

BSBI Scotland 2024 Christmas Quiz: Answers!

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 are provided in red, along with the marks awarded in brackets. Use half-marks etc. if the question is a multiple-parter with just one mark on offer. The Quizmaster's answer is final (unless he is wrong, in which case go ahead and award yourself as many marks as you like – remember it's just for fun!).

The maximum score, including all bonus points awarded, is **120**.

Score 1 – 25: Congratulations, I hope you're enjoying your Scottish botanical journey. There's so much exciting stuff to discover!

Score 26 – 50: Well done, good knowledge! Hopefully this quiz has provided a few extra Scottish botanical titbits for you.

Score 51-75: Excellent, an impressive display of knowledge! You clearly know your stuff.

Score 76-100: Wow, amazing! You are a Scottish botanical expert, no question.

Score 100+: You should be setting this quiz...

1. The national flower of Scotland.

Thistle will get you the mark, but most images look like *Cirsium vulgare* (Spear Thistle) to me (1)
[Cirsium vulgare \(Savi\) Ten. in BSBI Online Plant Atlas 2020](#)

2. My leaves can be round, oblong or great (!) – what kind of plant am I?

A sundew (1)

3. To which Scottish native plant is the epithet 'granny' sometimes applied?

***Pinus sylvestris* (Scots Pine) (1)**
[Pinus sylvestris L. in BSBI Online Plant Atlas 2020](#)

4. Which tree is widely thought to be the oldest in Britain?

The Fortingall Yew in Perthshire – estimated to be around 5,000 years old by Forestry and Land Scotland (1). In 1769 it had a recorded girth of 16 metres!
[Yew | Forestry and Land Scotland](#)

5. The fertile, low-lying grassy plains found along the coastline of the Outer Hebrides are examples of what habitat?

Machair (1)
[Machair \(Machairs\) - Special Areas of Conservation](#)

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?

***Rhinanthus minor* (Yellow-rattle) (1)**
[Rhinanthus minor L. in BSBI Online Plant Atlas 2020; How to grow Yellow Rattle - Plantlife](#)

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7. Which coastal grassland flower is endemic to Caithness and Orkney?

Primula scotica (Scottish Primrose) (1)

[Primula scotica Hook. in BSBI Online Plant Atlas 2020](#)

8. Despite its name, this member of the Asteraceae always brightens your day when encountered. Perhaps the sadness is in leaving it...?

Cirsium heterophyllum (Melancholy Thistle) (1)

[Cirsium heterophyllum \(L.\) Hill in BSBI Online Plant Atlas 2020](#)

9. Why do some Holly trees have berries, and some don't?

Ilex aquifolium (Holly) is dioecious, meaning male and female flowers occur on different trees. The female flowers develop into berries. (1)

[Ilex aquifolium L. in BSBI Online Plant Atlas 2020](#)

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?

Glebionis segetum (Corn Marigold) (1)

[Glebionis segetum \(L.\) Fourr. in BSBI Online Plant Atlas 2020](#)

11. Which part of the *Neottia nidus-avis* (Bird's-nest Orchid) resembles a bird's nest?

The tangled root mass (1)

[Neottia nidus-avis \(L.\) Rich. in BSBI Online Plant Atlas 2020](#)

12. Which wetland species has the wonderfully apt Gaelic name *Caorag làna* (marsh spark), and from Shetland the Scots name Rag-a-tag?

Silene flos-cuculi (Ragged-Robin) (1)

[Silene flos-cuculi \(L.\) Clairv. in BSBI Online Plant Atlas 2020](#); [Dictionary of Scottish Plant Names from Summerfield Books](#) is a great resource for this kind of knowledge

13. What is the largest SSSI in Scotland?

The Cairngorms SSSI, at a massive 29,230.96 ha, or 292 km² (1)

Explore and download data on Scottish SSSIs at [Sites of Special Scientific Interest | NatureScot Spatial Data Hub](#)

14. Carnation, Stiff, Hair, Elongated, Dotted and Sheathed are all types of what that are found in Scotland?

Sedge (*Carex*) (1)

15. Which small, white-flowered perennial monocot is a delightful plant of calcareous flushes in the central Highlands and northern Scotland?

Tofieldia pusilla (Scottish Asphodel) (1)

[Tofieldia pusilla \(Michx.\) Pers. in BSBI Online Plant Atlas 2020](#)

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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?

Dryas octapetala (Mountain Avens) (1)

[Dryas octopetala L. in BSBI Online Plant Atlas 2020](#)

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?

Picea sitchensis (Sitka Spruce) (1)

[Picea sitchensis \(Bong.\) Carrière in BSBI Online Plant Atlas 2020](#)

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’.

Calluna vulgaris (Heather) (1)

[Calluna vulgaris \(L.\) Hull in BSBI Online Plant Atlas 2020](#)

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?

Cranberry sauce (1). The North American species grown commercially is *Vaccinium macrocarpum* (American Cranberry), which is occasionally found as a naturalised escape from cultivation in Scotland (1)

[Vaccinium macrocarpon Aiton in BSBI Online Plant Atlas 2020](#)

20. Which Scottish hedge is officially the tallest in the world, and what species of tree does it consist of?

Meikleour Beech Hedge; *Fagus sylvatica* (Beech) (1)

[Meikleour Beech Hedge, Meikleour – Forests & Woodlands | VisitScotland](#)

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?

Poa annua (Annual Meadow-grass) (1) Highest altitude found currently 1,214 m on Ben Lawers
[Poa annua L. in BSBI Online Plant Atlas 2020](#); find out the current known altitudinal limits of British & Irish plants at [Altitudes – Botanical Society of Britain & Ireland](#)

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.

Succisa pratensis (Devil’s-bit Scabious) (1)

[Succisa pratensis Moench in BSBI Online Plant Atlas 2020](#)

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.

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Silene suecica (Alpine Catchfly) (1)

[Silene suecica \(Lodd.\) Greuter & Burdet in BSBI Online Plant Atlas 2020](#)

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.

Mary McCallum Webster (1)

[Mary McCallum Webster | Mapping Memorials to Women in Scotland](#)

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?

Dactylorhiza incarnata (Early Marsh-orchid) (1). Ssp. *incarnata*, *coccinea*, *pulchella* and *cruenta* are found in Scotland (1)

[Dactylorhiza incarnata \(L.\) Soó in BSBI Online Plant Atlas 2020](#); each subspecies also has a Plant Atlas entry

26. Which Scottish plant's global population is thought to consist of just three trees?

Sorbus pseudomeinichii (False Rowan or Catacol Whitebeam) (1)

[Sorbus pseudomeinichii Ashley Robertson in BSBI Online Plant Atlas 2020](#); a third tree was discovered post-publication

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?

Rhinanthus angustifolius (Greater Yellow-rattle), found in Angus (VC90) (1)

[Rhinanthus angustifolius C.C.Gmel. in BSBI Online Plant Atlas 2020](#)

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?

Derek Ratcliffe (1) – the Ratcliffe ledge, Coire na Poite

Beinn Bhan SSSI [site-management-statement.pdf](#); obituary of Derek Ratcliffe: [Wats26p101.pdf](#)

29. Despite its common name, this pondweed is considered native to the Outer Hebrides, where it was first discovered in 1943.

Potamogeton epihydrus (American Pondweed) (1)

[Potamogeton epihydrus Raf. in BSBI Online Plant Atlas 2020](#)

30. Which rare montane willow with furry leaves can also sometimes be found in urban parks, where it is planted as an ornamental?

Salix lanata (Woolly Willow) (1)

[Salix lanata L. in BSBI Online Plant Atlas 2020](#)

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 strewing herb of Queen Elisabeth I.

Filipendula ulmaria (Meadowsweet) (1)

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[Filipendula ulmaria \(L.\) Maxim. in BSBI Online Plant Atlas 2020](#); details on its historical uses are available from books such as [A Dictionary of English Plant Names from Summerfield Books](#) and [Dragon Blood & Willow Bark. The Mysteries of Medieval Medicine - Search](#)

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 for a bonus point where was its only Scottish station?

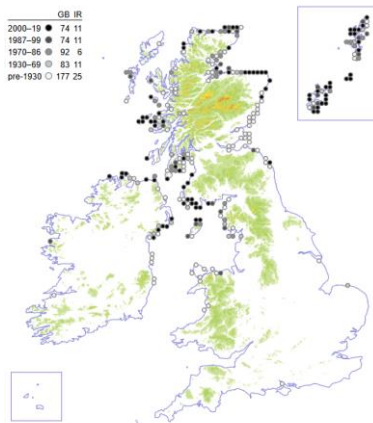
Senecio cambrensis (Welsh Groundsel) (1); Leith Docks, Midlothian (1)

[Senecio cambrensis Rosser in BSBI Online Plant Atlas 2020](#)

33. Which two parent species is the Scottish Pearlwort (*Sagina x normaniana*) derived from?

Sagina procumbens (Procumbent Pearlwort) and *S. saginoides* (Alpine Pearlwort) (1)
Plant Crib details including *S. x normaniana*: [Upland Caryophyllaceae Crib.pdf](#); Plant Atlas account for *S. saginoides*: [Sagina saginoides \(L.\) H.Karst. in BSBI Online Plant Atlas 2020](#)

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



Mertensia maritima (Oysterplant) (1). Its range in Britain is shifting northwards, and it has now been lost from England and Wales

[Mertensia maritima \(L.\) Gray in BSBI Online Plant Atlas 2020](#)

35. Name the only site in Britain where the beautiful *Gentiana nivalis* (Alpine Gentian) is still certain to occur.

Ben Lawers NNR (1). The Caenlochan SSSI population has not been refound since 2017, when one plant was seen and damage to the site was noted

[Gentiana nivalis L. in BSBI Online Plant Atlas 2020](#)

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.

Spiranthes romanzoffiana (Irish Lady's-tresses) (1)

[Spiranthes romanzoffiana Cham. in BSBI Online Plant Atlas 2020](#); published account of the expedition available: [Voyage Around the World with the Romanzov Exploring Expedition in the Years 1815-18 - Search](#)

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37. This fuzzy, velvety mat of filaments is the gametophyte of which rare fern, found in caves along the west coast of Scotland?



Image by Fred Rumsey

Trichomanes speciosum (Killarney Fern) (1)

[Trichomanes speciosum \(gametophyte\) Willd. in BSBI Online Plant Atlas 2020](#)

38. There are two letters of the alphabet that don't begin the scientific name of a Scottish native plant – which are they?

X and Y (1)

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)?

Hedera helix (Common Ivy) and *Hedera hibernica* (Atlantic Ivy) (1). Native in vice-counties 73, 74 and 75 (1 for any one correct vice-county)

[Hedera helix s.l. in BSBI Online Plant Atlas 2020](#); [Hedera hibernica \(G.Kirch.\) Bean in BSBI Online Plant Atlas 2020](#) (make sure to check the status box to view native distribution)

40. Which rare montane saxifrage reproduces via brownish-red bulbils?

Saxifraga cernua (Drooping Saxifrage) (1). It flowers infrequently, without producing viable seed
[Saxifraga cernua L. in BSBI Online Plant Atlas 2020](#)

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?

Ilex aquifolium (Holly) and *I. perado* (Macaronesian Holly) (1)

[Ilex aquifolium × perado = I. × altaclerensis \(hort. ex Loudon\) Dallim. in BSBI Online Plant Atlas 2020](#); [interesting article at Shapeshifting hollies: unnoticed change? - British Wildlife](#)

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

41 Scottish vice-counties (1). Robert Lloyd Praeger introduced a vice-county system to Ireland in 1901 (1)

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To find out more about each vice-county go to [Local Botany – Botanical Society of Britain & Ireland](#); [Biological Records Centre maps of British and Irish Vice Counties](#); a useful synopsis at [Vice-county - Wikipedia](#)

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?

Subularia aquatica (Awlwort) (1). Flowers above the water surface open for insect pollination, flowers below the water often stay closed and self-pollinate (1)

[Subularia aquatica L. in BSBI Online Plant Atlas 2020](#)

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

(iii) 600 times (1)

[Viscum album L. in BSBI Online Plant Atlas 2020](#); details of the DTOL project sequencing at [The year we built the biggest genome in Britain and Ireland – Darwin Tree of Life](#)

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?

Pinguicula lusitanica overwinters as a rosette, *P. vulgaris* overwinters as a rootless bud (1)

[Pinguicula lusitanica L. in BSBI Online Plant Atlas 2020](#); [Pinguicula vulgaris L. in BSBI Online Plant Atlas 2020](#)

46. Which grass species boasts the delightful Gaelic name *Feur-sithean sithe* (fairy or phantom breath of wind) and the Scots name ‘Shakie tremlies’?

Briza media (Quaking-grass) (1)

[Dictionary of Scottish Plant Names from Summerfield Books](#)

47. From what character of the plant is the common name for the cliff specialist *Rhodiola rosea* derived?

Roseroot – its root and rhizome smell of roses (1)

[Dictionary of Scottish Plant Names from Summerfield Books](#)

48. There are three Scottish native species whose scientific name begins with ‘z’ – can you name them?

Zannichellia palustris (Horned Pondweed), *Zostera marina* (Eelgrass) and *Zostera noltei* (Dwarf Eelgrass) (1)

[Zannichellia palustris L. in BSBI Online Plant Atlas 2020](#); [Zostera marina L. in BSBI Online Plant Atlas 2020](#); [Zostera noltei Hornem. in BSBI Online Plant Atlas 2020](#)

49. Which species has leaves with a marginal fringe of tiny bulbils?

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Hammarbya paludosa (Bog Orchid) (1)

[Hammarbya paludosa \(L.\) Kuntze in BSBI Online Plant Atlas 2020](#)

50. Which member of the carrot family, found on coastal rocks, was a Scottish culinary speciality, commonly used as an ingredient in stews?

Ligusticum scoticum (Scots Lovage) (1)

[Ligusticum scoticum L. in BSBI Online Plant Atlas 2020](#)

51. Which SSSI supports the largest ashwood on limestone in the Highlands?

Rassal SSSI (1)

Rassal SSSI citation: [sssi-citation.pdf](#)

52. The BSBI *Alchemilla* handbook, published in 2022, contains two recently described taxa discovered in Scotland – can you name them?

Alchemilla sciura (Cairnwell Lady's-mantle) and *Alchemilla neomanifesta* (Revealed Lady's-mantle) (1)

See [Alchemilla : Lady's-mantles of Britain and Ireland from Summerfield Books](#)

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.

Geum urbanum (Wood Avens or Herb Bennet) (1). Herb Bennet is a corruption of Herb Benedict, the Blessed Herb, and *urbanum* means of the town.

Lots to explore at [Geum urbanum - Wikipedia](#)

54. Which cryptic fern ally was discovered for the first time in Britain behind the Glen Shee Ski Centre in 2017?

Botrychium nordicum (Nordic Moonwort) (1)

[Botrychium nordicum Stensvold & Farrar in BSBI Online Plant Atlas 2020](#)

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?

John William Heslop-Harrison and John Raven (1)

Karl Sabbagh's book on this controversy makes interesting reading: [a rum affair sabbagh - Search](#), as does the BSBI review of the book by Michael Braithwaite: [Wats23p349.pdf](#). Several of the finds in question have herbarium specimens in the [RBGE Herbarium](#)

56. Which nationally rare plant found in Scotland has its next closest population in Pembrokeshire?

Ononis reclinata (Small Restharrow) (1)

[Ononis reclinata L. in BSBI Online Plant Atlas 2020](#)

57. Which mycoheterotroph is typically found under pine or in damp dune slacks, but in central Scotland associates with coal mining bings?

Hypopitys montropa (Yellow Bird's-nest) (1)

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[Hypopitys monotropa Crantz in BSBI Online Plant Atlas 2020](#); several discoveries have also been made in central Scotland post-publication

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?

All the way to Shetland (1), where it was recorded at Gulberwick in 2017. All the British specimens come from one lineage, which DNA analysis indicates originates from Australia not New Zealand (1)

[Biological Flora of the British Isles: Crassula helmsii - Smith - 2020 - Journal of Ecology - Wiley Online Library](#)

[Crassula helmsii \(Kirk\) Cockayne in BSBI Online Plant Atlas 2020](#)

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?

Loch Shiel / River Shiel, in Westernness (1)

[Crassula aquatica \(L.\) Schönland in BSBI Online Plant Atlas 2020](#)

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.

Juncus tenuis (Slender Rush) (1)

[Juncus tenuis Willd. in BSBI Online Plant Atlas 2020](#)

61. Which botanist made the first recorded ascent of Ben Nevis, Britain's highest mountain, in 1771?

James Robertson (1), who was commissioned by John Hope, the King's Botanist and Superintendent of the Royal Botanic Garden Edinburgh, to explore the native plants of Scotland. See [BSBI News & Views: Plant-hunting on Ben Nevis with BSBI Scottish Officer and Team RBGE](#)

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?

Schoenus ferrugineus (Brown Bog-rush) (1)

[Schoenus ferrugineus L. in BSBI Online Plant Atlas 2020](#)

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?

Lysimachia thysiflora (Tufted Loosestrife) (1)

[Lysimachia thysiflora L. in BSBI Online Plant Atlas 2020](#)

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?

Woodsia ilvensis (Oblong Woodsia) (1)

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[Woodsia ilvensis \(L.\) R.Br. in BSBI Online Plant Atlas 2020](#); a great account of the fern's travails and work towards its recovery in Scotland here: [Restoring a fern wiped out by collectors and botanists – Botanic Stories](#)

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?

Salix herbacea (Dwarf Willow) (1)

[Salix herbacea L. in BSBI Online Plant Atlas 2020](#)

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?

Ben Lomond, in Stirlingshire (1). Royal Botanic Garden Edinburgh (1)

[Sibbaldia procumbens L. in BSBI Online Plant Atlas 2020](#); a timeline of interesting moments in RBGE's history here: [Our History | Royal Botanic Garden Edinburgh](#)

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?

Molinia caerulea (Purple Moor-grass) (1). M25 *Molinia caerulea*-*Potentilla erecta* mire community (1)

[Molinia caerulea \(L.\) Moench in BSBI Online Plant Atlas 2020](#); the JNCC crib to mire and heath NVC communities is available here: [JNCC-NVC-MiresHeaths-2002.pdf](#)

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?

The ripe fruits are amber or pale orange coloured; initially the unripe fruits are red (1)

[Rubus chamaemorus L. in BSBI Online Plant Atlas 2020](#)

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?

Geranium sylvaticum (Wood Crane's-bill) (1)

[Geranium sylvaticum L. in BSBI Online Plant Atlas 2020](#)

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?

Linnaea borealis (Twinflower) (1)

[Linnaea borealis L. in BSBI Online Plant Atlas 2020](#)

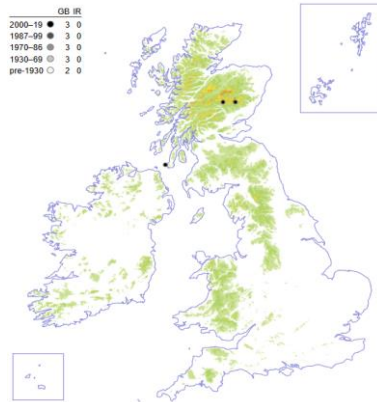
71. Of the three species of *Eriophorum* (Cottongrass) that occur in Scotland, which one only grows in base-rich habitats?

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Eriophorum latifolium (Broad-leaved Cottongrass) (1)

[Eriophorum latifolium Hoppe in BSBI Online Plant Atlas 2020](#)

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



Oxytropis campestris (Yellow Oxytropis) (1)

[Oxytropis campestris \(L.\) DC. in BSBI Online Plant Atlas 2020](#)

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?

Maybud Sherwood Campbell (1)

See [Campbell, Maybud Sherwood \(1903-1982\) on JSTOR](#) and [The Flora of Uig - Search](#)

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?

Carex salina (Saltmarsh Sedge) (1)

[Carex salina Wahlenb. in BSBI Online Plant Atlas 2020](#)

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.

Lycopodium annotinum (Interrupted Clubmoss) (1)

[Lycopodium annotinum L. in BSBI Online Plant Atlas 2020](#)

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?

M11 *Carex demissa*-*Saxifraga aizoides* mire (1)

The JNCC crib to mire and heath NVC communities is available here: [JNCC-NVC-MiresHeaths-2002.pdf](#). It can be found down to sea level in north-west Scotland

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?

Melampyrum sylvaticum (Small Cow-wheat) (1)

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[Melampyrum sylvaticum L. in BSBI Online Plant Atlas 2020](#); [an interesting look at the mysteries of its insect interactions here: Cow-wheat conundrum – Botanics Stories](#)

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.

Koenigia islandica (Iceland-purslane) (1)

[Koenigia islandica L. in BSBI Online Plant Atlas 2020](#)

79. There are six species found in Scotland whose scientific name includes the term '*norvegica*'. Can you name them all?

Arenaria norvegica subsp. *norvegica* (Arctic Sandwort), *Carex norvegica* (Close-headed Alpine-sedge), *Draba norvegica* (Rock Whitlowgrass), *Omalotheca norvegica* (Highland Cudweed) and *Potentilla norvegica* (Ternate-leaved Cinquefoil) (1)

The last species in the list may be less familiar to mountain botanists – it is a neophyte that pops up from time to time in central Scotland, possibly from long-lasting seed banks: [Potentilla norvegica L. in BSBI Online Plant Atlas 2020](#)

80. Which species was known from Mull, Beinn a' Ghlo and Cairn Gorm, but is now extinct as a Scottish plant?

Rubus arcticus (Arctic Bramble) (1)

[Rubus arcticus L. in BSBI Online Plant Atlas 2020](#)

81. Which nationally rare plant occurs as a Scottish native only as a sporadic colonist of beaches, from Norway? Relevant subspecies as well please!

Angelica archangelica ssp. *littoralis* (Garden Angelica) (1)

[Angelica archangelica L. in BSBI Online Plant Atlas 2020](#), don't forget to check the status box to see its native distribution (on Shetland)

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?

Rubus longiflorus (1)

See [View of A new species of Rubus L. \(Rosaceae\) from NE Scotland and Introducing Rubus longiflorus – Scottish Botanists' Conference](#)

83. Which eponymous plant did Reverend Edward Shearburn Marshall discover on a botanical tour of the north coast of Scotland in 1895?

Euphrasia marshallii (Marshall's Eyebright) (1)

[Euphrasia marshallii Pugsley in BSBI Online Plant Atlas 2020](#)

84. Which species of tree is the highest occurring in Britain, and for a bonus point, on which mountain was it found?

Salix cinerea (Grey Willow) (1), at 1,219 m (corrected from 1,221 m) on Ben Nevis in 2023 (1)

If you don't do social media, then you can have the marks for the latest published record:

Sorbus aucuparia (Rowan) (1), found at 1,150 m on Sgurr nan Ceathreamhnan in 2022 (1)

2023 *Salix cinerea* find: [Sarah Watts on X: "👉 There's a brand new record for Britain's highest altitude tree!](#)

BSBI Scotland 2024 Christmas Quiz: Answers!

2022 *Sorbus aucuparia* find: [View of High mountain trees: altitudinal records recently broken for eleven different tree species in Britain](#)

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)?

Laphangium luteoalbum (Jersey Cudweed) (1)

[Laphangium luteoalbum \(L.\) Tzvelev in BSBI Online Plant Atlas 2020](#); **several new sites in central Scotland post-publication**

86. Which hybrid fern is now only known in Britain from Edinburgh, and which are its two parent species?

Asplenium x murbeckii; *A. ruta-muraria* (Wall-rue) and *A. septentrionale* (Forked Spleenwort) (1)

[Asplenium ruta-muraria x septentrionale = A. x murbeckii Dörfel. distribution map \(BSBI\)](#)

87. Which neophyte from the Apiaceae family has been naturalised at Callander in West Perthshire for over a century?

Chaerophyllum aureum (Golden Chervil) (1)

[Chaerophyllum aureum L. in BSBI Online Plant Atlas 2020](#)

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?!

They only open on sunny days between July and September – a rare commodity at altitude! (1)

See [Mardon _ Watts 2019.pdf](#); and [Sagina nivalis \(Lindblom\) Fr. in BSBI Online Plant Atlas 2020](#)

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!

Diphasiastrum x issleri (Issler's Clubmoss) and *Stuckenia x bottnica* (Bothnian Pondweed) (1)

D. complanatum (Flat-stemmed Clubmoss) (1) and *S. vaginata* (Sheathed Pondweed) (1)

[Diphasiastrum alpinum x complanatum = D. x issleri \(Rouy\) Holub in BSBI Online Plant Atlas 2020](#); and [Stuckenia x bottnica BSBI map](#)

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?

Hieracium basicrinum (Fionn Glenn Hawkweed) (1)

See p. 71 of [BSBI-News-157-web.pdf](#)

91. What feature of the inner tepals of *Rumex aquaticus* (Scottish Dock) would indicate hybridisation with *R. obtusifolius* (Broad-leaved Dock)?

Jagged teeth along the lower edges of the inner tepals (1)

See [BSBI Handbook: 3. Docks and Knotweeds of Britain and Ireland – Botanical Society of Britain & Ireland](#); also [Rumex aquaticus L. in BSBI Online Plant Atlas 2020](#)

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?

Trichophorum alpinum (Cotton Deergrass) (1). Moss of Restenneth (1)

[Trichophorum alpinum \(L.\) Pers. in BSBI Online Plant Atlas 2020](#)

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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?

Atriplex longipes (Long-stalked Orache) (1). *A. x gustafssoniana* (Kattegat's Orache), its hybrid with *A. prostrata* (Spear-leaved Orache) and *A. x taschereaui* (Taschereau's Orache), its hybrid with *A. glabriuscula* (Babington's Orache) are found as far north as Shetland

[Atriplex longipes Drejer in BSBI Online Plant Atlas 2020](#); also [Atriplex longipes x prostrata = A. x gustafssoniana Tascher. in BSBI Online Plant Atlas 2020](#)

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.

Calamites (1). See [Calamites - Wikipedia](#), and [Coal Measures, Carboniferous, Southern Uplands - MediaWiki](#) and [Midland Valley – Scottish Geology Trust](#) for overviews of the geological formations

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?

Quadrifids (1) See [Utricularia_Crib.pdf](#) for details of their use in identifying *Utricularia* to species

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?

Hierochloe odorata (Holy-grass) (1). The Loons (VC111), Loch Leven (VC85), Blackpool Moss (VC80), the River Thurso (VC109), Ravenshall Point, (VC73) Clearburn Loch (VC79) and Caerlaverock (VC72) (1)

[Hierochloe odorata \(L.\) P.Beauv. in BSBI Online Plant Atlas 2020](#); site details available on the [BSBI Distribution Database](#)

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?



Photo by Sarah Watts

Illecebrum verticillatum (Coral-necklace) (1)

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[Illecebrum verticillatum L.](#) in [BSBI Online Plant Atlas 2020](#). Details of the Loch Trieg find are [here: Surprising finds in 2021 from freshwater lochs at Corroul, Westernness \(vc97\) – Scottish Botanists' Conference](#), and this interesting 2008 paper by David Pearman examines its status outside of its Cornish stronghold [Wats27p143.pdf](#)

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)?

Sir Isaac Bayley Balfour (1). *Sphagnum papillosum* and *S. palustre* were the two species used for wound dressings (1).

See [Sir Isaac Bayley Balfour \(1853-1922\) – Botanic Stories](#). Species accounts from the wonderful British Bryological Society Field Guide are available online: [Field Guide online - British Bryological Society](#)

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?

Catfirth SSSI in Shetland, a small limestone ravine containing relict scrub vegetation – the best example of such scrub in Shetland (1). The second smallest is Laxo Burn SSSI (1), notified for its vascular plant assemblage which includes the only known population of the endemic *Hieracium attenuatifolium* (Weak-leaved Hawkweed)

Explore and download data on Scottish SSSIs at [Sites of Special Scientific Interest | NatureScot Spatial Data Hub](#)

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?!

Erythranthe peregrina (New Monkeyflower) (1)

- One small spot on the lower, central corolla lobe (vs none in *E. guttata* and a single blotch in *E. lutea*) (1)
- Open corolla throat (vs nearly closed in *E. guttata*) (1)
- Small, simple non-glandular hairs on inflorescence and calyx keels (vs glabrous in *E. lutea*) (1)
- High pollen fertility, abundant seed setting, and larger pollen grains, seeds and stomata than *E. x robertsii* (1 for any one of these)

See [vallejo-marin_phytokeys_2012.pdf](#), and [Erythranthe peregrina \(Vall.-Marín\) G.L.Nesom](#) in [BSBI Online Plant Atlas 2020](#)