

## WHAT TO LOOK FOR?

A white to greyish to pale grey/yellow-brown mushroom, cap 4 to 8 cm diameter, growing in association with the creeping *Salix herbacea* (“dwarf willow” or “least willow”), on mountain peaks and plateaus at altitudes of ~700+ m.

Distinctive field characters include the presence of a volva (sac) at the base; a cylindrical stalk lacking a ring (although sometimes an ephemeral ring can be present); white to cream gills; striations on the cap margin to 1/3 of the radius; and sometimes remnants of a white veil still attached on the top of the cap.

## WHEN TO LOOK?

In GB from August to late September, very rarely in July or October.

## WHERE TO LOOK?

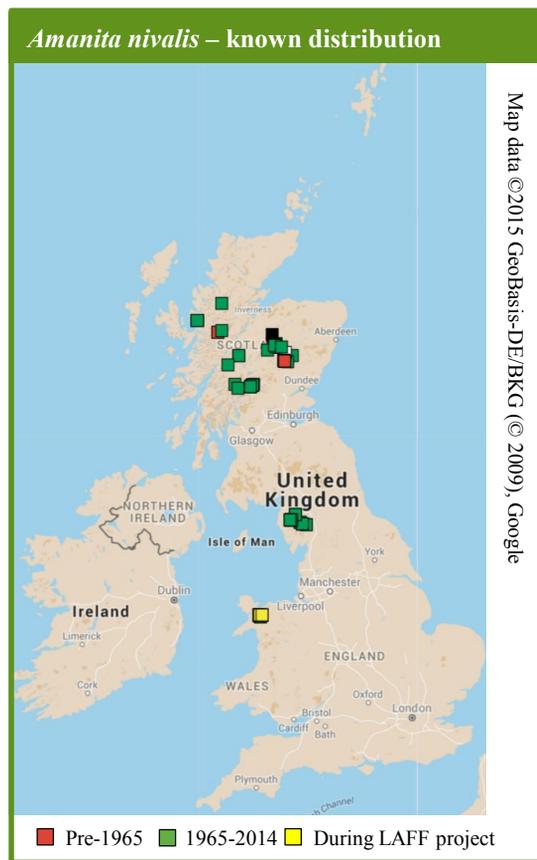
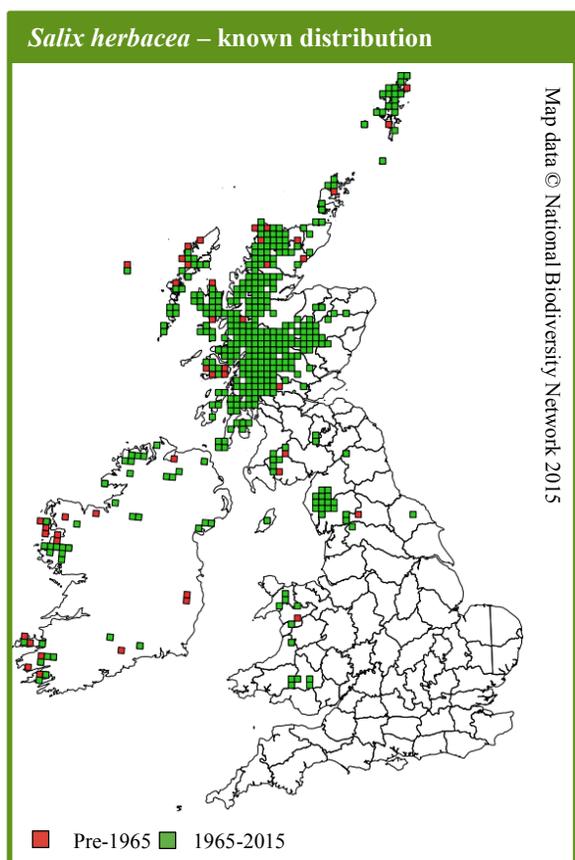
Mountain summits, and upland and montane heaths, where *Salix herbacea* is present (see [here](#) for the NBN distribution map of *S. herbacea*). A moderate number of sites are known, mostly in Scotland, but also seven sites in England in the Lake District, and four sites in Snowdonia, Wales. Many Scottish sites have not been revisited in recent years, and nearby suitable habitats may not have been investigated. Further suitable habitats could be present in mountain regions throughout Scotland; the Lake District, Pennines and Yorkshire Dales in England; and Snowdonia and the Brecon Beacons in Wales.



*Amanita nivalis*, images © D.A. Evans



*Amanita nivalis*, with *Salix herbacea* visible in the foreground. Image © E.M. Holden



# *Amanita nivalis*

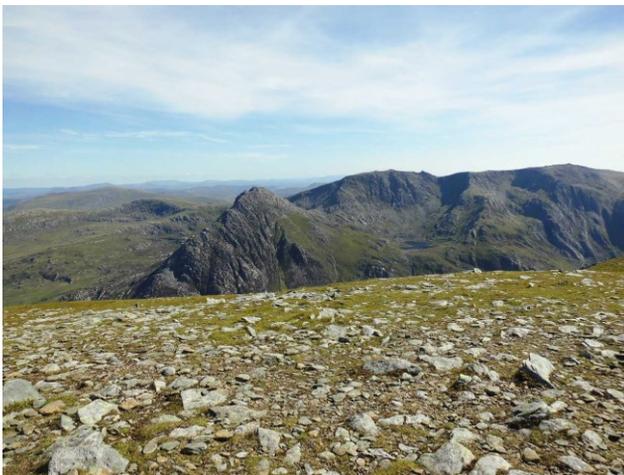
## General description

A white to greyish to pale grey-buff mushroom, growing in association with dwarf willow (*Salix herbacea*) on mountains at altitudes of ~700+ m. **Pileus** (cap) 4-8 cm diam., rounded to broadly umbonate (with a central dome), smooth or with a few remnants of white veil on top, with marginal striations extending to ~ 1/3 the cap radius. **Stipe** (stalk) slender, typically lacking a ring, but sometimes with an ephemeral ring, cylindrical or slightly swollen downwards. Stem often rather short, slender, white to slightly greyish-buff. **Gills** white to pale cream. **Volva** (a cup-like structure around the base of the stipe) saccate (sac-like), partly membranous, usually adnate (attached) to the stem at the base, flared above into lobes, white but staining ochre. **Basidiospores** (8.2-) 10.0 - 13.5 (-21) × (7.1-) 8.8 - 12.0 (-19.5) μm, globose to subglobose (occasionally broadly ellipsoid, rarely ellipsoid or elongate), inamyloid, without clamps at base of basidia.

Note: Description adapted from Kibby (2012), and Tulloss & Goldman (2015).

## Habitat

Mountain tops, plateaus and ridges with montane turfs and heaths at high altitude (700+ m), with *Salix herbacea*.



*Salix herbacea* habitat on Pen Yr Ole Wen, Snowdonia, Wales.  
Image © D.A. Evans

## Conservation status

Considered Vulnerable/ B in GB&IOM in the current but unofficial “Red Data List of Threatened British Fungi” (Evans *et al.* 2006). Presumed mycorrhizal with *Salix herbacea*, and decline of this host could impact populations of *A. nivalis*. Apparently not uncommon in Scotland, and populations may be more resilient to climate change due to a greater altitudinal range of habitat. Populations in England and Wales are only known from seven and three known sites respectively, may be at their altitudinal limits, and could be potentially vulnerable .

## Associations

Almost always found with *Salix herbacea*. Occasionally reported with different *Salix* hosts in other countries.

## Look-alikes

None known in this specific habitat in GB&I. Pale ringless forms of *Amanita*, as seen in *Amanita* sect. *Vaginatae*, may resemble this species, e.g. *A. vaginata* var. *alba*. Specimens and records from unsuitable locations (e.g. lowlands with no *S. herbacea* nearby) should be considered dubious.

## Known sites in GB&I

**Scotland:** Sites widely distributed throughout the Grampians and Northwest Highlands, but infrequently recorded:

- Cairnwell (the site of the epitype collection) and neighbouring mountain habitat, East Perthshire (VC:89) /South Aberdeenshire (VC:92).
- Cairngorm Mountain and Ben Macdui, the Cairngorms, Banffshire (VC:94) and South Aberdeenshire (VC:92).
- Creag Mhor, West Perthshire (VC:87).
- Ben Achaladair, Mid Perthshire (VC:88)/Argyllshire (VC:89).
- Ben Lawers, Mid Perthshire (VC:88).
- Creag Meagaidh, West Perthshire (VC:87).
- Mam Sodhail and Tom a'Choirinich, East Inverness-shire (VC:96).
- Bheinn Bhan, West Ross (VC:105).
- Beinn na Socaich nr. Ben Nevis, West Inverness-shire (VC:97).

**England:** Recorded on Eel Crag, Grasmoor, Helvellyn, Skiddaw, St. Sunday Crag, and Rampsgill Head in the Lake District (Cumberland, VC:70) in recent years (2006-2012). English records until 1955 were from lowland areas and are likely to have been misidentifications.

**Wales:** Elidir Fach, Mynydd Perfedd, Pen-Yr-Ole-Wen, Y Garn in Snowdonia, Caernarvonshire (VC:49) (see Evans, 2010). Recorded at all sites but Y Garn in 2015.

## Literature

- Evans, D.A. (2010). Mountains are not just for Walking, *Herefordshire Fungus Survey Group News Sheet* No. 20: Autumn 2010, p. 9-11. Available [here](#).
- Evans, S., Henrici, A. & Ing. B. (2006). "The Red Data List of Threatened British Fungi: Preliminary Assessment." *Unpublished report. British Mycological Society*. Manchester. Available [here](#).
- Kibby G. (2012). The Genus *Amanita* in Britain. Geoffrey Kibby (privately published).
- Taylor, J. (2001). Arctic alpine fungi of the English Lake District. *Field Mycology*, 2(3), 105-107.
- Tulloss R.E., Goldman N. (2015). *Amanita nivalis*. in Tulloss RE, Yang ZL, eds. *Amanitaceae studies*. [ <http://www.amanitaceae.org?Amanita+nivalis> ], accessed August 7, 2015.
- Watling, R. (1985). Observations of *Amanita nivalis* Greville. *Agarica*, 6, 327-335. Available [here](#), and featuring a detailed description of the epitype.