

# European Botany Guide









Rock Sea Spurrey (Spergularia rupicola)

Moss campion (Silene acaulis)

Many plants that usually live further south are able to survive and thrive in Scotland, Ireland, and Iceland thanks to the warm ocean currents of the Gulf Stream. Some plants growing in the southern part of Ireland are also found on the Iberian Peninsula of Spain and Portugal. The warm temperatures and wet weather have created the conditions for the natural vegetation of the north Atlantic islands to be both deciduous and boreal forests.

In contrast, Iceland's habitats are heavily influenced by the volcanic geology, though many of the same plants have made their way here. Due to its history of clearing forests for sheep farming, the present-day landscape of Scotland—outside of the towns and cities—is grassland and moorland. As in Ireland, there are many bogs.

North American visitors will recognize many of the flowers that we see on these north Atlantic expeditions, because they were brought along by immigrants to Canada and the United States! Additionally, some of the more northerly alpine species found in Scotland and Iceland have circumboreal and circumpolar ranges. They will be familiar to people who have visited the Canadian Arctic.

This short guide to common flowers of early summer, is divided into three main kinds of habitat:

- Flowers on the beach and nearby to landing sites.
- Roadside flowers and wildflowers growing in town and village gardens.
- Flowers growing on the hills with grazing sheep

# Contents

### **Beaches**

- 06 Brassicaceae, Mustard Family
- **07** Boraginaceae, Borage Family Polygonaceae, Buckwheat Family
- **08** Violaceae, Violet Family Fabaceae, Pea Family
- **09** Plantaginaceae, Plantain Family Caryophyllaceae, Pink Family

- **11** Rosaceae, Rose Family Crassulaceae, Stonecrop Family
- **12** Plumbaginaceae, Leadwort Family Ranunculaceae, Buttercup Family Umbelliferae, Carrot Family
- 13 Asteraceae, Aster or Daisy Family
- **14** Poaceae, Grass Family Cyperaceae, Sedge Family

### **Gardens And Roadsides**

- 15 Ferns and Horsetails
- **16** Iridaceae, Iris Family
- **17** Labiatae, Mint Family Violaceae, Violet Family Fabaceae, Pea Family
- **19** Caryophyllaceae, Pink Family Onagraceae, Evening Primrose Family

- **20** Plantaginaceae, Plantain Family Ranunculaceae, Buttercup Family Asteraceae, Aster or Daisy Family
- **21** Pinaceae, Pine Family Rosaceae, Rose Family
- **22** Betulaceae, Birch Family Poaceae, Grass Family

### Hillsides

- 23 Ericaceae, Heath Family
- **24** Peat Bog Moss Carnivorous Plants
- **25** Crassulaceae, Stonecrop Family Menyanthaceae Family Orobanchaceae, Broomrape Family

- **26** Brassicaceae, Mustard Family Labiatae, Mint Family Polygonaceae, Buckwheat Family
- **27** Rosaceae, Rose Family Saxifragaceae, Saxifrage Family
- 28 Poaceae, Grass Family
- 29 Cyperaceae, Sedge Family

### A Word About Orchids

Please take pictures, not plants!

Orchids are rare in many parts of the world, where their habitats are threatened or plant hunters collect them. Scotland, Ireland, and Iceland are fortunate to have many orchids growing in the wild. It's important to recognize the common orchids so as to be able to avoid picking them.

Orchids can be found in bogs and on heaths. They range from pink to purple to white, with flowers usually arranged in a spike or a pyramid. Many orchids will have leaves with dark brown or black blotches.

The excellent *Guide to Orchids in Skye*, provided on board, clearly identifies the main orchids that we will see in Europe.





# Beaches

Beaches range from fine, white or black sand to gravel and pebbles. Many shorelines are rocky, with tidal pools and seaweeds. On land, many plants are found in patches. Many of the species growing just above the high tide mark (or strandline) of beaches, and in patches among the seaweed and driftwood, are tolerant of the salty conditions. These "halophytes" or salt-lovers have thick, fleshy leaves, which is an adaptation that helps them to conserve water. We will also see grasses, including marram, which acts to stabilize sand dunes.

### Brassicaceae, Mustard Family

The Mustard family includes one of the first plants that you will meet on the beach, sea rocket (left).

Plants in this family usually have tiny flowers that all have four petals. Members of this family are easily recognized by their fruit, a long thin capsule that splits in two when the seeds are ripe, called a *silique*. Both outer walls of the silique fall off, leaving a fine membrane to which the seeds are attached. Mustard flowers come in yellow, white, and even shades of purple.

Most members of the Brassicaceae have leaves that grow close to the ground and taller flower stalks. Many of the mustards have small white flowers and similar leaves thus making it hard to distinguish the different species.

**Sea rocket** (*Cakile maritima*) is a low-lying annual with purple, lilac, or white flowers. The leaves are fleshy and thick, giving it the appearance of a succulent. While the plant is edible, its bitter taste makes it a survival food. Otherwise, the leaves should be used sparingly for flavour.



### Boraginaceae, Borage Family

### **Oyster Plant** (Mertensia maritima)

A salt-tolerant, sand- and beach-loving member of the Borage family, oyster plant's (*Mertensia maritima*) common name reflects the taste of its leaves. Identify this plant by its thick, bluish-grey elliptic or obovate leaves. When in bloom, watch for the small five-parted blue flowers that reflect another of its common names—sea bluebells. 10 to 35cm tall.



**Oyster Plant** (Mertensia maritima)

### Polygonaceae, Buckwheat Family

The buckwheat family includes plants like rhubarb (*Rheum rhabarbarum*) which thrive in Scotland, Ireland, and Iceland—and the north Atlantic in general.

**Sorrels or docks** (*Rumex species*) are edible plants in the buck-wheat family. We will see several species. Common sorrel, sheep's sorrel, and curled sorrel all have medium to large leaves at their base and spikes of reddish flowers without petals. Their young leaves make delicious soup. These species are all considered weeds in North America.



Curled sorrel (Rumex crispus)



Common sorrel (Rumex acetosa)



Sheep's sorrel (Rumex acetosella)

### Violaceae, Violet Family

Plants in the violet family have irregular flowers, which means that the petals on one flower are not all the same shape or size. Familiar members of this family include garden pansies.

**Common dog violet** (*Viola riviniana*) is easy to spot with its rosettes of simple green leaves and five flower petals. We will also see this small plant growing in patches of grass along roadsides and in gardens.

**Common dog violet** (Viola riviniana)

### Fabaceae, Pea Family

One of the traits of the pea family is that the roots of these plants can fix nitrogen from the air into forms of nitrogen that plants use to make proteins. Bacteria living in small nodules on the roots make this chemical reaction possible. When the roots die, the decomposing nodules release the nitrates into the soil, providing nutrients for other plants as well.

**Tufted vetch** (*Vicia cracca*) produces a spike of blue-purple irregular shaped flowers. It has compound leaves made up of smaller leaflets. As with other pea plants, vetches have pods that contain the seeds.

**Common bird's foot trefoil** (*Lotus corniculatus*) is easily recognized by its cluster of bright yellow flowers. Like other pea plants, it has compound leaves and pods.





Common bird's foot trefoil (Lotus corniculatus)

Sea plantain (Plantago maritima)

### Plantaginaceae, Plantain Family

**Sea plantain** (*Plantago maritima*) is easy to overlook, because its flowers lack petals. It is highly tolerant of salt spray and often forms carpets along beaches and cliffs. The edible leaves are thick and fleshy. It is a close relative of the widespread, introduced weed in North America, common plantain (*Plantago major*)—which some First Nations called Englishman's Foot.



Moss campion (Silene acaulis)

### Caryophyllaceae, Pink Family

Plants in the pink or carnation family have opposite leaves, meaning that leaves grow in pairs, one on each side of the stem opposite the other. The flowers have five petals. Although this makes it sound as if all the plants in this family might look similar, this is not the case. This family has a large variety of flower colours and forms.

**Moss campion** (Silene acaulis) is a good example of a cushion plant, the typical plant form found in alpine and Arctic environments. The plant is compact and grows tightly pressed to the ground, creating a warm microclimate. It has no visible stems. When the plant is in bloom, if it difficult to see the leaves beneath the mass of tiny pink blossoms.



Common mouse ear (Cerastium fontanum)

**Common mouse ear** (*Cerastium fontanum*) is a small plant that usually grows in clumps. It has hairy leaves that resemble a mouse's ear. It has showy white flowers with five notched petals. We may see a related species that was introduced to Scotland and Ireland from North America, sea mouse ear (*Cerastium diffusum*).

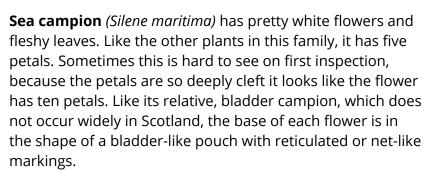


**Knotted pearlwort** (Sagina nodosa) is a tiny plant with white flowers that is easily missed. This plant is only a few centimetres tall and wide.

Knotted pearlwort (Sagina nodosa)



Sea campion (Silene maritima)



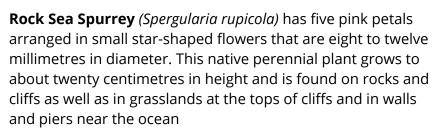


**Sea-beach sandwort** (Honckenya peploides)

**Sea-beach sandwort** (Honckenya peploides) is a low, mat-forming plant that is common along beaches. It has fleshy green leaves with white flowers that are not particularly showy. The leaves are quite tasty—albeit a little salty. This is a halophyte or salt-tolerant plant.



Rock Sea Spurrey (Spergularia rupicola)





Silverweed (Pontentilla anserina)



Roseroot (Sedum rosea)

### Rosaceae, Rose Family

Plants belonging to the rose family can have yellow, white, pink, or cream coloured flowers. These plants have alternate leaves, that can be simple in shape, or compound, like cinquefoil or Potentilla species, with many leaflets. Most flowers in the rose family have five petals.

**Silverweed** (*Potentilla anserina*) has silky, silvery compound leaves and yellow flowers with five heart-shaped petals. The red stolons creeping above the ground link each rosette of leaves.

### Crassulaceae, Stonecrop Family

**Roseroot** (*Sedum rosea*) plants are easily recognizable by their thick, fleshy leaves. Most plants are unisexual, having only male or female flowers, but occasionally, plants will have flowers of both sexes.

### Plumbaginaceae, Leadwort Family

**Sea thrift** (*Armeria maritima*) has grass-like leaves growing in a tuft at the base of the plant. The flowers are grouped together in a flowering head. There are between thirty and fifty flowers per head. Each flower has five petals that are red in bud but pink when in bloom. When the flowers are past their peak, they become paper thin, and are straw coloured—or even white.



Sea thrift (Armeria maritima)



Sea thrift (Armeria maritima)



Marsh marigold (Caltha palustris)

### Ranunculaceae, Buttercup Family

Most members of the buttercup family are found in moister habitats. This is **marsh marigold** (*Caltha palustris*). Yellow flowers in the buttercup family can be easily distinguished from yellow silverweed (*Potentilla anserina*) flowers because the buttercup petals are much shinier.



Rock samphire (Crithmum maritimum)

### **Umbelliferae, Carrot Family**

**Rock samphire** (*Crithmum maritimum*) is in the carrot family with flowers in umbrella shaped umbels. This edible plant has distinctive, grey-green fleshy leaves and yellow green flowers about two millimetres across. Umbels contain as many as thirty rays of flowers.

### Asteraceae, Aster or Daisy Family

The daisy family has composite flowers composed of ray florets and/or tube florets. The florets have all the sexual parts and are complete flowers. In a flowering head, there may be between forty and fifty florets making up the inflorescence. The ray florets are the long skinny flowers on the outside of daisy flower head and the tubular *disc* florets are in the centre of the flower. Many species in the daisy family have seeds with hairs to help them disperse in the wind.



Yarrow (Achillea millefolium)

**Yarrow** (*Achillea millefolium*) is widespread across the north Atlantic landscapes, and also Canada. The circular panicles contain many small white flowers, while the compound leaves are fern-like.



Dandelions (Taraxacum ssp.)

**Dandelions** (*Taraxacum ssp.*) are examples of daisy plants with only ray florets. They are everywhere—and are edible!



**Seashore chamomile or sea mayweed** (*Tripleurospermum maritimum*)

**Seashore chamomile** or **sea mayweed** (*Tripleurospermum maritimum*) is a daisy-like flower with white ray florets and yellow disc florets. It is common along beaches.



### Poaceae, Grass Family

The most successful and widely spread plant on Earth, grasses are common throughout the landscapes of Iceland, Ireland, and Scotland. They have very small, wind-pollinated flowers with no petals. Grass stems are round and their leaves are mostly found in a tuft at their base. Their flowers contain both male and female parts. Grasses produce grains as fruit.

The coastal grasslands found in the north-west highlands and islands of Scotland on sand, are known as *Machair*. The most common large grass found among sand dunes is marram grass.



**Beach** or marram grass (*Ammophila arenaria*, right) and fine-leaved red fescue (*Festuca rubra*, left).

### Cyperaceae, Sedge Family

Members of the sedge family look like grasses at first glance, but they differ—for most sedge species, the male and female sexual parts are not in the same flower. "Sedges have edges" is an easy way to remember that their stems are triangular. This is one way to distinguish a sedge from a grass plant easily in the field. Sedges produce an achene as a fruit.

Look out for **beach sedge** (*Carex arenaria*). The bunches of grass shoots are arranged in straight line, because each ramet or shoot is springing up from an underground rhizome creeping through the sand.



# Gardens And Roadsides

Many wildflowers dot the roadside verges in yellows, pinks, whites, and purples. Cabbage, potatoes, and rhubarb grow well in garden vegetable patches, along with introduced flowering plants like columbine, fuschias, and clematis.

Today, most of Scotland and Ireland are classified as having agricultural land use. Fields with crops and pastures, and moorlands scattered with grazing sheep, predominate. Iceland also has many sheep, but only 3% is classified as agricultural land, while 50% of the country is bare soil and rock. Both Scotland and Ireland have many wetlands and bogs.

Due to the long history of agriculture, Scotland has very little remaining deciduous forest and the ancient Caledonian Forest of the highlands, with its pine trees. About thirty years ago, intensive reforestation efforts took place, particularly in the south of Scotland. In the highlands and islands, we see relatively few patches of forest in comparison to moorlands. Most trees are found in the valleys and around gardens. Iceland has less than 1% of forest cover, but for a completely different reason, namely its volcanic history and lack of soils in many areas.

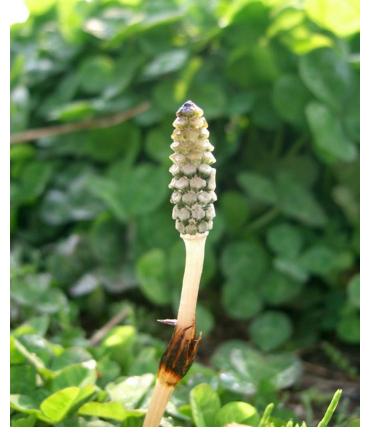


### Ferns and Horsetails

Ferns and horsetails grow very well in the north Atlantic region, due to the warm, wet climate. These plants do not produce flowers and seeds, but spores that are found on the underside of leaves or in cone-like structures on stalks. They have strong upright stems.

**Bracken** (*Pteridium aquilinum*) is a common, easily identified fern that can grow up to a metre tall. In Scotland, it can be found up to five hundred metres above sea level, on the hills, but it is also very common in low-lying sheltered areas.

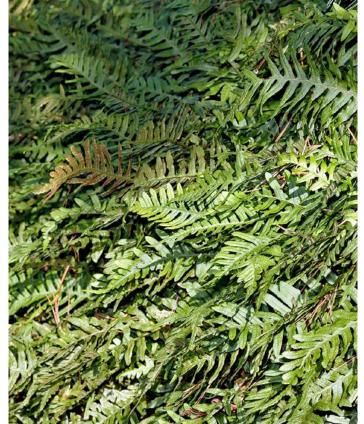
Bracken (Pteridium aquilinum)



Field horsetail (Equisetum arvense)

**Field horsetail** (*Equisetum arvense*) and its relative, the marsh horsetail (*Equisetum palustre*) are jointed green plants without leaves. They contain high levels of silica.





Polypody (Polypodium vulgare)

**Polypody** (*Polypodium vulgare*) is also a fern.

### Iridaceae, Iris Family

**Yellow flag** (*Iris pseudacorus*) grows in ditches along roadsides. A yellow die can be obtained from the flowers, and a black dye from the roots (mixed with sulphate of iron); the black dye is called 'Sabbath Black' and is used in ink. A bright green dye can be obtained from the leaves. All of these colours were used in the Harris tweed industry in the Western Isles of Scotland.



Self heal (Prunella vulgaris)

Marsh violet (Viola flammea)

### Labiatae, Mint Family

**Self heal** (*Prunella vulgaris*) is common in lawns and along roadsides.



Meadow vetchling (Lathyrus pratensis)

Red clover (Trifolium pratense)

### Violaceae, Violet Family

**Marsh violet** (*Viola flammea*) is quite tiny at less than fifteen centimetres tall.

### Fabaceae, Pea Family

**Meadow vetchling** (*Lathyrus pratensis*) is another of the many yellow flowers that abound in early summer medick. Its yellow, clover-like flowers look similar to bird's foot trefoil, but meadow vetchling is a taller, climbing perennial with tendrils and leaflets that are either single or paired.



White clover (Trifolium repens)

**White clover** (*Trifolium repens*) and **red clover** (*Trifolium pratense*) are easily recognized by their three-part compound leaves. Both are important forage plants in hayfields.



Nootka lupin (Lupinus nootkatensis)



Nootka lupin (Lupinus nootkatensis)



Nootka lupin (Lupinus nootkatensis)

A member of the Pea Family to keep an eye out for is the **Nootka Lupin** (*Lupinus nootkatensis*). An alien to Europe, this plant was introduced to Iceland to fertilize the soil, but now competes with local flora. Despite a bad reputation, Nootka Lupin is abundant and striking. Recognize this plant by its purple and white flowers and its palmately compound leaves. It grows all over, but is commonly found in river flats, gravel hillsides, and other areas with poor soil. It is twenty to thirty centimetres tall.



Gorse (Ulex europaeus)

**Gorse** (*Ulex europaeus*) is a spiny evergreen shrub with bright yellow pea-like flowers. It's difficult to miss and has become highly invasive in countries such as New Zealand, where it was introduced as a garden plant.

### Caryophyllaceae, Pink Family



Ragged robin (Silene flos-cuculi)



Red campion (Silene dioica)

**Ragged robin** (*Silene flos-cuculi*) is a perennial herb that likes damp ground. The pink flowers each have five petals that are deeply divided into four lobes, for twenty parts that give the plant its "ragged" appearance. Ragged robin is a popular pollinator food plant. The leaves on the stem lack stalks.

**Red campion** (*Silene dioica*) is similar to ragged robin, though each flower petal is divided into only two lobes.

### Onagraceae, Evening Primrose Family

**Fuschia** (*Fuschia magellanica*) is an easily recognizable bush due to its many tubular pink and purple flowers. It has been widely planted in the gardens of north Atlantic islands, including in the Orkneys, where it is considered a naturalized species.



Fuschia (Fuschia magellanica)



Foxglove (Digitalis purpurea)

# Plantaginaceae, Plantain Family

The tall, purple flower spikes of **foxglove** (*Digitalis purpurea*) are easy to spot. Foxglove flowers are bell-like with a wide mouth. Inside the tube, they are heavily spotted. The leaves are very hairy, with an almost furry feel, and live as rosettes in their first years, before growing big enough to flower. While the plant is poisonous, it can be refined to create the drug digitalin, and is used as a heart medication.

### Ranunculaceae, Buttercup Family



Creeping buttercup (Ranunculus repens)



Meadow buttercup (Ranunculus acris)

**Creeping Buttercup** (*Ranunculus repens*). Yellow buttercups can be distinguished from yellow potentilla blooms because the buttercups are much shinier.

**Meadow buttercup** (*Ranunculus acris*) is widespread.

### Asteraceae, Aster or Daisy Family



Field thistle (Cirsium alpina)

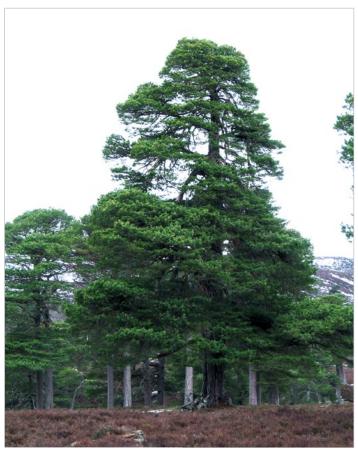
No list of Scotland's common flowering plants would be complete without that most iconic of species, the thistle. There are many species of thistle growing in Scotland and Ireland, and **field thistle** (*Cirsium arvense*) has been introduced to Iceland, but the **spear thistle** (*Cirsium alpina*), shown here, is considered by many, to be the most likely candidate for the Scottish national emblem.



Common daisy (Bellis perennis)

Like dandelions, **common daisy** (*Bellis perennis*) is everywhere in Scotland and Ireland and is an introduced species in Iceland.

### Pinaceae, Pine Family



The Scots Pine (Pinus sylvestris)

These evergreen trees are conifers that are most commonly found in the boreal forest. Members of the pine family produce seeds in cones, and do not have flowers. Nevertheless, they do produce large amounts of pollen, as pines are wind-pollinated.

**The Scots Pine** (*Pinus sylvestris*) is Scotland's National Tree.

### Rosaceae, Rose Family



Rowan or mountain ash (Sorbus aucuparia)

The **rowan** or **mountain ash** (*Sorbus aucuparia*) is one of only two tree species found in the Shetland Isles, the other being crab apple. Rowans are found throughout the rest of Scotland and across Ireland but are rare in Iceland. It is a woody member of the rose family.



Silver birch (Betula pendula)

### Betulaceae, Birch Family

**Birches** are deciduous trees that lose their leaves in the winter.

**Silver birch** (*Betula pendula*) has round leaves with scalloped edges. It is a pioneer species that occurs in Ireland, mainland Scotland and the Western Isles. There are some **downy birch** (*Betula pubescens*) trees in Iceland, but forest cover is very low across the landscape.

### Poaceae, Grass Family

Grasses are common plants in Scotland, Ireland, and Iceland, and there are many species of them. Grass flowers are wind-pollinated, producing large amounts of pollen, which makes many people sneeze. Grass stems are round and their leaves are mostly found in a tuft at their base. Their flowers contain both male and female parts. Grasses produce grains as fruit.



False oat grass (Arrhenatherum elatius)

Around the gardens, on roadsides, and in fields, we see **false oat grass** (*Arrhenatherum elatius*), left and the purple, velvety flowers of **Yorkshire fog** (*Holcus lanatus*), right.



Yorkshire fog (Holcus lanatus)

# Hillsides

As you walk up the hillsides, or even at sea level, you quickly encounter boggy conditions, sheep, and in Scotland, possibly red deer—as well as numerous birds.

### Ericaceae, Heath Family

Heather is an iconic Scottish and Irish plant. Most of the plants in this family are tiny shrubs. Many of them have tiny bell-shaped flowers, and some of them have berries in the autumn. The flowers range from showy purple to small pink or white bells.



Common heather or ling (Calluna vulgaris)



Common heather or ling (Calluna vulgaris)

**Common heather** or **ling** (*Calluna vulgaris*) is the classic Scottish heather that turns the hillsides purple when it flowers. The linear leaves are in opposite rows and the flowers are pale purple. It also grows in Ireland and in Iceland.



Cross-leaved heath (Erica tetralix) Bell heather (Erica cinerea) **Cross-leaved heath** (*Erica tetralix*) has linear leaves The third common species is **bell heather** (*Erica* 

in whorls of four. The flowers are pink and globular in compact heads.

*cinerea*). The linear, dark green leaves are in whorls of three.



Trailing azalea (Loiseleuria procumbens)

A low growing member of the heath family (Ericaceae), **trailing azalea** (*Loiseleuria procumbens*) can be found inhabiting low hilltops and exposed slopes. Though low above the surface, trailing azalea grows wide and elaborate root systems under the Earth. Look for its woody stem; opposite, evergreen, shiny leaves; and small pink to bright red petals. It is five to ten centimetres tall.

# Peat Bog Moss Sphagnum moss (Sphagn

**Sphagnum moss** (*Sphagnum species*) forms the infrastructure of the peat bogs that are common in both Ireland and Scotland. New moss grows in layers on top of the old moss, which dies, and slowly decomposes to form peat. Peat is cut from trenches, laid out to dry, and is used for fuel—and also to give Scotch whiskey its famous smokey flavour.



Sphagnum moss (Sphagnum species)

### **Carnivorous Plants**

Bogs are nutrient-poor environments, so plants that live in them have evolved different strategies to capture the nitrogen needed for growth and flowering. Strategies include trapping insects with sticky hairs. **Butterwort** (*Pinguicula vulgaris*) and **sundew** (*Drosera rotundifolia*) are carnivorous plants found in bogs and low-nutrient habitats throughout Scotland, the northwest of Ireland and in Iceland.

The bright green basal rosette leaves of butterwort have sticky hairs for trapping flies, while sundew is a low bright red plant that is easily spotted in low, wet grass swards.



**Butterwort** (Pinguicula vulgaris)



**Sundew** (Drosera rotundifolia)

Biting stonecrop (Sedum acre)

### Crassulaceae, Stonecrop Family

A member of the stonecrop family, **biting stonecrop** (*Sedum acre*) has a yellow five-parted flower. It stores water in its small, thick, plump leaves; allowing it to drought for up to half a year. Look for biting stonecrop on gravel hills, riverbeds, rock outcrops, and cliffs. It ranges three to five centimetres tall.



Bogbean or buckbean (Menyanthes trifoliata)

### Menyanthaceae Family

**Bogbean** or **buckbean** (*Menyanthes trifoliata*) lives in bogs and has a leaf that is divided into three, known as a trefoil. The pink and white flowers are fringed with long white hairs and are found in spikes rising above the water surface along with the leaves.



Lousewort (Pedicularis sylvatica)

### Orobanchaceae, Broomrape Family

Louseworts have irregular flowers, which means that not all the petals on one flower are the same shape or size. The other name for plants in this family is "fernweeds" and, like this name implies, their leaves resemble those of a fern.

**Lousewort** (*Pedicularis sylvatica*) is an almost-hairless low perennial with pink flowers and fernlike, deeply indented leaves.



Another member of this family, **alpine bartsia** (*Bartsia alpina*), can be found throughout the landscape in ravines, cliffs, alpine slopes, and pastures. It is capable of living in a variety of environments because of its ability to tap into the root systems of other plants and steal nutrients. Recognize it by spotting the dark violet flower, glandular hairs, and ovately shaped opposite leaves. It is between fifteen and thirty centimetres tall.

### Brassicaceae, Mustard Family

**Cuckoo flower** or **lady's smock** (*Cardamine pratensis*) can be pink, lilac or white. In June, the similar-looking, though bigger, frequent garden escape, dame's rocket or dame's violet (*Hesperis matronalis*) can be seen along roadside in Orkney and the Hebrides.



**Cuckoo flower or lady's smock** (Cardamine pratensis)

### Labiatae, Mint Family

A member of the mint family, **wild thyme** (*Thymus praecox* subspecies. *arcticus*) is a small flowering plant used locally in cooking and teas. It has the classic four-sided stem of the minty family, with opposite lanceolate leaves. The flowers grow close together at branch tips and are pink to red in colour. Find this plant low to the ground on gravel hills, in dry heathand slopes, on cliffsides, and at rock edges. It is two to five centimetres tall.



Wild thyme (Thymus praecox subspecies. arcticus)

### Polygonaceae, Buckwheat Family

Alpine bistort (*Bistorta vivipara*), a member of the buckwheat/dock family, grows in a variety of different environments up to a thousand metres in elevation. The latin name vivipara means producing living offspring. Along the inflorescence, bulbils develop into new plants which eventually fall off, continuing life on their own. Identify alpine bistort by its spike inflorescence, white flowers, and dark green lanceolate leaves. It is five to fifteen centimetres tall.



Alpine bistort (Bistorta vivipara)

### Rosaceae, Rose Family

**Tormentil** (*Potentilla erecta*) has compound leaves and yellow flowers with four petals. This makes it unusual, since most Potentilla or cinquefoil species have five petals. The plant is often prostrate or sprawling.



Tormentil (Potentilla erecta)

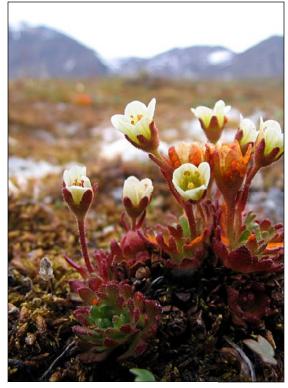
A member of the rose family, **mountain avens** (*Dryas octopetala*) inhabits gravely hills and dry heathland. Identify this plant in bloom by its small, white eight-petalled corolla, or year-round by its ovate basal leaves rimmed with blunt toothlike edges. Mid-summer, after its flowering, look for it's twisted seedhead which will begin to unwind as autumn approaches. It is five to ten centimetres tall.



Mountain avens (Dryas octopetala)

### Saxifragaceae, Saxifrage Family

**Tufted saxifrage** (*Saxifraga cespitosa*), a member of the saxifrage family, is a low growing plant that inhabits gravely hills, cliffs, and rock outcrops. Recognize it by its basal rosette of clustered green and red leaves. The plant has a creamy, white, self-pollinating flower, allowing it to produce a seed in unfavourable environmental conditions. It is five to ten centimetres tall.



Tufted saxifrage (Saxifraga cespitosa)

# Mat grass (Nardus stricta)

### Poaceae, Grass Family

The classic heather moor and bog grasses are **mat grass** (*Nardus stricta*, left) and **purple moor-grass** (*Molinia caerulea*, right) which can cover large areas of the uplands.





**Wavy Hair Grass** (*Deschampsia flexuosa*) is pictured left and has thin leaves. All three species are stiffened by high silica levels.

### Cyperaceae, Sedge Family

There are many different members of the sedge family in Britain, and many of them like damp places, and can be seen in Scotland.

Sedges differ from grasses in that—in most species—their male and female sexual parts are not in the same flower. Most of the times, the male flowers are on one spike while the females are on another spike. Most sedges have triangular stems and this helps to distinguish them from grasses easily in the field. Sedges produce an achene as a fruit.

Although cotton grasses have round stems, and flowers of both sexes in the same floret, they produce a fruit that is an achene, thereby making them a sedge and not a grass.



**Common cotton grass** (Eriophorum angustifolium)

The white, fluffy plants waving around in wet patches of upland heather moorland can be one of two species of bog cotton: **common cotton grass** (*Eriophorum angustifolium*) has three white cotton flowers on a stem, while *Eriophorum vaginatum* has one.







+1.905.271.4000 1.800.363.7566

info@adventurecanada.com www.adventurecanada.com

55 Woodlawn Avenue, Mississauga, ON, L5G 3K7, Canada, TICO Reg# 4001400

- **f** AdventureCanada
- @adventurecanada
- @@adventure.canada
- ® blog.adventurecanada.com #AdventureCanada

