

## DNA Sequencing results

18<sup>th</sup> February 2025

This is a short summary of the latest sequencing results since November 2025

- *Entoloma viudense* from Ballygalley Head ASSI. New to Ireland. Found on 30/10/2023 by myself. This was only recently reported from the UK although there are now a handful of scattered records. I wonder if we have mixed this with *Entoloma anatinum* although microscopically they are different. The blue scaly cap is a key feature.



- ***Entoloma coracis***. This is a new British record and was first found at Little Deer Park ASSI near Glenarm in 2022. I got a successful sequence in the other direction to back up the first sequence. As sequences are always strongest at the start, by combining a forward and reverse sequence, you can get a longer better quality sequence. I had two more sequences of this from Knockmore and Clyhannagh on the Marlbank so it looks like this could be the most common species in the very dark *Entoloma corvinum* group now that it has been split up. *E. corvinum* s. str. has not been confirmed in the UK to my knowledge. Note that some older specimens can have a black gill edge.



- ***Lyophyllum fumosum*** clade Vb10 from Belfast Harbour Estate with the NIFG. *L. fumosum* is a complex that hasn't been resolved. This clustered in Clade Vb10 so we await work on this complex to resolve what actual species it is. Debbie's photo



- ***Microglossum truncatum***. Another of the green earth tongues – from Legalough on the Marlbank. This is proving to be the most common of our *Microglossums* but curiously none of the specimens would have keyed to it as they all have small spores while the published keys say that *truncatum* has large spores. This has also been found in sequences from Wales and shows that all green *Microglossums* should be dried for later examination as the keys are not dependable.



- ***Dermoloma alexandri***. I had the first Irish record of this last year from Gortmaconnell Rock on the Marlbank and have had two more sequences of it from Brookfield and Legalough also on the Marlbank. The Brookfield specimen showed its classic brown cap but the Legalough specimen was a more typical dark grey *Dermoloma*. It had basidia with a mix of sterigmata from 2 spored to 4 spored which is unusual. Very few British records.



- ***Entoloma sect rhynchocystidium***. This is from Gortmaconnell Rock last year and is unresolved. It comes out near to *Entoloma dirensis* but this was described in Pakistan. The group is being worked on the Chiel Noordeloos and colleagues have a paper about to come out on the group. Once out, more sequences will be published on GenBank and it will hopefully be possible to resolve this one. Noordeloos told me that the one sequence of *E. catalaunicum* that this is also near to is misidentified which illustrates one problem of sequencing....



- ***Entoloma jubatum***. From Cloghan Hill on the Marlbank. Not an uncommon species but it is good to have identifications confirmed in this difficult group. No photo alas.
- ***Entoloma sericellum***. Another not uncommon species but in Mullynacooagh Wood (Crom) and not grassland so was worth checking.
- ***Entoloma sericeum***. Also not uncommon but worth checking given the ongoing revisions in this group. From Cloghan Hill on the Marlbank.

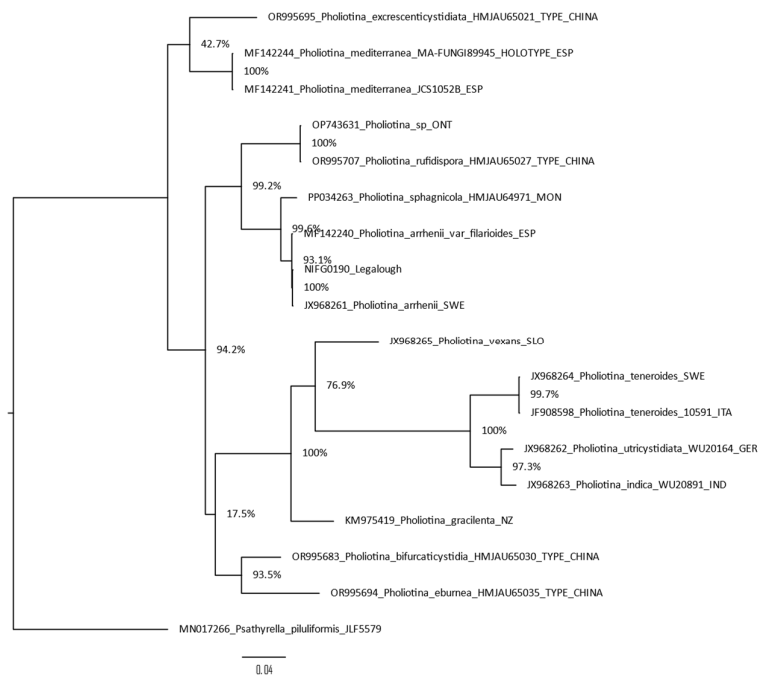
- ***Hodophilus anatinus***. A second find of this species. The first Irish record was from Cloughey Dunes in 2022. This was from Brookfield on the Marlbank. To get to it in the key, you need to go to the Yellow Stiped group of Hodophilus....



- ***Lepista irina***. The Flowery Blewit with a very strong perfume smell. Only the 4<sup>th</sup> record for Northern Ireland. From Clogan Hill on the Marlbank



- Pholiotina arrhenii*** – From Legalough on the Marlbank. This one does confuse me. It has a 99.69% match to a sequence of *P. arrhenii* that was listed as *arrhenii* in the latest paper on the group and it clusters tightly with this group in a phylogenetic tree. However it had no obvious ring (but this may have been lost) and the spores seemed too large. It is always possible that it is a of a new undescribed closely related species....



- ***Melanoleuca friesii*** One previous record of this species from NI from a churchyard in Monea. Found in Derryvore woodland in Crom Estate. Now this group is finally very well understood after a series of papers by Antonin, it could be very interesting to work out what species we actually have...



- ***Agaricus friesianus***. New to Britain. A small *Agaricus* in the *Minores* group marked by its small spores, this smelt very strongly of almonds. Found by Marie-Claire Valley in Reilly Wood. No photo unfortunately as it was pouring rain. 99.70% match to the type specimen. Confirmed by forward and reverse sequence.
- ***Alnicola (Naucoria) spectabilis/pallidifolia*** The research for this is ongoing but potentially another new British record. Found by Chris Stretch in Coleraine (as *amarescens*) and myself at Mullynacoagh Wood under Alder at the wet lough edge (as *luteolofibrillosa*). The match is good but I now need a sequence in the other direction to confirm and to create a better improved consensus sequence.

- ***Cortinarius decipientoides*** From Reilly Wood. First Irish record. Probably will not be too unusual.



- ***Cortinarius roseomyceliosus*** First record for Ireland from Kilgarrow Wood. There will be a number of new Irish records for these small brown Cortinari....





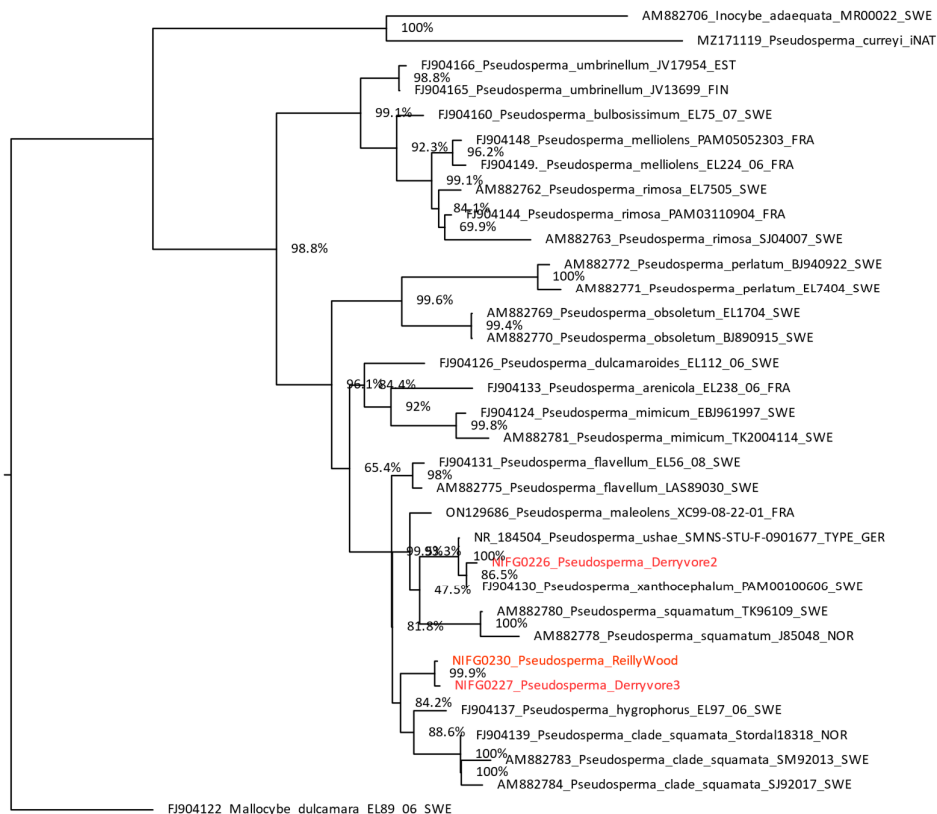
- ***Cortinarius russulaespermus*** From Mullynacoagh Wood (Crom Estate). New Irish record This one did surprise me as the descriptions of this species are for a much browner capped species – not this almost black cap but the match is very good.



- ***Hebeloma celatum/erebium/quercetorum***. Still needing more work but potentially a new British record. The sequence has a 100% match to the types for all three of these species but they cannot be distinguished by an ITS sequence alone and need different loci which I cannot do. It is now done to measuring the width of cheilocystidia.... From the salix carr at the lough edge at Derryvore (Crom Estate).



- *Pseudosperma (Inocybe) cf squamatum*. More work needed but this appears to be in an undescribed clade near to *P. squamatum* and *P. hygrophorus*. Potentially a new British record. Found in Reilly Wood by Marie-Claire Vallely and also in Derryvore. Might need patience before this group is fully described...



0.05

- ***Pseudosperma ushae***. New Irish record from Derryvore and only found in Britain for first time last month. See above phylogenetic tree but more work needed as could also be *P. xanthocephalum*. Additional sequences are needed but are not available on GenBank. I am discussing with other researchers. 99.75% match to the type of *P. ushae*. I am trying to get a sequence in the other direction now.



- ***Inocybe sindonia*** Excellent to have this confirmed in this extremely difficult group. One of the more commonly recorded *Inocybes* but when the British expert on the group says she has given up identifying things by microscope and gets everything sequenced, nothing can be taken for granted!! The very pale cap is a key feature.

