

BSBI Scotland 2024 Christmas Quiz!

100 questions to test your Scottish botanical knowledge, from species ranges to historical figures, distribution trends to traditional medical uses!

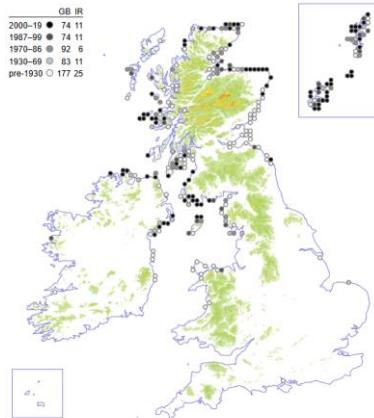
Questions are roughly ordered from the easier at the start to the more obscure towards the end. There are no prizes other than a glow of personal satisfaction, and you can make as much use of references and/or Google as your conscience can bear. Answers will be circulated in the new year. Enjoy!

1. The national flower of Scotland.
2. My leaves can be round, oblong or great (!) – what kind of plant am I?
3. To which Scottish native plant is the epithet ‘granny’ sometimes applied?
4. Which tree is widely thought to be the oldest in Britain?
5. The fertile, low-lying grassy plains found along the coastline of the Outer Hebrides are examples of what habitat?
6. This hemiparasitic, yellow-flowering plant is known as the ‘meadow-maker’ for its ability to help boost grassland species diversity – can you name it?
7. Which coastal grassland flower is endemic to Caithness and Orkney?
8. Despite its name, this member of the Asteraceae always brightens your day when encountered. Perhaps the sadness is in leaving it...?
9. Why do some Holly trees have berries, and some don’t?
10. This cheery, yellow-flowered annual has undergone one of the most extensive declines in range of any Scottish plant since the 1930s, due to arable intensification and the loss of small-scale arable cropping. It is now more likely to be spotted in urban areas, as a component of sown seed mixes. What is its name?
11. Which part of the *Neottia nidus-avis* (Bird’s-nest Orchid) resembles a bird’s nest?
12. Which wetland species has the wonderfully apt Gaelic name *Caorag làna* (marsh spark), and from Shetland the Scots name ‘Rag-a-tag’?
13. What is the largest SSSI in Scotland?
14. Carnation, Stiff, Hair, Elongated, Dotted and Sheathed are all types of what that are found in Scotland?
15. Which small, white-flowered perennial monocot is a delightful plant of calcareous flushes in the central Highlands and northern Scotland?
16. This procumbent dwarf shrub is found on basic rock outcrops, upland calcareous grassland and on coastal shell-sand, and is easily identified by its eight-petalled flowers. What is its name?
17. Which plant had the greatest estimated increase in range of any species covered by the *Plant Atlas 2020* project, and is now near ubiquitous in Scotland?

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18. Which dwarf shrub is a key component of dry heath habitat, often managed through muirburn to promote grouse-shooting activities? This species was once used to make brooms, which is how it got its scientific name – derived from the Greek word meaning ‘to brush’.
19. Can you name the festive Christmas sauce made from red berries? For a bonus point, can you name the North American species that is used to produce these berries (and their sauce) commercially?
20. Which Scottish hedge is officially the tallest in the world, and what species of tree does it consist of?
21. Which common grass of pavements and car parks is also a feature of mountain tops and summit cairns, having hitched a ride uphill with Munro baggers?
22. Which blue-flowered plant of damp habitats was traditionally used to treat skin conditions such as scabies and the sores of bubonic plague? Legend has it that the plant’s efficacy as a treatment so enraged the Devil that he bit off its root, leaving it black and truncated.
23. Only known from two locations in Britain & Ireland, this attractive member of the Caryophyllaceae is confined to serpentine debris rich in magnesium and other metals at its Scottish site.
24. This 20th century Scottish botanist was an expert on wintergreens, and published the *Flora of Moray, Nairn and East Inverness* in 1978. She has a memorial in Culbin Forest, Moray.
25. Which orchid is known for its colourful subspecies, including pink, brick red, purple and pale-yellow varieties? For a bonus point, can you name the four subspecies found in Scotland?
26. Which Scottish plant’s global population is thought to consist of just three trees?
27. The answer to question 6 has a much rarer cousin in the same genus, which is also found in Scotland. Can you name this species and the vice-county in which it is found?
28. The famous ledge of inaccessible tall herb and fern vegetation on Beinn Bhan in West Ross, where remnants of the area’s original vegetation survive unmodified by grazing, is named after which 20th century British nature conservationist?
29. Despite its common name, this pondweed is considered native to the Outer Hebrides, where it was first discovered in 1943.
30. Which rare montane willow with furry leaves can also sometimes be found in urban parks, where it is planted as an ornamental?
31. This plant gained its common name from its use to sweeten or flavour mead in the 16th century. It also makes an appearance in Chaucer’s *The Knight’s Tale*, and was a favoured stewing herb of Queen Elisabeth I.
32. This endemic British species was last seen in Scotland in 1993, although it is still found at 12 localities in Wales. What is its name, and where was its only Scottish station?
33. Which two parent species is the Scottish Pearlwort (*Sagina x normaniana*) derived from?
34. To which Scottish native species does this *Plant Atlas 2020* distribution map belong?

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35. Name the only site in Britain where the beautiful *Gentiana nivalis* (Alpine Gentian) is still certain to occur.
36. Which 'Irish' orchid is also found in the southern Hebrides and elsewhere in west Scotland, where its sporadic flowering can make it difficult to detect? It was first described by the German botanist Adelbert von Chamisso on the Romanzov Expedition, a scientific exploration of the Americas in 1815-1818, a fact reflected by its scientific name.
37. This fuzzy, velvety mat of filaments is the gametophyte of which rare fern, found in caves along the west coast of Scotland?



Photo © Fred Rumsey

38. There are two letters of the alphabet that don't begin the scientific name of a Scottish native plant – which are they?
39. Which two species of Ivy are native to Scotland? For a bonus point, can you name a Scottish vice-county where the less well known one occurs as a native (and not a cultivar)?
40. Which rare montane saxifrage reproduces via brownish-red bulbils?
41. The Highclere Holly is a fertile hybrid that is found in Scotland as a self-sown plant and as a relic of cultivation. Can you name its two parent species?
42. The Watsonian vice-counties are a geographical division of Britain for the purposes of biological recording, introduced in 1852 by Hewett Cottrell Watson in the third volume of his *Cybele*

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Britannica. How many of them are there in Scotland? For a bonus point, who introduced a similar system for Ireland?

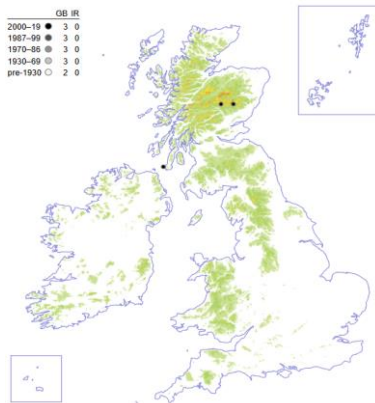
43. Which tiny member of the Brassicaceae can be found growing underwater in acidic, oligotrophic lochs? For a bonus point, how does its method of reproduction differ between emergent and submerged flowers?
44. The *Viscum album* (Mistletoe) genome has been sequenced by the Darwin Tree of Life Project, revealing it to be around 90 gigabase pairs – approximately 30 times the size of the human genome. Roughly how much bigger is the Mistletoe genome than *Arabidopsis thaliana* (Thale Cress), the first plant genome to be fully sequenced?
 - (i) 6 times
 - (ii) 60 times
 - (iii) 600 times
45. In the west of Scotland one can encounter two carnivorous Butterwort species: *Pinguicula lusitanica* (Pale Butterwort) and *P. vulgaris* (Common Butterwort). These two plants overwinter in very different looking ways. Can you describe the overwintering strategy of each species?
46. Which grass species boasts the delightful Gaelic name *Feur-sithean sithe* (fairy or phantom breath of wind) and the Scots name 'Shakie tremlies'?
47. From what character of the plant is the common name for the cliff specialist *Rhodiola rosea* derived?
48. There are three Scottish native species whose scientific name begins with 'z' – can you name them?
49. Which species has leaves with a marginal fringe of tiny bulbils?
50. Which member of the carrot family, found on coastal rocks, was a Scottish culinary speciality, commonly used as an ingredient in stews?
51. Which SSSI supports the largest ashwood on limestone in the Highlands?
52. The BSBI *Alchemilla* handbook, published in 2022, contains two recently described taxa discovered in Scotland – can you name them?
53. Which 'blessed herb' was said to have the power to drive away evil spirits, and protect against rabid dogs and venomous snakes? This member of the Rosaceae is associated with more basic woodlands, but as its scientific name suggests is also 'of the town' and crops up in gardens and urban areas as well.
54. Which cryptic fern ally was discovered for the first time in Britain behind the Glen Shee Ski Centre in 2017?
55. Which two botanists were the main protagonists in the infamous 'Rum Affair', a controversy involving botanical finds on the Isle of Rum in the 1940s?
56. Which nationally rare plant found in Scotland has its next closest population in Pembrokeshire?
57. Which mycoheterotroph is typically found under pine or in damp dune slacks, but in central Scotland associates with coal mining bings?

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58. The invasive non-native *Crassula helmsii* (New Zealand Pigmyweed) has been extending its range northwards in Britain since the 1970s. How far north has it got? For a bonus point, what is ironic about the plants found in Britain, given its common name?
59. The related species *Crassula aquatica* (Pigmyweed) is known from just one location in Britain and Ireland, where it was discovered in 1969. Can you name either the loch or the river on which it is found here?
60. Which North American graminoid was first recorded in Britain in Angus in 1796, probably as an accidental introduction, but has spread widely since the late 19th century and is now ubiquitous along roads, tracks and paths.
61. Which botanist made the first recorded ascent of Ben Nevis, Britain's highest mountain, in 1771?
62. Originally known from just one site on the edge of Loch Tummel in Mid-Perthshire, this species was transplanted to Ben Vrackie in East Perthshire in a bid to save it when the water levels of the loch were raised in 1950. Can you name the species?
63. Which nationally scarce, yellow-flowered member of the Primulaceae has its British stronghold along the canals, rivers, lake margins and flood plains of central Scotland?
64. Which diminutive fern is known from just three vice-counties in Scotland, with a British population thought to number fewer than 200 individuals, having suffered greatly at the hands of Victorian collectors?
65. This tiny creeping willow is one of the smallest woody shrubs in the world, forming loose prostrate mats on exposed open ground or areas of late snow-lie from near sea-level in Shetland to the Ben Nevis summit plateau. What is its name?
66. Which mountain supports the most southerly native population of *Sibbaldia procumbens* (*Sibbaldia*), an arctic-alpine member of the Rosaceae. For a bonus point, of which Scottish organisation is *Sibbaldia* the emblem?
67. This widespread grass covers great tracts of the western Highlands and Inner Hebrides, often on heath and bog habitats that have been degraded by burning and draining. Its tussocky habit can make walking through the mires it forms a nightmare! Can you name the species, and for a bonus point can you name the National Vegetation Classification (NVC) mire community that it most commonly dominates?
68. *Rubus chamaemorus* (Cloudberry) grows in upland, wet peat habitats. Its aggregate fruit consists of a cluster of drupelets and is considered a delicacy in Scandinavian countries. What colour are the fruits when ripe?
69. Despite its name, this member of the Geraniaceae is a characteristic species of northern hay meadow habitats, found in the Southern Uplands and scattered in the eastern and southern Highlands. Which species is it?
70. This pinewood specialist has a very fragmented population due to the loss of pinewood habitat, with most of its stations consisting of just one or a few clones. Although the plant is named after its unique flower arrangement, the clones are usually self-incompatible and so cannot produce seed. Can you name the species?
71. Of the three species of *Eriophorum* (Cottongrass) that occur in Scotland, which one only grows in base-rich habitats?

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72. To which Scottish native species does this *Plant Atlas 2020* distribution map belong?



73. Which 20th century botanist published 'The Flora of Uig: A Botanical Exploration' – an account of a botanical expedition to the Uig district on the western side of the Isle of Lewis?
74. Which sedge was first discovered new to Britain and Ireland on the west coast of Scotland in 2004, and was known from just four sites until this year, when a fifth site was found?
75. This clubmoss species is named for its distinctive appearance, due to the branch leaves produced at the end of each growth season being notably shorter than those above and below.
76. This stony flush vegetation is typically found on base-rich hillsides at high altitudes, and is easily spotted in summer by the conspicuous yellow flowers of *Saxifraga aizoides* (Yellow Saxifrage) intermingled with bryophytes, sedges, wet stones and bare muddy soil. Which NVC mire community does it correspond to?
77. This endangered hemiparasite has large seeds which are thought to be dispersed by wood ants – although this behaviour has never been observed at any Scottish site! The seeds have a lipid-rich elaiosome, which may provide a reward for any insects up to the challenge. Can you name the species?
78. Which very rare arctic-alpine was initially misidentified as *Lythrum portula* (Water-purslane) when discovered in Scotland in 1934, and not correctly named for a further 16 years.
79. There are six species found in Scotland whose scientific name includes the term '*norvegica*'. Can you name them all?
80. Which species was known from Mull, Beinn a' Ghlo and Cairn Gorm, but is now extinct as a Scottish plant?
81. Which nationally rare plant occurs as a Scottish native only as a sporadic colonist of beaches, from Norway? Relevant subspecies as well please!
82. Which bramble microspecies was described as a new taxon to science in 2021 by the late David Welch, based on bushes found in Kincardineshire and Angus?
83. Which eponymous plant did Reverend Edward Shearburn Marshall discover on a botanical tour of the north coast of Scotland in 1895?
84. Which species of tree is the highest occurring in Britain, and for a bonus point, on which mountain was it found?

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85. Which Schedule 8 species on the Wildlife and Countryside Act (1981) is now generally considered to be an alien, and has been found in several Scottish vice-counties including Midlothian (where it is well naturalised near the Royal Botanic Garden Edinburgh)?
86. Which hybrid fern is now only known in Britain from Edinburgh, and which are its two parent species?
87. Which neophyte from the Apiaceae family has been naturalised at Callander in West Perthshire for over a century?
88. Other than the fact it is incredibly rare, why is it so unusual to find the high altitude snowbed species *Sagina nivalis* (Snow Pearlwort) with open flowers?!
89. Name two native hybrids found in Scotland for whom one parent is not known in Britain and Ireland. Bonus points if you can name the absent parents!
90. After a gap of 71 years, this endemic hawkweed species was refound in Argyllshire in 2024 on the BSBI's Hawkweed Hunt! What is its name?
91. What feature of the inner tepals of *Rumex aquaticus* (Scottish Dock) would indicate hybridisation with *R. obtusifolius* (Broad-leaved Dock)?
92. Which member of the Cyperaceae was known in Britain from just one site in Angus, until it was lost to marl extraction in the late 1800s? For a bonus point, can you name the site?
93. Which coastal plant reaches the northern limit of its British distribution in the Firth of Forth, although its hybrids' distribution reaches all the way to Shetland?
94. Name the genus of extinct, arborescent (tree-like) horsetails to which modern horsetails (*Equisetum*) are closely related, and which were a key component of the Carboniferous coal swamps found across central Scotland 300 million years ago.
95. Bladderworts (*Utricularia*) are aquatic carnivorous plants with tiny, animal-catching bladders. Several species occur in Scotland, and the shape of the 4-armed hairs on the inner surface of the bladders are of diagnostic importance. What is the name given to these 4-armed bladder hairs?
96. What sweet-smelling species does The Loons, Loch Leven, Blackpool Moss, the River Thurso, Ravenshall Point, Clearburn Loch and Caerlaverock have in common? For a bonus point, can you name the vice-counties in which these seven sites are found?
97. This remarkable-looking plant was discovered in 2021 on Loch Trieg in Westernness, in huge quantities. As a British native it is restricted to Cornwall and some parts of southern England, making its presence on Loch Trieg rather a mystery. Can you name the species?

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Photo © Sarah Watts

98. Which Scottish botanist was knighted for his work in promoting the collection and use of *Sphagnum* bog-mosses as wound dressings during the First World War? For a bonus point, which two *Sphagnum* species were considered the best for this purpose (hint, the fatter the plant, the more absorbent)?
99. What is the smallest SSSI in Scotland designated for vascular plants, and for what feature is it designated? For a bonus point, can you name the second smallest biological SSSI in Scotland, found in the same vice-county?
100. The global range of this allopolyploid species consists of populations in South Lanarkshire and Orkney – can you name it? And for bonus points (one per character), can you describe some of the characteristics that help identify it?!