

Woodchip wonders: bird's nest fungi in an office car park in central Scotland

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Fungus forays undertaken by the Clyde & Argyll Fungus Group (CAFG) since 2010 have added many new fungal records for its respective geographical area including numerous new records in and around the environs of Glasgow. Some of the more unusual fungi found in recent years from around Glasgow have been highlighted in a series of short notes in the Glasgow Naturalist (McInerny, 2019; O'Reilly, 2018, 2019, 2020, 2022; O'Reilly & Mitchell, 2019; O'Reilly & Mason, 2024; O'Reilly & Taylor, 2023).

Car parks are not usually considered as promising locations for new fungi records. However, most CAFG fungus forays commence in a city or country car park and there is a standing joke among members that it takes at least twenty minutes to leave the car park as enthusiastic forayers discover various fungus species around its periphery.

The Scottish Environment Protection Agency (SEPA) has a large office and laboratory at Maxim Park, Eurocentral, North Lanarkshire, about 12 km east of Glasgow city centre. The area around the SEPA office building along Parklands Avenue is a regular haunt of the author for lunchtime walks and, in the autumn, mini fungus forays, with around 60 species of fungi having been identified using standard field guides (Sterry & Hughes, 2009; Buczacki *et al.*, 2012; Watling, 1973). The SEPA office car park is bounded by grass verges and shrubberies but also contains a number of island flower beds. Surprisingly, it was the SEPA car park itself which revealed the most interesting fungal finds, which also happened to be one of the smallest. These were bird's nest fungi (Nidulariaceae), which were initially discovered in the car park flower beds while the author was kneeling down to look more closely at other nearby mushrooms. The beds were densely covered in woodchip mulch to suppress weed growth, with just one or two hornbeam trees (*Carpinus betulus*) and only a few scattered clumps of heather (*Calluna* sp.) (Fig. 1). It is the woodchips that provide a fertile substrate for the bird's nest fungi.

Bird's nest fungi differ considerably in structure from



Fig. 1. Island flower beds at SEPA car park, Maxim Park, Eurocentral, North Lanarkshire, November 2021. (Photo: M. O'Reilly)

gilled mushrooms. Their taxonomy, morphology and biology were studied in detail by Brodie (1975), an eminent American mycologist (Saville, 1989). Their unusual fruiting bodies, first described as long ago as 1601, are comprised of small cups, initially covered by membranes which split open to reveal a group of lens-shaped “eggs” (peridioles), thus providing their common name. The eggs which contain the fungal spores, are splashed out of the cups by heavy rain drops up to a distance of around a metre (Hassett *et al.*, 2013).

The bird's nest fungi in the SEPA car park were first observed on 28th October 2014 in a flower bed adjacent to the south-west rear corner of the SEPA building. They were rather small vase-like cups around 1 cm diameter occurring singly or in small groups or clusters (Fig. 2). A total of 47 cups was counted on woodchips scattered over just a few square metres of the flower bed. The bird's nest cups were quite difficult to see from head height amongst the mosaic of woodchip fragments. The cups were pale brown with smooth flared rims and greyish eggs and were identified as the field bird's nest fungus *Cyathus olla*. Loose eggs from the cups were scattered over the woodchips nearby.

A few days later, 11 more bird's nest fungi fruiting bodies were found on woodchips in a separate island flower bed about 10 m to the west. These were a little smaller and shorter, mostly immature with amber membranous caps still intact (Fig. 3). Just one cup had opened to reveal the eggs. The cup rim was narrow, without flaring, and the eggs were white, indicating these to be the common bird's nest fungus *Crucibulum laeve*. This species has several synonyms and is referred to as *C. crucibuliforme* by Laessle & Petersen (2019).

No further bird's nest fungi were observed in the beds for quite a few years afterwards, perhaps due to repeated hoeing of the beds by the Maxim Park groundsmen. However, they made a re-appearance on 18th October 2021. Both *C. olla* and *C. laeve* returned to the very same beds respectively as in 2014. Only nine *C. olla* were found in 2021, a few still with intact fawn caps, others open but somewhat damaged, presumably by grazing slugs. Around a hundred *C. laeve* were found

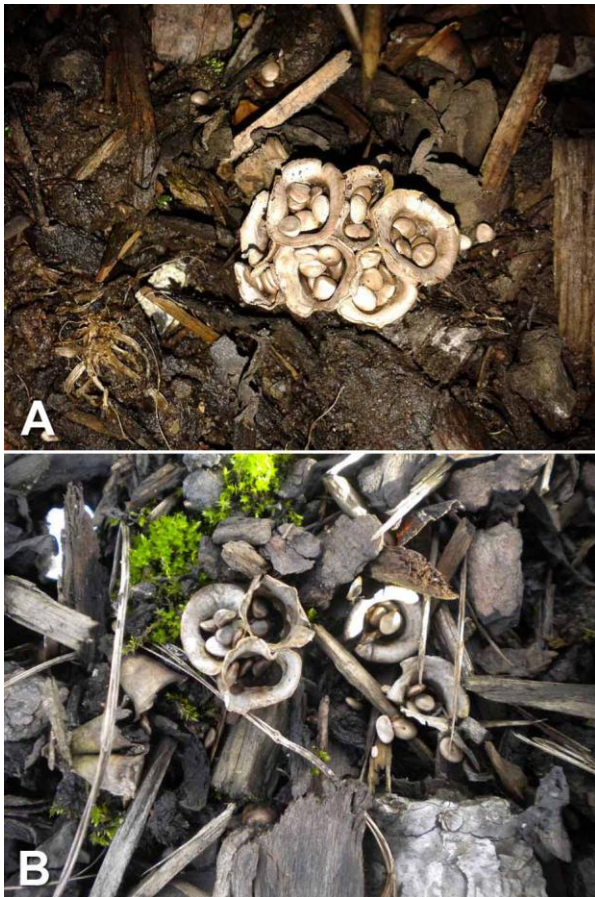


Fig. 2. Field bird's nest fungus cups (*Cyathus olla*), Maxim Park, Eurocentral, North Lanarkshire, October 2014. (A) Cluster of cups, which are about 1 cm in diameter. (B) Group of seven field bird's nest fungus cups with scattered peridioles; note cups lying on side on left. The cups are about 1 cm in diameter. (Photos: M. O'Reilly)



Fig. 3. Group of six immature common bird's nest fungus cups (*Crucibulum laeve*) with intact amber caps, Maxim Park, Eurocentral, North Lanarkshire, October 2014. The cups are about 1 cm in diameter. (Photo: M. O'Reilly)

mostly still with their amber caps intact, making them much easier to spot among the woodchips than the fawn capped *C. olla*. However, a few days later hundreds more *C. laeve* were found nearby in two other semi-circular island beds at the south-west end of the SEPA car park.

The *C. laeve* in the island beds were repeatedly observed through to the end of November, allowing good photographs to be taken of mature specimens with scattered peridioles nearby (Fig. 4). Some of these *C. laeve* persisted throughout the winter and were still visible in the middle of February 2022, though by then most of the cups were empty with most of the peridioles scattered alongside. It seems plausible that the island beds, almost bereft of vegetation, may have had minimal slug colonisation allowing these bird's nest fungi to survive undamaged for so long. Dozens of *C. laeve* re-appeared in the island beds in October 2022 but in Spring 2023 a major makeover of all the car park beds was carried out. The hornbeam trees were removed and the beds completely dug over and heavily planted with shrubs and a few rowan saplings. Almost no woodchip remained, and no bird's nest fungi have been seen since.



Fig. 4. Common bird's nest fungus cups (*Crucibulum laeve*), Maxim Park, Eurocentral, North Lanarkshire. (A) Group of around twenty, including immature capped stages and fully mature; November 2022. The largest mature cups are about 1 cm in diameter. (B) Group of nine common bird's nest fungus, mostly mature without caps; October 2021. The largest mature cups are about 1 cm in diameter. (Photos: M. O'Reilly)

Records of bird's nest fungi in Scotland are widely scattered with rather few in or around the Glasgow area (NBN, 2025). The NBN Atlas shows fewer than 50 Scottish records for *C. olla*, with only two in the Glasgow area (Govan and Springboig), whilst *C. laeve* shows over 80 Scottish records with one record in Glasgow (Govan) and other nearby records in Kirkintilloch (East Dunbartonshire), Hamilton and East Kilbride (both South Lanarkshire). The Fungal records Database for Britain and Ireland (FRDBI) holds some additional old records of both species from the late 1800s in the Glasgow area (FRDBI, 2025) including one, in 1896, for *C. laeve* from the former 1888 Exhibition site in Kelvingrove Park (Stewart, 1900).

There are three additional species of bird's nest fungi in Scotland: the fluted bird's nest *Cyathus striatus*, with NBN showing just 29 Scottish records with one in Govan and one in East Kilbride; the pea-shaped bird's nest fungus *Nidularia deformis*, with 26 records including one from near Glasgow (in Newton Mearns, East Renfrewshire) and one a few km north-west of Balloch, West Dunbartonshire; and the dung bird's nest *Cyathus stercoreus*, which is restricted to a single site near Glenluce, Wigtownshire.

Although the natural habitat of bird's nest fungi would be fallen branches, twigs, and other plant debris, they appear to have adopted horticultural woodchips as an alternative substrate and the widespread use of woodchip mulch in ornamental beds provides a new habitat that may help the spread of these and other fungi. Quite a few different fungi species may now be taking advantage of the woodchip mulch including bird's nest fungi and collared earthstars (Sterry & Hughes 2009; O'Reilly, 2011). The woodchipped beds in the SEPA car park had other distinctive mushroom species including several redlead roundhead *Leratiomyces ceres* (formerly known as *Stropharia aurantiaca*) and numerous yellow fieldcap *Bolbitius titubans*, both now well-known from woodchip mulch. Although Sterry & Hughes highlight half a dozen "woodchip fungi" species in a special section they do not include these latter species or bird's nest fungi among them. Bird's nest fungi are probably overlooked due to their small size and hence under-recorded. A recent account of the unexpected discovery of bird's nest fungi in a mulched border at an urban fast-food outlet at Cameron Toll Shopping Centre in Edinburgh is given by Diekonigin (2020).

It is hoped that this note will encourage naturalists to take a closer look at woodchipped beds in the autumn and perhaps add new records of bird's nest fungi or other interesting species.

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