

Entoloma ammophilum and *Entoloma coracis*

Two New Species of Pinkgill for the UK

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Fig. 1. Part of the SSSI site, indicating the survey habitat. Photo © Will Brantingham.

Introduction

In September 2024, we carried out a CHEGD focused survey of the Burn of Midsand, part of the Dunnet Links SSSI in Caithness. We were optimistic, given the geography and the known ecology of the site, along with preliminary records, that the site would be a haven for unusual CHEGD fungi. This proved to be very much the case, and along with many other finds the survey recorded over twenty species of Hygrophoraceae (waxcaps), and a number of species of *Entoloma*, *Microglossum*, *Geoglossum* and *Clavulinopsis*.

Some of our samples were subsequently sent for DNA sequencing. The results showed that two of our finds, both members of the *Cyanula* subgenus of *Entoloma* with collybioid fruiting bodies, had ITS region DNA sequences which were closely aligned to those of species hitherto unknown in the UK. A comparison of ecological, macromorphological and microscopic features was then carried out, and confirmed the finds as *Entoloma ammophilum* and *E. coracis*, both of which are new additions to the funga of the British Isles.

Ecology

Both species were found on the same SSSI grassland site. The Burn of Midsand is a



Fig. 2. *E. coracis* in situ cap. Photo © Colin Doull.

coastal grassland at the very northern tip of Scotland, with sandy calcareous soil, and bordered by Dunnet Community Forest, a primarily coniferous woodland. The site is designated for its grassland flora, including the Scottish endemic *Primula scotica* (Scottish Primrose), and *Salix repens* (Creeping Willow) appears in abundance across the site.

Entoloma ammophilum

This species was described from the Netherlands in 2021 (Crous *et al.*, 2021), from coastal grassland with calcareous soil and *Salix repens*, very similar to our site. Our specimen was a solid match to the holotype in terms of both macromorphological and microscopic features. In many respects it is rather nondescript in the field for those of us who don't often dive into *Entoloma* identification. The translucently striate cap with a very dark, minutely squamulose centre and the bicoloured stipe (a dark blue towards the base and brown at the apex) are obvious field ID clues which can be seen in the image provided below. The spores were measured at 9.4–10.8 x 7–8.3 µm, which is a good match to the type description. DNA sequencing of the ITS region revealed a 100% match to the data obtained from the type specimen, leaving no doubt as to its identity, and confirming *E. ammophilum* as new to the UK.



Fig. 3. *E. ammophilum* in situ, showing characteristic features and habitat. Photo © Colin Doull.

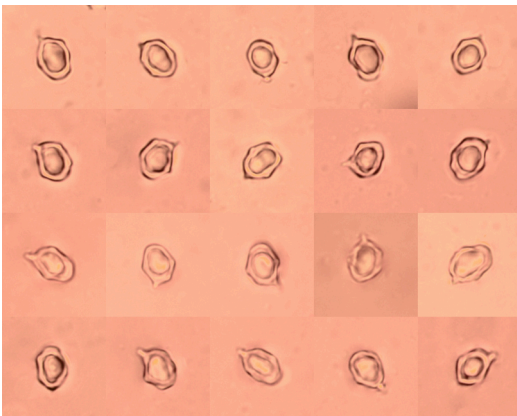


Fig. 4. A collection of spores of *E. ammophilum*, in Congo red. Photo © Colin Doull.

Entoloma coracis

This species was also described in 2021, incidentally in the same paper as *E. ammophilum*, from Norway (Crous *et al.*, 2021). In terms of field identification characteristics, the tomentose cap which had broken up into squamules, black spotting on the gills with age, and the fibrillose stipe with abundant basal mycelium are all field ID clues for the species. The habitat in this case was a little more incongruous, with the literature revealing a known preference for 'thermophilic' calcareous grasslands in the Mediterranean, with its presence also noted in both deciduous and coniferous woodlands (Crous *et al.*, 2021 & Voto, 2024). As ever with *Entoloma*, field ID characteristics alone are generally insufficient for species level ID, but the spore sizes were a fair match at 9.5–10.6 x 6.7–7.7 µm, and the characteristic cheilocystidia were found on the gill edges, which distinguish this species from lookalikes. ITS sequencing revealed the specimen to be a 99.85% match to the type, confirming this species for the UK.



Fig. 5. *E. coracis* underside photo. Photo © Colin Doull.

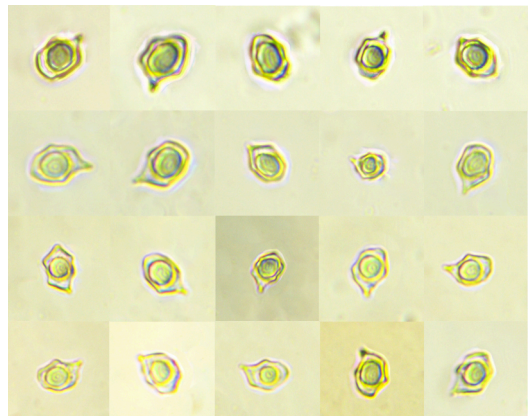


Fig. 6. A collection of spores of *E. coracis*, in Congo red. Photo © Colin Doull.

E. coracis is noted in the literature to bear a strong resemblance to *Entoloma corvinum* (Crous *et al.*, 2021) a species which is ostensibly well recorded in the UK. This latter species is indicated very clearly in the latest treatments of genus *Entoloma* to be a strictly Alpine species (Noordeloos *et al.*, 2022). Therefore, it is plausible that older fungarium specimens which were collected in habitats other than this could belong to *E. coracis*. This was the case with some records of putative *E. corvinum* made in Italy, which were reassigned after careful examination of the cheilocystidia (Voto, 2024). During the writing of this paper it has also come to our attention that there may be some existing records of *E. coracis* from Northern Ireland, dating to 2021. (per David Mitchel of the Northern Ireland Fungus Group, social media posts.)

Acknowledgements

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Freezing fungi

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Autumn may be the most popular time for fungus forays but in recent years the Norfolk Fungus Study Group has organised recording forays in every month of the year. Contrary to expectations, more than 25 members attended the foray at Dillington Carr near Dereham, Norfolk in January 2025.

Despite ice crystals making it difficult to pick out fungi, sharp eyes (and subsequent work) produced a list of 104 species, including one first county record, *Ionomidotis fulvotingers*, and three second records for the county, *Phaeohelotium nobile* (see back cover), *Neodasyscyphus cerina* and *Daldinia decipiens*.

Although ascomycetes predominated, 14 gill fungi were recorded and Norfolk's Lichen Recorder, Rob Yaxley, added 38 lichen species.



Fig. 1. Norfolk Fungus Study Group at Dillington Carr near Dereham. Photo © Mike Ball.

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