

## DNA Sequencing Results

Update March 2026

### Waxcaps

- *Cuphophyllus aff. fornicatus*: Mentioned in the last report, yet again from the Curragh, I now have a sequence in the other direction for this lengthening and improving the quality of the sequence. It remains nearest to *fornicatus* but clearly different from it and looks like an undescribed species. Sounding others out, David Harries in Wales has a matching sequence so it has been found elsewhere. Now to work out where to go next with this... Found by Mo Rainey in the military graveyard.



- *Gliophorus psittacinus*: The Parrot waxcap is so variable in colour that I fear it may turn out to be a complex of species. We had a warning of this when I found this identification on iNaturalist: <https://www.inaturalist.org/observations/140830993> from Ward Park. It was identified at *Gliophorus reginae* but it isn't. I queried it and a researcher from Slovakia who has described a number of new waxcaps jumped in saying it looks like one undescribed *Gliophorus* that he has had from Slovakia ([https://www.nahuby.sk/obrazok\\_detail.php?obrazok\\_id=842308&poradie=16&form\\_hash=cb8b2d8ef46868eaa703243c1e513a99](https://www.nahuby.sk/obrazok_detail.php?obrazok_id=842308&poradie=16&form_hash=cb8b2d8ef46868eaa703243c1e513a99)). Robert, Lesley and Maia are going to look out for it this year so when I had one oddish Parrot at Agnew's Hill that had no green on the cap but did on the stipe, I sequenced it. The Kew paper that described *Gliophorus reginae* and *G. europ perplexus* (<https://mycokeys.pensoft.net/articles.php?id=1198>) had a tree that suggested that there was more than one clade of *G. psittacinus*. This find clustered with the Hungarian sequences in their tree. This is one to put away for now and re-examine when more work is done on the area.



*Gliophorus psittacinus*, Agnew's Hill

- ***Hygrocybe cf. aurantiocitrina***: More sequences of this part of the *insipida* complex from the Giant's Causeway and the Curragh. I have now got more sequences of *aurantiocitrina* than *garajonayensis* and still only one *insipida*. I am beginning to wonder if this is the true *insipida* as it could be a problem of naming new species in a complex without tackling the whole complex. I think the type of *insipida* remains to be sequenced. These sequences are still just below 99% match to the type even after getting a second sequence in the other direction and merging the two.



*Hygrocybe cf. aurantiocitrina*

- ***Hygrocybe parvula***: An update on the Glendun finds that could turn out to be the first European finds of this normally American species. There is no type sequence of *H. parvula* but there are sequences from the type locality. I now have a second sequence in the opposite direction and when the two are put together, they give more confidence about the identification. The match is still just under 99% and ideally you want better but one of the differences is a repeated block of base pairs, in this case TAATCTAATC in my sequence whilst the sequence from the type locality has just TAATC. This, apparently, is not as important a difference as a base pair difference e.g. a C instead of a T and, if ignored, would mean the difference is about 99.3% which is more respectable. I need this confirmed though so there is still some doubt....
- ***Hygrocybe cf. phaeococcinea***: Another nice sequence but with another curious result. There is one very close match (99.58%) to a Kew sequence of *phaeococcinea*, but also not near to a lot of other sequences of *phaeococcinea* (only 97.1% and less). Does that mean that there are actually two species in here? Possibly. Many waxcaps surprisingly need reference sequences or type sequences. This one is a bit curious for *phaeococcinea* being more yellow-orange than red and with no blackening on the cap. David Boertmann does say that this form of *phaeococcinea* is very rare – but is it different?? Found by Simeon Cathcart at Giant’s Causeway. A much more typical scarlet specimen was found in the same field (the hay meadow near the upper car park) but I haven’t managed to get a sequence from that yet.

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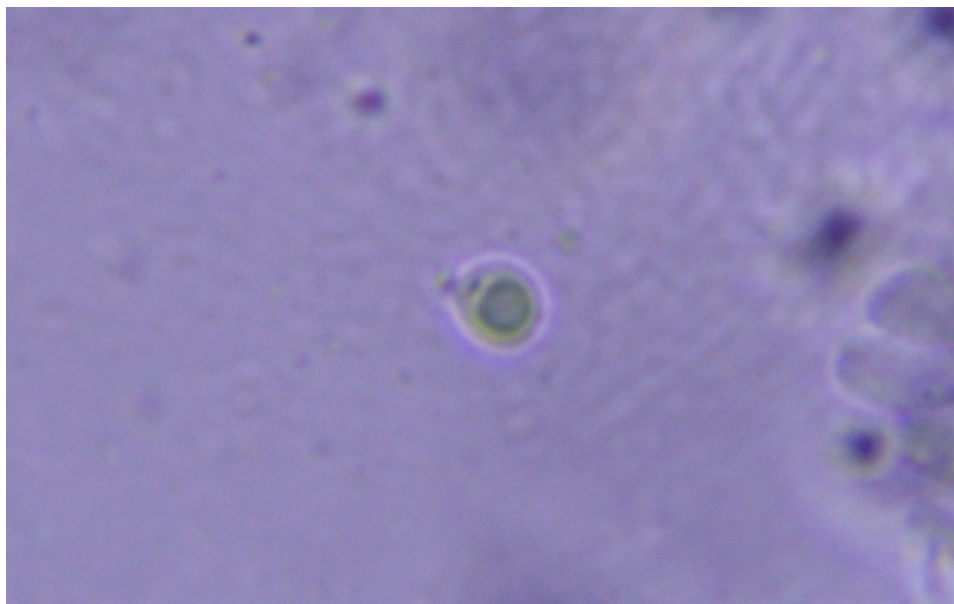
*Hygrocybe cf. phaeococcinea*, Giant’s Causeway

## Fairy Clubs

- ***Ramariopsis minutula***: Found by Mo Rainey at Mount Stewart on 25/10/2025, this is a small delicate white branching fairy club. There are a number of species that look like this including *R. kunzei* s.str., *R. subtilis* and *R. tenuiramosa* and a microscopic look is critical. This one had very small subglobose spores averaging  $3.7 \times 2.9\mu\text{m}$  with hardly any ornamentation. The sequence alas hardly help as there are almost none available for a number of things in this section but this clearly keys to *R. minutula* in the Italian Clavarioid book.



*Ramariopsis minutula*, Mount Stewart. Photo by Mo Rainey



*Ramariopsis minutula* spore showing virtually ornamentation at x1000. Other spores looked as if they may have some ornamentation but it was definitely not prominent. With spores this tiny size, if there was clear ornamentation, it would likely be *R. tenuiramosa*

## Pink Gills

- ***Entoloma clandestinum***: Found on the Giant's Causeway, this is one of the most common of the *Nolanea* group. It used to be known as *E. papillatum* and has a thin stipe and small nipple on top. Similar in many ways to the equally common *E. infula* from which it is distinguished by its longer spores (averaging more than 10µm).
- ***Entoloma hirtipes***: This is often labelled as a coniferous woodland species but the current concept of this species includes what used to be called *E. kuehnerianum* which was a grassland species. The stipe here was noticeably long and thin and the smell was a strongly mealy. Found on Agnew's Hill. Only two other NI records although the *Nolanea* group is often not recorded.



*Entoloma hirtipes*, Agnew's Hill

- ***Entoloma jubatum***: One more sequence of this not uncommon fibrillose *Entoloma* from Tievebullagh found by Jolanda. Unfortunately, no photo. Like a small *E. porphyrophaeum* but without the reddish colours. With lecythiform cheilocystidia.
- ***Entoloma turbidum***: There are two very close species, *E. turbidum* and *E. pseudoturbidum* both with small almost subglobose spores. Normally *Entoloma* spores are very distinctly shaped with 4 or more distinct angles but the angles on these spores are weak making them look subglobose. In some books, these were transferred to *Entocybe* but this has been rejected in recent work and they are back to *Entoloma*. The dark centre paling to the cap edges is typical. Descriptions say that *turbidum* is more typical on heaths and woods and it is *pseudoturbidum* that is in grasslands

but these sequences are clearly *turbidum*. Two finds on Linford Barrows both by Chris Stretch. There are a few scattered records in Northern Ireland.



*Entoloma*

*turbidum*, Ballycoos Hill

## Others

- ***Cortinarius pratensis***: This specimen was one of the largest grassland “Cortinarius” that I have seen measuring over 4cms wide but apparently they can be up to 6cms. Most in Ireland are much smaller. Found on Keble by Hazel Watson.



*Cortinarius pratensis*, Keble NNR

- ***Lyophyllum sp.***: Puzzling microscopically and puzzling molecularly. Found on Ballycoos Hill by Chris Stretch. I thought in the field it could be a *Mycena* but the microscope said otherwise. It only comes close to one other sequence on GenBank to a specimen labelled *Lyophyllum sp.* A recent paper by Bellanger et al on the *Lyophyllaceae* puts this sequence in a clade which includes species of *Lyophyllum*, *Clitocybe*, *Tephrocybe* and *Hypsizygus* – a real hotch potch. This unnamed species is in a subclade all by itself. I will upload it to GenBank as “*Lyophyllum sp.*” so hopefully the sequence can be picked up by future researchers.



*Lyophyllum sp.*, Ballycoos Hill

- ***Pseudoomphalina***: Our mystery *Pseudoomphalina* first found on Rathlin at Roonivoolin back in 2021 now finally has a second site – at the other end of Rathlin. Found by Jolanda (again) at Kebble NNR. I’m working on a few more possibilities so hopefully more to report on this soon.



*Pseudoomphalina sp.*, Kebble NNR

- ***Volvariella similis***: A first British Isles record. Yet another notable find from the Curragh. This grassland species was only described in Denmark in 2024 and, until now, was only known from there. A very silky pale cap with a pubescent stipe and a brownish volva at the base of the stipe. The gills were white when fresh but are orangey pink when dried. Typical of *Volvariella*, with large smooth pink spores. Two finds, one by Patrick Mitchel and one by Mo Rainey both just outside the military graveyard on the Curragh. I have no idea who had the first record so both can have the honour.



*Volvariella similis*, The Curragh



*Volvariella similis*, The Curragh