

BIODIVERSITY on your Farm

The National Biodiversity Data Centre has set a challenge for farmers to record some of the amazing biodiversity found on your farm during the year. We have 40 species for you to record.

Are you up for the challenge?

Species: Common Puffball

Scientific Name: *Lycoperdon perlatum*

Irish name: Bolgán béice coiteann

Group

Fungi (including lichens, symbioses of fungi with algae and cyanobacteria) constitute one of the largest and most significant organism groups. Approximately 5,500 known fungi, estimated at 9,000.

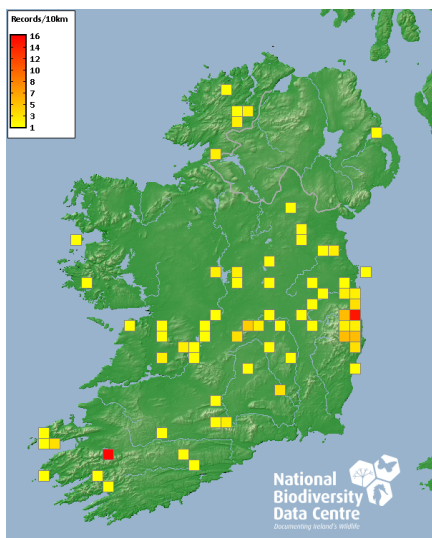
Lycoperdon is a genus of puffball mushroom.

How common on farms

Biodiversity surveys were carried out across 40 farms within the National Biodiversity Data Centre's 'Protecting Farmland Pollinators' EIP project (<https://biodiversityireland.ie/projects/protecting-farmland-pollinators/>). The 40 farms were chosen to reflect farms of differing types and intensity levels. The Common Puffball was present on some of the 40 farms.

Distribution

Common and widespread.



Source: The Common Puffball records as viewed on Biodiversity Maps, 2023.



Common Puffball. Note: Short spikey warts on out layer, not quite globe shaped, with apical pore.

Identification Tips

- Fruit body 2.5 to 6 cm across, 2 to 9 cm high.
- Not quite globe shaped, with a distinct stem.
- White at first, then yellow-brown in colour.
- Short spiky warts on the outer layer
- Usually appear in late summer to late autumn.
- Often grow in groups.
- When mature a hole forms in the top (apical pore) where the spores can escape.

Biodiversity Tip No. 39

Take care of your soil.

Healthy soils are the foundation of healthy food and a better environment.



Conservation Status

Red Lists are an internationally recognised methodology for assessing conservation status.

There is no complete Irish checklist for fungi or a national conservation assessment.

Management Tips

On the farm:

- Retain permanent pasture for grazing livestock.
- Avoid poaching or heavy trampling of pasture, as this is detrimental to fungi.
- Retain or restore species-rich meadows.
- Manage grassland areas, to avoid a matt of dead grass.
- Retain and manage native species hedgerows.
- Retain wetland features, such as ponds and ditches.
- Create a small woodland, on a suitable site.
- Reduce disturbance to the soil, where possible.
- Retain standing and fallen deadwood and leaf litter, where possible.

Reduce pesticide and herbicide inputs:

- Fungi will not flourish where there is too much phosphorous from artificial fertiliser.
- Reduce the use of fungicide, which will kill fungi.



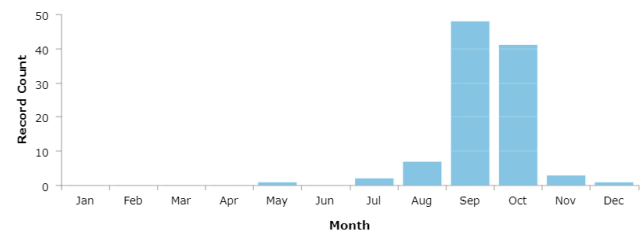
Photo:
Ruth Wilson

Common Puffball.
Mature, with spores released.

When?

Can be seen from July to November.

Records per month across all datasets



National Biodiversity Data Centre, Ireland, Common Puffball, *Lycoperdon perlatum* image, accessed November 2023

[Common Puffball \(*Lycoperdon perlatum*\) - Detail - Biodiversity Maps \(biodiversityireland.ie\)](https://biodiversityireland.ie/Common-Puffball-(Lycoperdon-perlatum)-Detail-Biodiversity-Maps)

Where on the farm?

They grow in fields, along roadsides, as well as in grassy clearings in woods (deciduous and coniferous forests) and in gardens.

Value

- They are responsible for a range of key ecological functions, including nutrient cycling, water uptake by plants and soil health and formation.
- Extracts of the puffball have antimicrobial and antifungal activities.



Photo:
Ruth Wilson

Common Puffball, spines come off when rubbed.

Further Info

Fungi (including lichens, symbioses of fungi with algae and cyanobacteria) constitute one of the largest and most significant organism groups in the world.

Puffballs are saprotrophic, this means they feed on non-living organic matter, known as detritus. They break down detritus into utilisable nutrients and minerals, which maintains soil health and aids plant growth.

They are responsible for a range of key ecological functions, including nutrient cycling, water uptake by plants and soil health and formation. Their presence is critical for continuing life on Earth, and their conservation should be a high priority alongside animals and plants.

When mature, the Common Puffball becomes brown, and a hole in the top opens to release spores in a burst when the body is compressed by touch or falling raindrops. A single puff like this can release over a million spores.

Similar species

They may be confused with the Stump Puffball (*Lycoperdon pyriforme*) that look superficially similar to the Common Puffball, although the surface is smoother and the warty spines are much finer.

They may also be confused with Pestle Puffball (*Lycoperdon excipuliiforme*), but have a distinctive apical pore.

Need some help with identification?

Just drop us a line, we'll be happy to help:
pollinators@biodiversityireland.ie

Useful Links

Fungi of Britain and Ireland:

[Fungi of Great Britain and Ireland \(myspecies.info\)](http://myspecies.info)

National Biodiversity Data Centre—Fungi

[Fungi – National Biodiversity Data Centre \(biodiversityireland.ie\)](http://biodiversityireland.ie)

Record here

Your records will help us build a picture of farmland biodiversity in Ireland. If you're happy with your identification, you can submit your record.

- On the National Biodiversity Data Centre website:

<https://records.biodiversityireland.ie/record/biodiversity-on-your-farm#7/53.455/-8.016>

Affected by a change in climate?

Fungi may be affected by the combined stress of water and temperature changes and this may disturb fungal networks.

Research has found that the networks that are complex and well connected became simpler networks with less connections. Such networks are found in disturbed forest and not in healthy and mature forests.

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An Roinn Talmhaíochta,
Bia agus Mara
Department of Agriculture,
Food and the Marine



An Roinn Tithíochta,
Rialtais Áitiúil agus Oidhreacht
Department of Housing,
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An Chomhairle Oidhreachta
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