



- a. Alpine Milk-vetch: on mountain pasture, very local.  
 b. Moss Campion: corries and exposed summits, frequent.  
 c. Purple Saxifrage: on moist rocks, local.  
 d. Dwarf Cornel: on peaty moors.

*About natural size*

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## FLOWERING PLANTS OF THE CAIRNGORMS

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As the Cairngorms consist predominantly of a dissected mass of coarse-grained granite, originally thrust upwards into the Moine schists and gneisses, their flora generally comprises species characteristic of acid igneous rocks. The less resistant schists, which have been reduced by weathering to elevations mainly below 2,000 feet and rarely above 3,000 feet, support a rather richer and more varied flora, particularly in places where the schists are calcareous. On the areas of diorite also the vegetation differs noticeably from that on the neighbouring granite. Taken as a whole, the region of the Cairngorms presents a very interesting range of plant communities from the pine and birch woods upwards over the moors and mountain pastures to the high corries and exposed summits, including in all over two hundred species of native flowering plants.

In Mar and Rothiemurchus the pine and birch woods have their present-day upper limits near the 2,000 feet contour, although scattered pines may be found somewhat higher, and birches up to 2,400 feet. The most extensive pinewoods are those remaining on the northern and western slopes of the mountains where also regeneration is more evident than in Mar, but in Glen Quoich, Glen Lui, and Glen Derry there are fine areas of woodland containing many splendid trees. Such old woods of Scots Pine have a shrub flora consisting principally of Blaeberry (*Vaccinium myrtillus*), Cranberry or Red Whortleberry (*Vaccinium vitis-idaea*), Ling or Heather (*Calluna vulgaris*), and, locally, Juniper (*Juniperus communis*); while the characteristic herbs include Creeping Lady's Tresses (*Goodyera repens*), Linnæa (*Linnæa borealis*), Chickweed Wintergreen (*Trientalis europæa*), Intermediate Wintergreen (*Pyrola media*), and Single-flowered Wintergreen (*Moneses uniflora*). In the birch woods the following are among the

common herbs: Wood Anemone (*Anemone nemorosa*), Tuberous Bitter Vetch (*Lathyrus montanus*), Hairy Woodrush (*Luzula pilosa*), Common Cow-wheat (*Melampyrum pratense*), Wood Sorrel (*Oxalis acetosella*), Germander Speedwell (*Veronica chamædrys*), and Violet (*Viola riviniana*).

Usually along the lower parts of the glens the tree species include Alder (*Alnus glutinosa*), Aspen (*Populus tremula*), Rowan (*Sorbus aucuparia*), and more locally Bird-Cherry or Hagberry (*Prunus padus*). The Rowans reach elevations up to at least 2,300 feet, particularly on steep rocks.

On a few hillsides, notably on Cadha Mor, in Rothiemurchus, the pine woods are associated at their upper limits with spreading juniper bushes which continue upwards to the open moors beyond the highest trees. Generally, however, this probably most natural transition does not prevail and Ling is very frequently quite dominant immediately above the woodlands, although it has many associates and several important competitors which replace it over large areas, according to the nature of the soil and the degree of exposure. Bell Heather (*Erica cinerea*) is prominent on the drier moors up to about 2,200 feet, while Cross-leaved Heath (*Erica tetralix*) is very common on wetter areas, to at least 2,300 feet. Red Bearberry (*Arctostaphylos uva-ursi*) occurs, frequently along with the *Calluna*, to higher elevations, and Trailing Azalea (*Loiseleuria procumbens*) appears on more exposed places generally, from 2,500 to 3,500 feet—often associated with Mountain Crowberry (*Empetrum hermaphroditum*) and Ling. The Crowberry and Blaeberry are more tolerant of snow cover and shade than Ling, so they tend to be dominant over areas less suitable to the latter. The Cranberry or Red Whortleberry (*Vaccinium vitis-idaea*) is common on the moors up to about 3,000 feet, and Bog Whortleberry (*Vaccinium uliginosum*) is locally abundant between 2,000 and 3,500 feet. Dwarf Birch (*Betula nana*) is sparsely distributed on peaty areas usually between 1,500 and 2,500 feet, and Dwarf Juniper (*Juniperus communis* ssp. *nana*) is found up to 3,350 feet on Ben Macdhui.

The shrubby plants referred to above are generally the most conspicuous elements of the vegetation of the Cairngorms above the woodlands, but many herbs occur on the middle slopes of the mountains. Some of these are common species of the lowlands, e.g., Tormentil (*Potentilla erecta*), Heath Bedstraw (*Galium hercynicum*), Devil's-bit Scabious (*Succisa pratensis*), and Bluebell (*Campanula rotundifolia*), but others are characteristic mountain plants. The

latter include Averans or Cloudberry (*Rubus chamaemorus*), Dwarf Cornel (*Chamaepericlymenum suecicum*), Alpine Lady's Mantle (*Alchemilla alpina*), Procumbent Sibbaldia (*Sibbaldia procumbens*), and Dwarf Cudweed (*Gnaphalium supinum*). The Alpine Milk Vetch (*Astragalus alpinus*) is (for geological regions) confined to one hillside between 2,300 and 2,600 feet—its only known station in Scotland north of the Dee. Quite frequent in the wetter places, particularly by burns and springs, are: Alpine Meadow Rue (*Thalictrum alpinum*), Scottish Asphodel (*Tofieldia pusilla*), Starry Saxifrage (*Saxifraga stellaris*), Yellow Mountain Saxifrage (*S. aizoides*), Alpine Willow-herb (*Epilobium anagallidifolium*), and Chickweed Willow-herb (*E. alsinifolium*).

In the high corries several of the species present such as Rose-root (*Sedum rosea*) and Mountain Sorrel (*Oxyria digyna*) are widespread over the Highlands, others such as Alpine Rock Cress (*Cardaminopsis petræa*) and Alpine Speedwell (*Veronica alpina*) are generally more local, while a few are among the rarest members of the British Flora. The latter include Tufted Saxifrage (*Saxifraga cæspitosa*), Brook Saxifrage (*S. rivularis*), Wavy Meadow Grass (*Poa flexuosa*), and Alpine Hare's foot Sedge (*Carex lachenalii*). Most of the thirty-five or so different Hawkweeds (*Hieracium* spp.) recorded for the Cairngorms occur in the corries and are among the most attractive plants appearing on the rocks in late summer.

Above the corries, on the extremely exposed tops, the vegetation is of special ecological interest because of the extensive areas near or over 4,000 feet subjected to terrific winds and great extremes of temperature. On the summit plateau of Braeriach and on the highest parts of Ben Macdhui, Cairntoul, Cairngorm, and Beinn a' Bhùird in particular the species of flowering plants present are indeed few, but the following can be found over the most windswept areas of stones and gravel—even near the indicator at the summit of Ben Macdhui: Rigid Sedge (*Carex bigelowii*), Viviparous Sheep's Fescue Grass (*Festuca vivipara*), Trifid Rush (*Juncus trifidus*), Curved Wood-rush (*Luzula arcuata*), Spiked Wood-rush (*Luzula spicata*), Least Willow (*Salix herbacea*), Starry Saxifrage (*Saxifraga stellaris*), and Moss Champion (*Silene acaulis*).

In the following summary the species are grouped according to their geographical relationships as recognised by Professor J. R. Matthews in his "Geographical Relationships of the British Flora" (*Journal of Ecology*, xxv, 1, 1937) and in his "Origin and Distribution of the British Flora," 1955.

## ARCTIC-ALPINE ELEMENT

Species mainly of arctic or subarctic regions and on high mountains farther south, but characteristically absent from the intervening lowlands (except, in some cases, on the sea coast). Most of the seventy-five British species of this group occur on the Cairngorms.

- Alchemilla alpina* L. Alpine Lady's Mantle. Abundant. Pastures, rocks, and exposed tops to over 4,000 feet.
- A. glomerulans* Buser. Rocks. Local up to c. 3,000 feet.
- Arctostaphylos uva-ursi* (L.) Spreng. Bearberry. Common on moors to 3,000 feet.
- Astragalus alpinus* L. Alpine Milk-Vetch. Extremely local in short pasture on basic schists, 2,300 to 2,500 feet.
- Betula nana* L. Dwarf Birch. Local on moors to 2,700 feet.
- Cardaminopsis petraea* (L.) Hiit. Alpine Rock Cress. Local on rocks to 4,000 feet.
- Carex atrata* L. Black Sedge. Very local on rocks to over 3,000 feet.
- C. bigelowii* Torr. Rigid Sedge. Common on stony and rocky places up to the highest summits.
- C. capillaris* L. Hair Sedge. Very local on basic rocks to 2,500 feet.
- C. lachenalii* Schkuhr. Very local. Wet places in a few of the highest corries. 3,000 to 3,900 feet.
- C. rupestris* All. Rock Sedge. Extremely local. On basic rocks from 2,400 to 2,500 feet.
- C. vaginata* Tausch. Brown-spiked Sedge. Local on rocks and grassy places, 2,500 to 3,800 feet.
- Cerastium alpinum* L. Alpine Mouse-ear Chickweed. Local on rocks to 4,000 feet.
- C. cerastoides* (L.) Britton. Starwort Mouse-ear Chickweed. Very local on rocks to near 4,000 feet.
- Dryas octopetala* L. Mountain Avens. Very local on basic rocks about 2,400 feet. Very rare on granite.
- Empetrum hermaphroditum* (Lange) Hagerup. Mountain Crowberry. Common and often abundant on moors and exposed places up to about 3,500 feet.
- E. nigrum* L. Common Crowberry. Common on moors up to about 2,500 feet.
- Epilobium alsinifolium* Vill. Chickweed Willow-herb. By springs and burns to about 3,500 feet.

- E. anagallidifolium* Lam. Alpine Willow-herb. Also by springs and burns but reaching higher elevations (to about 4,000 feet) than *E. alsinifolium*.
- Gnaphalium supinum* L. Dwarf Cudweed. Widespread on high rocky and gravelly places to over 4,000 feet.
- Juncus trifidus* L. Trifid Rush. Common and characteristic of exposed gravelly places, usually above 2,500 feet and reaching near the tops of the highest mountains.
- J. triglumis* L. Three-flowered Rush. Local in wet, usually rocky places to about 2,500 feet.
- Loiseleuria procumbens* (L.) Desv. Trailing Azalea. Exposed gravelly places from about 2,000 to 4,000 feet.
- Luzula spicata* (L.) D.C. Spiked Mountain Wood-rush. Widespread on rocks and gravel from about 2,500 feet to the highest summits.
- Oxyria digyna* (L.) Hill. Mountain Sorrel. Frequent on wet rocks up to about 4,000 feet, particularly in shaded gullies.
- Phleum commutatum* Gaud. Alpine Timothy Grass. Local and rare in wet places from 2,000 to 3,900 feet.
- Poa alpina* L. Alpine Meadow Grass. Local on rocks between 2,000 and 4,000 feet.
- Polygonum viviparum* L. Viviparous Bistort. Frequent on rocks and grassy places to over 4,000 feet.
- Potentilla crantzii* (Crantz.) Beck. Alpine Cinquefoil. Rare on ledges and grassy places to about 2,500 feet.
- Sagina saginoides* (L.) Karst. Alpine Pearlwort. Local and rare, usually on wet rocks, between 2,000 and 4,000 feet.
- Salix herbacea* L. Least Willow. Widespread on rocks and exposed gravelly places, from about 2,000 feet to the highest summits.
- S. lapponum* L. Downy Willow. Local on rocks to about 3,500 feet.
- S. myrsinites* L. Whortle-leaved Willow. Very local, usually between 2,000 and 2,500 feet, and favouring basic rocks.
- Saussurea alpina* (L.) DC. Alpine Saussurea. Very local on rock ledges usually between 2,000 and 3,000 feet.
- Saxifraga aizoides* L. Yellow Mountain Saxifrage. Common in wet places, particularly by burns, to about 3,000 feet.
- S. nivalis* L. Alpine Clustered Saxifrage. Very local and rare on rocks at about 3,000 feet.
- S. oppositifolia* L. Purple Saxifrage. Local on wet rocks from about 2,000 to over 3,000 feet.
- S. stellaris* L. Starry Saxifrage. Very common in wet places from about 1,200 feet to the highest summits.

- Sedum rosea* (L.) Scop. Rose-root. Widespread, but rather local, on steep rocks to at least 3,800 feet.
- Sibbaldia procumbens* L. Procumbent Sibbaldia. Common on rocks and exposed places from about 2,000 to 4,000 feet.
- Silene acaulis* L. Moss Campion or Cushion Pink. Locally common on rock ledges and gravel to the highest summits, flowering profusely over 4,000 feet.
- Thalictrum alpinum* L. Alpine Meadow Rue. Widespread in wet places to at least 3,100 feet.
- Tofieldia pusilla* (Michx.) Pers. Scottish Asphodel. Local from about 1,000 to at least 3,300 feet.
- Vaccinium uliginosum* L. Bog Whortleberry. Widespread on moors, mainly between 2,500 and 3,500 feet but reaching 3,700 feet.
- V. vitis-idaea* L. Cranberry or Red Whortleberry. Very common on woods and moors, reaching about 3,300 feet.
- Veronica alpina* L. Alpine Speedwell. Rare, on rocky places from about 2,000 to 3,300 feet.
- V. fructicans* Jacq. Rock Speedwell. Very rare and local on rocks about 2,500 feet.

#### ALPINE ELEMENT

Species found on the mountains of west, central, and south-east Europe, but absent from northern and arctic regions. Of the ten British species belonging to this group one is recorded for the Cairngorms.

- Cherleria sedoides* L. Mossy Cyphal. Extremely local on schists near 3,000 feet.

#### ARCTIC-SUBARCTIC ELEMENT

Species of definitely northern distribution ranging into the arctic or subarctic regions, but absent from the mountains of central Europe. In Britain there are in all about twenty-seven species of this group.

- Alopecurus alpinus* L. Alpine Fox-tail Grass. Very local and rare, in rather wet places, reaching at least 3,800 feet. (This strictly arctic plant is the only species of this element not found in Scandinavia.)
- Carex aquatilis* Wahlenb. Straight-leaved Water Sedge. Very local in marshy places to about 3,000 feet.
- C. rariflora* (Wahlenb.) Sm. Loose-flowered Sedge. Very rare, in wet, rather boggy places, reaching over 3,000 feet.

- C. saxatilis* L. Russet Sedge. Very rare, in wet places. On Cairntoul between 3,000 and 3,500 feet.
- Cerastium edmondstonii* (Wats.) Murb. and Ostenf. Broad-leaved Mouse-ear Chickweed. Local and rare, usually on rocky slopes and ledges, reaching nearly 4,000 feet.
- Cochlearia micacea* E. S. Marshall. Small Alpine Scurvy Grass. Local and rare, usually in rather wet places in the higher corries, to at least 3,300 feet.
- Chamaepericlymenum suecicum* (L.) Aschers and Graebn. Dwarf Cornel. Widespread, but rather local, on moors and sometimes on rock ledges to about 3,000 feet.
- Deschampsia alpina* L. Alpine Hair-grass. Local on rocks in the higher corries to at least 3,800 feet.
- Draba rupestris* R. Br. Rock Whitlow "Grass." Extremely local on rocks at about 3,000 feet.
- Luzula arcuata* (Wahl.) Wahl. Curved Woodrush. Widespread on stony places mostly above 3,500 feet, and reaching the summit of Ben Macdhui (4,296 feet). This species, so well represented on the Cairngorms, is rare in the Scottish Highlands generally.
- Poa flexuosa* L. Wavy Meadow Grass. Very rare in rocky places, in two of the highest corries at about 3,500 feet.
- Rhinanthus borealis* (Sterneck) Marshall. Northern Yellow Rattle. Local on pastures and rock ledges up to about 3,000 feet.
- Rubus chamaemorus* L. Averans or Cloudberry. Widespread on moors from about 1,000 to at least 3,800 feet.
- Saxifraga caespitosa* L. Tufted Saxifrage. Extremely local and rare, on rocks from about 3,000 to 3,500 feet.
- S. rivularis* L. Brook Saxifrage. Very local on wet rocks, in a few of the higher corries, usually well above 3,000 feet.

## NORTHERN MONTANE ELEMENT

Species of northern Europe and of the hilly regions of central and south Europe, but generally absent from the low-lying plains, the members of this group, about thirty in Britain, do not as a rule range so far north, nor to such high elevations on the mountains, as do the plants of the arctic-alpine element.

- Antennaria dioica* (L.) Gaertn. Mountain Everlasting. Widespread on hillsides, mainly short pastures, to at least 2,500 feet.
- Carex pauciflora* Lightf. Few-flowered Sedge. Rather local in boggy places, reaching over 2,500 feet.

- Goodyera repens* (L.) R. Br. Creeping Lady's Tresses. Locally common in Scots pine woods, but rarely over 1,000 feet.
- Juncus alpinus* Vill. Alpine Jointed Rush. Very local in wet places to about 2,000 feet.
- Leucorchis albida* (L.) Schur. Small White Orchid. Local in pastures to about 2,000 feet.
- Linnæa borealis* L. Linnaea. Very local in Scots pine woods, more rarely under birches to at least 1,500 feet.
- Listera cordata* (L.) R. Br. Lesser Twayblade. Local in woods and on moors, rarely on wet rocks, ascending to at least 2,300 feet.
- Rubus saxatilis* L. Stone Bramble. Very local, among rocks, in shade, ascending to 2,400 feet.
- Salix phylicifolia* L. Tea-leaved Willow. Local, usually on rocks by streams up to about 2,000 feet.
- Saxifraga hypnoides* L. Mossy Saxifrage. Extremely local, on basic rocks, to about 2,500 feet.
- Subularia aquatica* L. Awlwort. In the shallow water of a few lochs, to over 2,300 feet.
- Trientalis europæa* L. Chickweed Wintergreen. Widespread, but rather local, in woods and mountain pastures up to at least 3,000 feet. (Reaches 3,500 feet on Lochnagar!)
- Trollius europæus* L. Globe Flower. Local, in rather wet places in pastures or on rocks, reaching 3,700 feet on Braeriach.

#### OCEANIC NORTHERN ELEMENT

Species which in Europe have a distinctly north-westerly range, being characteristic of lands bordering the North Atlantic. Of the twenty-three British species, only three occur in the Cairngorms.

- Lobelia dortmanna* L. Water Lobelia. In several lochs to at least 1,950 feet (Lochan Beanaidh).
- Myrica gale* L. Bog Myrtle. Locally common in bogs to about 1,500 feet.
- Narthecium ossifragum* (L.) Huds. Bog Asphodel. Very common in wet moors, ascending to over 3,000 feet.
- Thymus drucei* Ronn. Wild Thyme. Very common in stony places, sandy slopes, and short pastures up to about 3,000 feet.

#### CONTINENTAL NORTHERN ELEMENT

Species having in Europe their chief distribution in central and northern regions, occurring farther south at higher altitudes. There are in all about ninety-seven British species in this group.

- Alchemilla glabra* Neugefind. Lady's Mantle. Widespread, usually by burns or on wet rocks in corries, reaching nearly 4,000 feet.
- Angelica sylvestris* L. Wild Angelica. Local, usually on rather wet rock ledges up to about 3,000 feet.
- Betula pubescens* Ehrh. Birch. Hillsides and valleys, ascending to 2,300 feet in Rothiemurchus.
- Carex curta* Good. White Sedge. Boggy places to about 3,500 feet.
- C. dioica* L. Dioecious Sedge. Rather local on wet moors to at least 2,500 feet.
- C. echinata* Murr. Star Sedge. Very common in wet places to about 2,500 feet.
- C. lasiocarpa* Ehrh. Slender Sedge. Very local, at loch margins, reaching 1,950 feet.
- C. pulicaris* L. Flea Sedge. Common in boggy places to about 2,000 feet.
- Cæloglossum viride* (L.) Hartm. Frog Orchid. Local, in pastures and on rock ledges, to at least 2,200 feet.
- Crepis paludosa* (L.) Moench. Marsh Hawk's Beard. Local, by burns and on wet rocks, to over 2,000 feet.
- Drosera anglica* Huds. Great Sundew. Rather local on wet moors to about 2,000 feet.
- D. rotundifolia* L. Round-leaved Sundew. Common on wet moors to at least 2,200 feet.
- Eriophorum angustifolium* Honck. Narrow-leaved Cotton-grass. Very common on wet moors to at least 3,500 feet.
- E. vaginatum* L. Hare's-tail Cotton-grass. Common on wet moors to about 2,500 feet.
- Galium boreale* L. Northern Bedstraw. Very local, usually on schistose rocks, to about 2,500 feet.
- Gentianella campestris* (L.) H. Sm. Field Gentian. Common in pastures to 2,500 feet.
- Hammarbya paludosa* (L.) O. Kuntze. Bog Orchid. Extremely local and rare, in boggy places usually on sphagnum, but probably not ascending above 1,500 feet.
- Littorella uniflora* (L.) Aschers. Shore-weed. Widespread, in the shallow water of lochs and lochans, to over 2,000 feet.
- Melampyrum sylvaticum* L. Wood Cow-wheat. Extremely local on damp, rather shaded rocks at about 2,000 feet.
- Menyanthes trifoliata* L. Bog Bean. Widespread in lochs and swampy places to at least 1,600 feet.

- Moneses uniflora* L. One-flowered Wintergreen. Extremely local in pine woods, ascending to about 1,200 feet. (It has seemingly been exterminated in a few areas by felling operations.)
- Oxycoccus palustris* Pers. Small Cranberry. Rather local in boggy places to at least 1,600 feet.
- Parnassia palustris* L. Grass of Parnassus. Local, in wet places to over 2,000 feet.
- Pinguicula vulgaris* L. Common Butterwort. Very common in wet moors, by burns, and dripping rocks to 3,800 feet on Cairntoul.
- Pinus sylvestris* L. Scots Pine. Represented in Mar and Rothiemurchus by the native sub-species *scotica* (Schott) E. F. Warburg, and ascending to about 2,000 feet, and very rarely higher as a tree, although seedlings and small shrubs reach much higher altitudes (3,400 feet on Ben Macdhui).
- Potentilla palustris* (L.) Scop. Marsh Cinquefoil. Common in boggy places to about 1,600 feet.
- Pyrola media* Sw. Intermediate Wintergreen. Rather local in woods and on the lower moors to about 1,500 feet.
- Ramischia secunda* (L.) Garcke. Serrated Wintergreen. Local in woods and on shaded slopes to at least 1,550 feet.
- Salix aurita* L. Eared Willow. Widespread by streams and on moors to about 2,000 feet.
- S. nigricans* Sm. Dark-leaved Willow. Local to over 2,000 feet.
- Sparganium angustifolium* Michx. Floating Bur-reed. Local, in pools, to about 2,000 feet.
- Trichophorum cespitosum* (L.) Hartman. Deer-grass. Abundant, as sub-species *germanicum* (Palla) Hegi, on the moors to at least 3,500 feet.
- Utricularia intermedia* Hayne. Intermediate Bladder wort, very local in the shallow peaty water of lochans and pools to at least 1,600 feet.
- Vaccinium myrtillus* L. Blaeberry. Abundant in woods and on moors to over 4,200 feet. (This species, often along with *Vaccinium vitis-idaea*, is frequently dominant in the closer pine woods, being more tolerant of shade than *Calluna vulgaris*.)
- Vicia sylvatica* L. Wood Vetch. Very local, in rather shaded rocky places to 2,000 feet.
- Viola palustris* L. Marsh Violet. Widespread in wet places to 4,200 feet.

## OCEANIC WEST EUROPEAN ELEMENT

Species distributed predominantly in areas of western Europe bordering on the Atlantic and absent, or very sporadic, in the central regions of the Continent. Only five of the eighty-five members of the British flora belonging to this group occur on the Cairngorms.

*Carex binervis* Sm. Ribbed Sedge. Common on moors to at least 2,800 feet.

*Erica cinerea* L. Bell-heather. Abundant on the drier moors to at least 2,200 feet.

*E. tetralix* L. Cross-leaved Heath. Abundant on the wetter moors to at least 2,300 feet.

*Genista anglica* L. Petty Whin. Common on rather dry moors to about 2,000 feet.

*Salix atrocinerea* Brot. Common Sallow. Widespread in wet places on hillsides and in rocky glens, ascending to 2,400 feet in Rothiemurchus.

In addition to the species summarised above, a considerable number of other flowering plants with generally less definite or very wide geographical relationships occur on the Cairngorms. Most of these are widespread over the lowlands and hills of Scotland, although some are represented at higher altitudes by sub-species or varieties.

The following ascend to 2,000 feet or above :—

*Achillea millefolium* L. Yarrow. In mountain pastures to about 3,500 feet.

*Agrostis canina* L. Brown Bent-grass. Widespread to over 3,000 feet.

*A. tenuis* Sibth. Fine or Common Bent-grass. Common to over 3,000 feet.

*Anemone nemorosa* L. Wood Anemone. Woods and shaded places to over 2,000 feet.

*Anthoxanthum odoratum* L. Sweet Vernal-grass. Abundant in woods and pastures to over 3,000 feet.

*Bellis perennis* L. Daisy. Frequent in pastures to about 2,500 feet.

*Caltha palustris* L. Marsh Marigold. Wet places, ascending to 3,900 feet on Cairntoul; the sub-species *minor* (Mill.) Clapham occurring from about 2,000 feet upwards.

*Calluna vulgaris* (L.) Hull. Heather or Ling. The most abundant flowering plant on the Cairngorms, dominant over large areas up to over 2,800 feet but occurring in dwarf form to nearly 3,600 feet.

- Campanula rotundifolia* L. Bluebell. Widespread in pastures and among rocks to over 3,200 feet.
- Carex demissa* Hornem. Yellow Sedge. Wet places to over 2,000 feet.
- C. flacca* Schreb. Glaucous Heath Sedge. Wet places to about 2,000 feet.
- C. nigra* (L.) Reichard. Common Sedge. Widespread in wet places to over 3,000 feet.
- C. pallescens* L. Pale Sedge. Local, in grassy woodlands and on hillsides to 2,000 feet.
- C. panicea* L. Carnation Sedge. Common in wet places to about 4,000 feet.
- C. pilulifera* L. Pill-headed Sedge. Widespread to 3,800 feet.
- C. rostrata* Stokes. Bottle Sedge. In the shallow water of lochs and in marshes.
- Chamaenerion angustifolium* (L.) Scop. Rosebay Willow-herb. Local, on rocks, to over 2,000 feet. (Noted at 3,600 feet on Lochnagar.)
- Chrysosplenium oppositifolium* L. Opposite-leaved Golden Saxifrage. Frequent by burns and on wet rocks to at least 3,500 feet.
- Cochlearia alpina* Wats. Mountain Scurvy-grass. Local, usually on wet rocks, to 3,800 feet.
- Deschampsia caespitosa* (L.) Beauv. Tufted Hair-grass. Widespread on moors and on hillsides to over 4,000 feet.
- D. flexuosa* (L.) Trin. Wavy Hair-grass. Abundant on moors and pastures to over 4,000 feet.
- Digitalis purpurea* L. Foxglove. Frequent at edges of woods and in rocky places to over 2,000 feet.
- Euphrasia officinalis* agg. Eyebright. Very common in pastures to over 3,500 feet. (Several of the rather critical species or sub-species of Eyebright occur on the Cairngorms, *E. frigida* Pugsl., being most frequent at higher altitudes.)
- Festuca ovina* L. Sheep's Fescue. Widespread, and locally abundant, in pastures to the highest summits, the sub-species *vivipara* (L.) Sm. being common on the exposed tops.
- Galium hercynicum* Weigel. Heath Bedstraw. Very common in pastures to over 4,000 feet.
- Geranium sylvaticum* L. Wood Cranesbill. Shaded rock ledges to over 3,000 feet.
- Geum rivale* L. Water Avens. Local, in wet places including shaded rocks to at least 2,500 feet.

- Hypericum pulchrum* L. Slender St John's Wort. Common on moors to over 2,000 feet.
- Juncus bulbosus* L. Bulbous Rush. Frequent in pools and wet places to over 3,000 feet.
- J. squarrosus* L. Heath Rush. Abundant on moors to at least 3,100 feet.
- Juniperus communis* L. Common Juniper. Locally common in woods and on moors; the sub-species *nana* (Willd.) Syme, occurring at higher elevations up to 3,350 feet.
- Lathyrus montanus* (L.) Bernh. Tuberous Bitter Vetch. Widespread in woods, pastures, and on moors to over 2,000 feet.
- Leontodon autumnalis* L. Autumnal Hawkbit. Common on hillside to over 3,000 feet.
- Luzula campestris* (L.) DC. Field Woodrush. Very common in pastures to about 3,000 feet.
- L. multiflora* (Retz.) Lej. Many-flowered Woodrush. Abundant on moors and pastures to about 3,000 feet.
- L. sylvatica* (Huds.) Gaud. Greater Woodrush. Woods and rock ledges to over 3,000 feet.
- Molinia caerulea* (L.) Moench. Purple Moor-grass. Abundant on moors to over 3,000 feet.
- Melampyrum pratense* L. Common Cow-wheat. In woods and pastures to at least 3,350 feet.
- Melandrium rubrum* (Weig.) Garcke. Red Campion. Local in shaded places to over 3,000 feet.
- Montia lamprosperma* Chamisso. Water Blinks. Common by springs and in swampy places to over 3,000 feet.
- Nardus stricta* L. Mat-grass. Abundant to over 3,700 feet.
- Orchis ericetorum* E. F. Linton. Heath Orchis. Common on moors to at least 3,050 feet.
- Oxalis acetosella* L. Wood Sorrel. Widespread in woods and shaded places among rocks to at least 4,000 feet.
- Pedicularis palustris* L. Red Rattle. Local, in marshy places to over 2,000 feet.
- P. sylvatica* L. Lousewort. Frequent in pastures to over 2,000 feet.
- Polygala serpyllifolia* Hose. Milkwort. Common in pastures to at least 3,000 feet.
- Potamogeton polygonifolius* Pourr. Bog Pondweed. Common in pools and bogs to over 2,000 feet.
- Potentilla erecta* (L.) Räsch. Tormentil. Abundant on moors and pastures to over 3,000 feet.

- Prunella vulgaris* L. Self-heal. Frequent in pastures to over 2,000 feet.
- Ranunculus acris* L. Meadow Buttercup. Common in pastures and among damp rocks to 3,800 feet.
- Rosa villosa* L. Villous Rose. Local, on rocks up to 2,000 feet.
- Rumex acetosa* L. Sorrel. Widespread in pastures and on rock ledges to 3,500 feet.
- R. acetosella* L. Common in pastures to over 2,000 feet.
- Salix repens* L. Creeping Willow. Locally common on moors and pastures to over 2,000 feet.
- Sarothamnus scoparius* (L.) Wimmer. Broom. Local, on hillsides to over 2,000 feet.
- Sorbus aucuparia* L. Rowan. Widespread in woods and on rocks to over 3,000 feet.
- Solidago virgaurea* L. Golden-rod. Common on hillsides and rocks to at least 3,600 feet.
- Stellaria alsine* Grimm. Bog Stitchwort. By springs and in marshy places to 3,200 feet.
- Succisa pratensis* Moench. Devil's-bit Scabious. Very common in pastures to over 2,500 feet.
- Taraxacum officinale* agg. Common Dandelion. Widespread to over 3,000 feet.
- T. paludosum* agg. Narrow-leaved Marsh Dandelion. Local, in wet places to over 3,000 feet.
- T. spectabile* agg. Broad-leaved Marsh Dandelion. Local, in marshy places and on wet rocks to about 4,000 feet on Cairntoul.
- Trifolium repens* L. White Clover. Widespread in pastures to over 2,000 feet.
- Veronica officinalis* L. Common Speedwell. Common on hillsides and rocky places to at least 3,100 feet.
- V. serpyllifolia* L. Thyme-leaved Speedwell. Widespread in pastures to over 3,000 feet, the sub-species *humifusa* (Dicks) Syme, occurring often in wetter places, usually above 2,000 feet.
- Viola riviniana* Rchb. Common Violet. Very common in woods, pastures, and rocky places to over 3,000 feet.

The many species of *Hieracium* (hawkweeds) recorded for the glens and corries of the Cairngorms are perhaps best referred to apart because of the peculiar difficulties which they present to the taxonomist and the plant geographer. Several are common to Britain and the Continent, others are apparently absent from the Continent, while a few seem to be found only on the Cairngorms.

Those of the first category include: *Hieracium alpinum* L., *H. argenteum* Fr., *H. calenduliflorum* Backh., *H. eximium* Backh., *H. globosiflorum* Pugsl., *H. gracilentum* Backh., *H. gracilifolium* (Hanb.) Pugsl., *H. holosericeum* Backh., *H. jovimontis* (Zahn) Roffey, *H. lasiophyllum* Koch., *H. molybdochroum* Dahlst., *H. pilosella* L., *H. sommerfeltii* Lindbg., and *H. vulgatum* (Fr.) Almq.

Of the second category are: *Hieracium aggregatum* Backh., *H. anglicum* Fr., *H. backhousei* Hanb., *H. centripetale* Hanb., *H. flocculosum* Backh., *H. graniticolum* W. R. Lint., *H. hanburyi* Pugsl., *H. hypocharoides* Gibson, *H. lingulatum* Backh., *H. marshallii* Lint., *H. nitidum* Backh., *H. pictorum* Lint., *H. pseudo-curvatum* (Zahn) Pugsl., *H. senescens* Backh., and *H. vennicantium* Pugsl.

Of the third category (Cairngorms only) are: *Hieracium grovesii* Pugsl., *H. macrocarpum* Pugsl., *H. melanochloricephalum* Pugsl., and *H. pseudo-petiolum* (Zahn) Roffey.

All the hawkweeds mentioned above have been described with great thoroughness by H. W. Pugsley in his "A Prodrum of the British Hieracia" (*Journal of the Linnean Society*, Vol. 54. London, 1948).

In conclusion it may be noted that, excluding *Hieracia*, 115 (or 62 per cent.) of the species mentioned above are essentially northern in their distribution generally; and indeed the high Cairngorms present a flora nearer in composition to that of arctic regions than can be found on perhaps any other group of mountains in the British Isles.

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