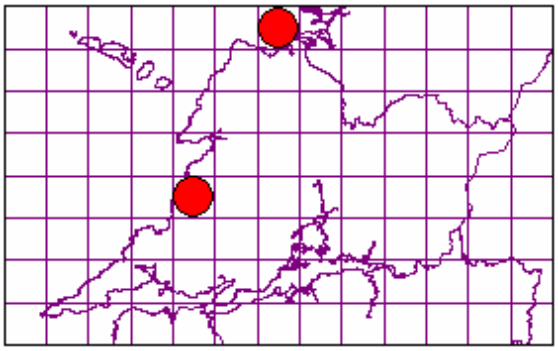
Omphalina ericetorum (Bull.) M. Lange

Often found in peat habitats



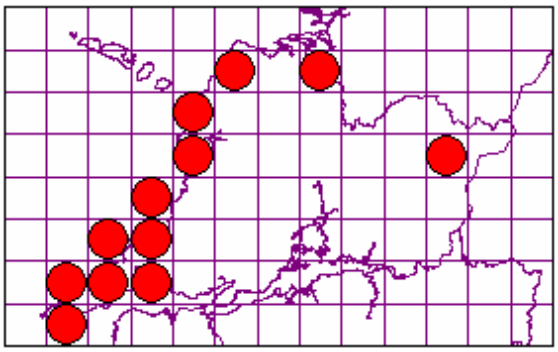
Panaeolina foenisecii (Pers.) Maire

Very common in domestic lawns



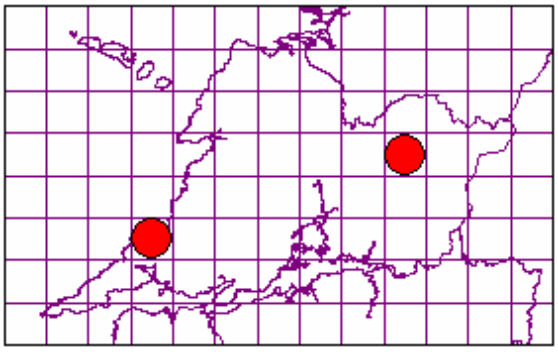
Panaeolus acuminatus (Schaeff.) Gillet

Very common



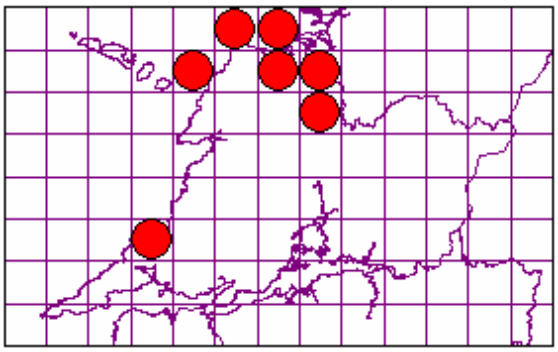
Panaeolus fimicola (Pers.) Gillet

A dark species of Panaeolus with distinctive spores



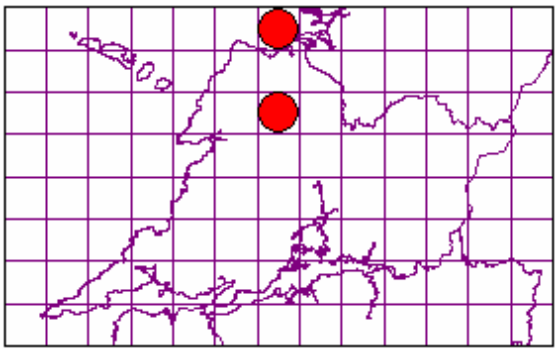
Panaeolus papilionaceus var. papilionaceus (Bull.) Quél.

Very common – includes what was known as *P.sphinctrinus*



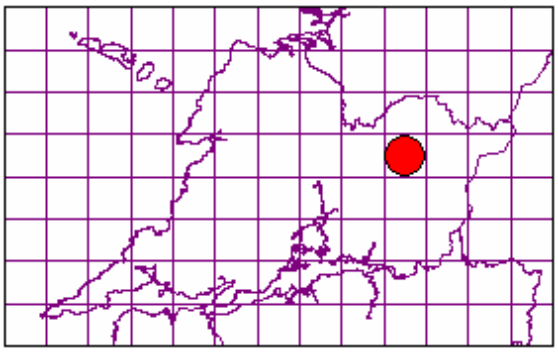
Panaeolus papilionaceus var. parvisporus Ew. Gerhardt

Very common - more commonly known as *P. campanulatus*



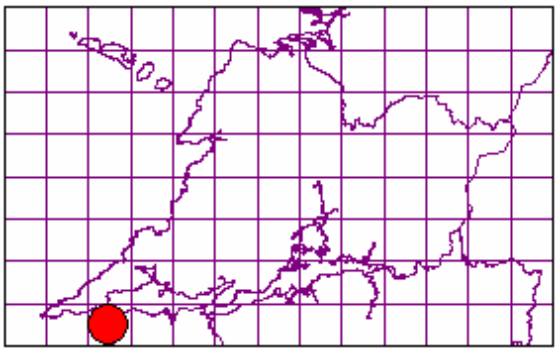
Paxillus involutus (Batsch) Fr.

The brown roll-rim. Usually found under Betula but here with Picea



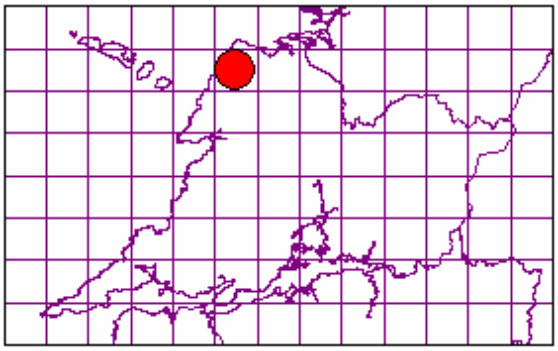
Pluteus plautus (Weinm.) Gillet

First record for Republic of Ireland and only recorded once in Northern Ireland. Found on buried wood on Rehy Hill



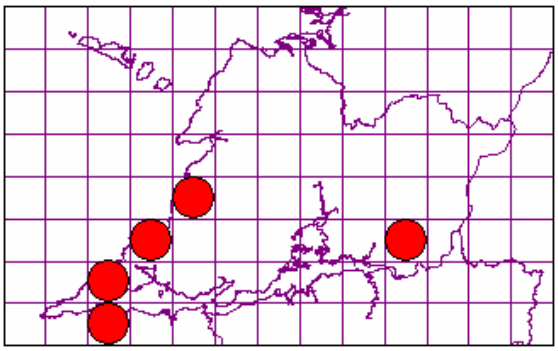
Psilocybe semilanceata (Fr.) P. Kumm.

The Magic Mushroom.



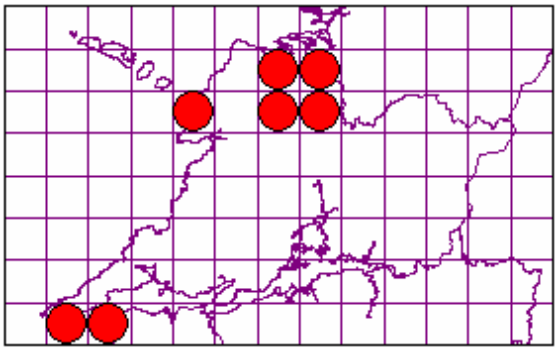
Schizophyllum commune (L.) Fr.

Found on silage bales. Appears to be very common in Clare as these records were made whilst driving and it was not systematically looked for. Can badly affect the quality of the silage



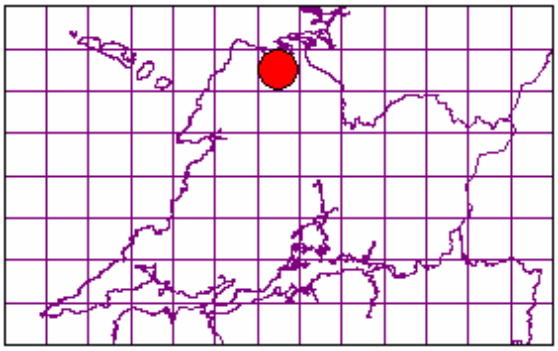
Stropharia semiglobata (Batsch) Quél.

Very common on dung



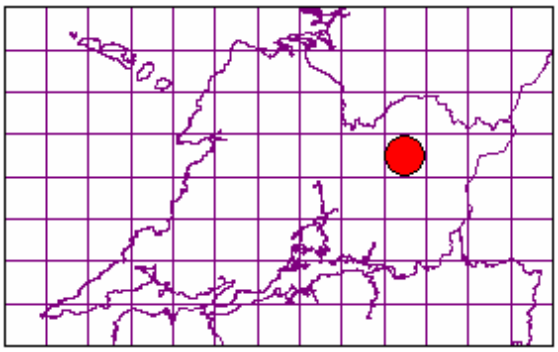
Tricholoma scalpturatum (Fr.) Quél.

An ectomycorrhizal species found here with Dryas octopetala



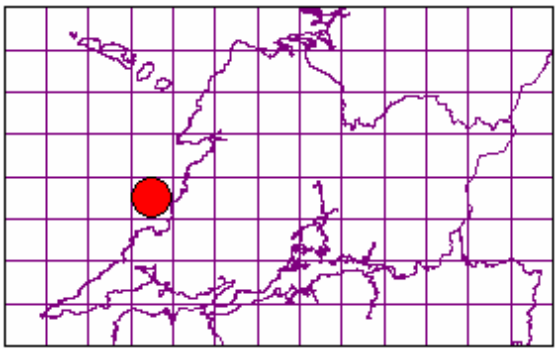
Tricholomopsis rutilans (Schaeff.) Singer

Plums and Custard. Found on wood



Volvariella gloiocephala (DC.) Fr.

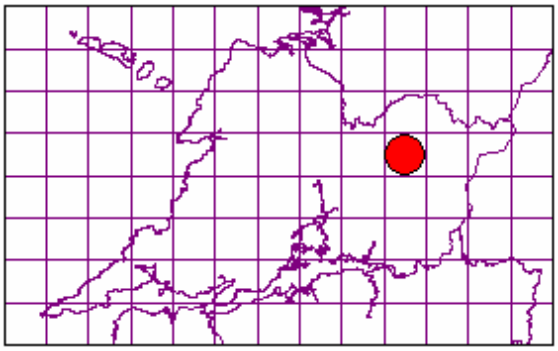
Large pink spored species with a volva. Often in fertilised places



Gasteroid Fungi (Puffballs, earthballs, earthstars etc)

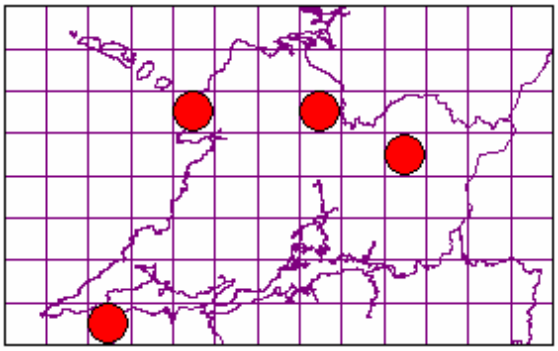
Lycoperdon nigrescens Wahlenb.

A puffball with black scales found in grassland



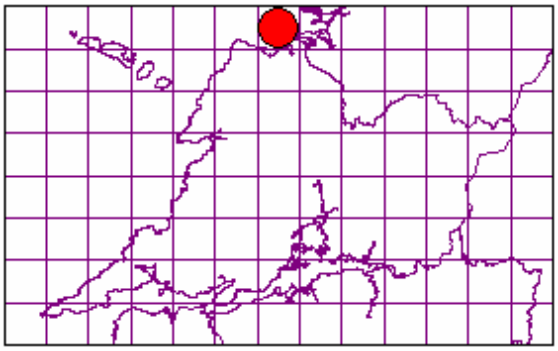
Lycoperdon pyriforme (Schaeff.) Pers.

Always found on wood



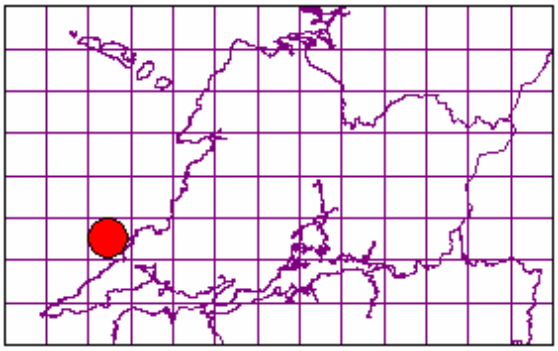
Tulostoma brumale Pers.

The Winter Stalked puffball. Rarely recorded in Ireland and the first record for Clare



Vascellum pratense (Pers.) Kreisel

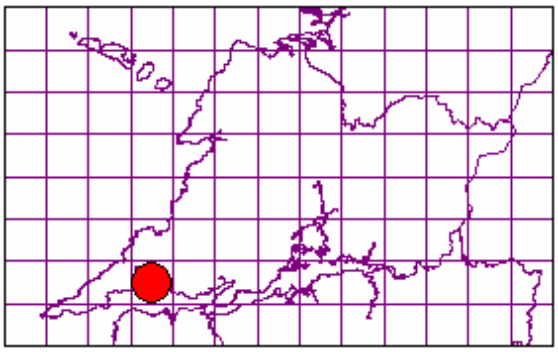
A common grassland puffball



Heterobasidiomycetes (jelly fungi)

Calocera cornea (Batsch) Fr.

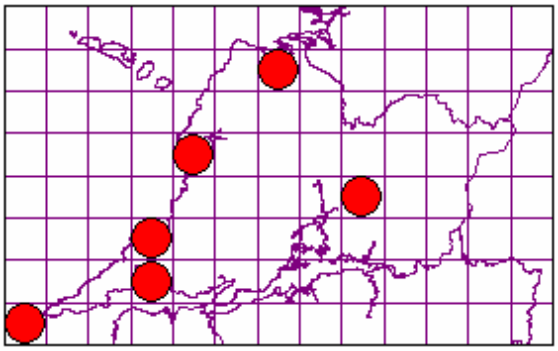
A common jelly fungus on decaying wood



Myxomycetes (Slime Moulds)

Mucilago crustacea Mich.

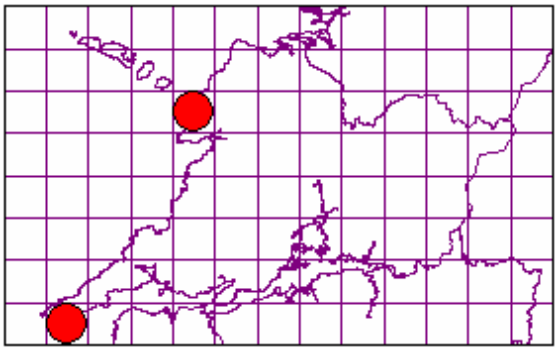
A slime mould in grass that looks like vomit. Normally lives in the soil digesting bacteria and moves up onto grass to fruit.



Powdery Mildews

Erysiphe sordida L. Junell

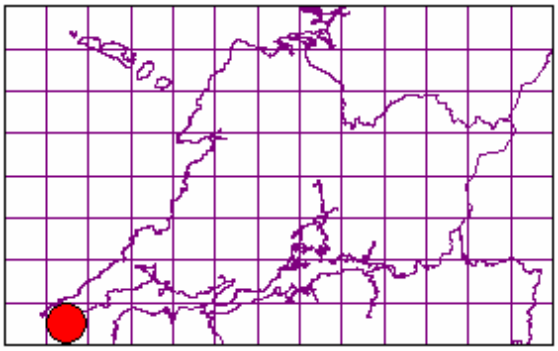
A powdery mildew on Plantago. Will be more common as it was not systematically looked for.



Rusts and Smuts

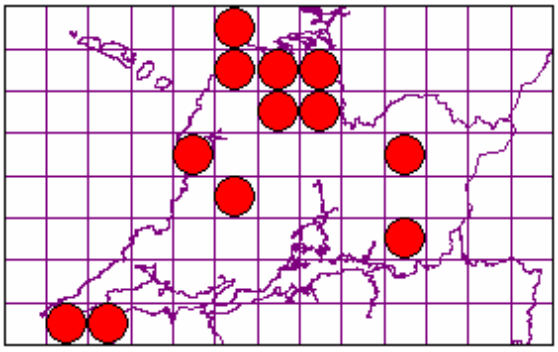
Miyagia pseudosphaeria (Mont.) Jørst.

A common rust on Sonchus. Will be more common as not systematically looked for



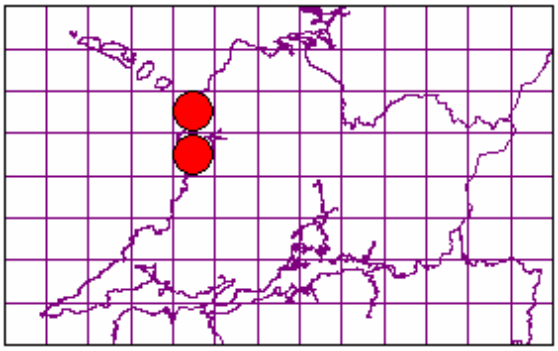
Phragmidium violaceum (Schultz) G. Winter

Very common rust on Bramble. Will be more common as not systematically looked for



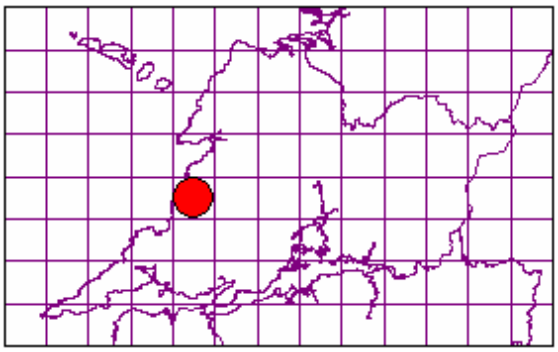
Puccinia behenis J. Schröt.

A more unusual rust on Sea campion



Puccinia poarum E. Nielsen

A common rust on Coltsfoot. Will be more common as not systematically looked for



Puccinia pygmaea var. ammophilina (Mains) Cummins & Greene

A common rust on Marram grass. Will be more common as not systematically looked for