

Cove coastal path

The Cove coastal path runs along the cliff top between Girdleness and Cove, south of Aberdeen. In addition to features such as its geology and rock pools, the coastal path passes through a range of coastal vegetation, from coastal heath to grassland. These habitats contain a diverse flora, from orchids to vetches to composites, making it an excellent place to learn to identify “wild flowers”. The path is not far from Aberdeen (c. 5 miles to Cove).

Getting there

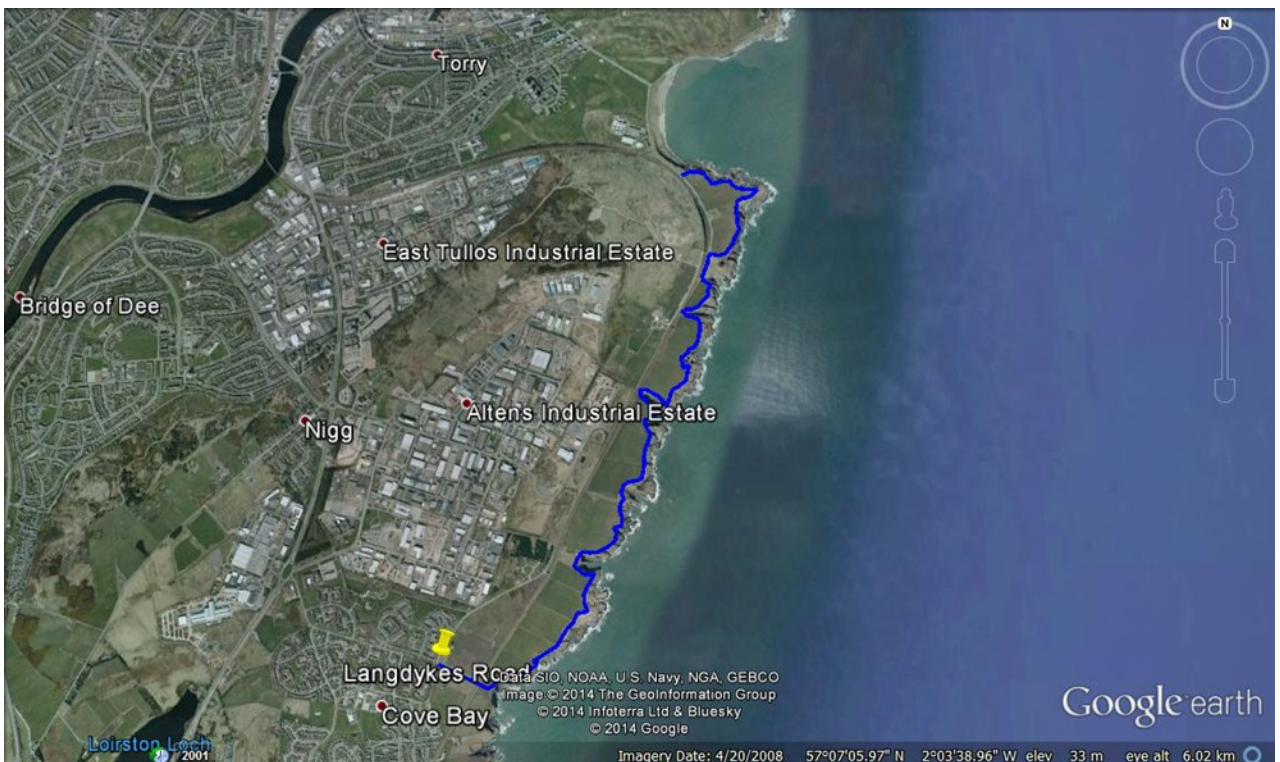
Bus: The number 3 bus will take you to Cove. From there, turn left down a trail toward the coast at the corner of Langdykes Road and Coast Road.

Bicycle: The coastal path is very easy to arrive at by bike. Cycle south from the city centre, down Market Street and across Victoria bridge. Follow Victoria Road round and onto St. Fittick's Road. At the top of St Fittick's, turn right and cycle up the hill. You can either follow this road to Cove and enter the path there, or turn left onto the path at the railway bridge.

Car: Taking the same route as the bike, drive down to Cove and enter the path at the corner of Langdykes Road and Coast Road.

Where to go once there

Simply follow the path. At the north end of the path the vegetation is heath-like, and transitions to a more grassland like community toward Cove. To see all the species described you will need to visit both vegetation types.



Notes on the key

It should be noted that the key is informal and designed to be used on Cove coastal path. It covers a range of species that are common and easily found at the site, and which illustrate the key features needed for identification of wild flower species. It does not cover the entire range of species present at the site – you will find species that have not been included.

When you identify a plant by its flowers, always take note of what the leaves look like so that you can identify it again when it is not in flower!

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The plant keys for Cove coastal path were produced by Jim Downie, funded by a University of Aberdeen College of Life Sciences and Medicine and Development Trust summer studentship and a field work support grant from the Botanical Society of Scotland (BSS). Students with an interest in botany are encouraged to join BSS <http://www.botanical-society-scotland.org.uk/>



Botanical Society of Scotland

Identifying wild flowers

The huge variety of flowering plants can be daunting when beginning to learn plant ID. However, there are patterns within this range of variation that allow plants to be grouped into families quite easily. These groupings are largely based on flower morphology but can also be determined through leaf morphology.

Although this guide does not aim to provide a detailed understanding of plant terminology, the use of some such terminology is unavoidable. The following simple diagrams introduce terms which are commonly used in identification.

Flower structure

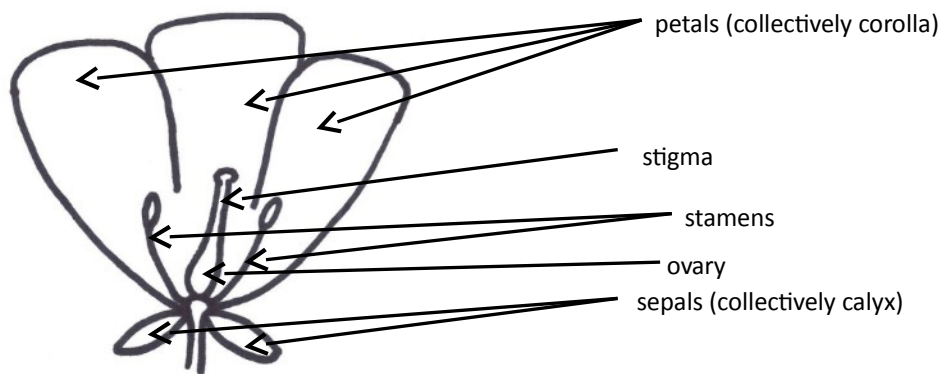


Fig 1. A cross section of an idealised flower.

Flowers are composed of a number of components, the number and shape of which are important for plant identification. These are, in turn from the outside to the inside, the sepals (calyx), petals (corolla), stamens and the stigma and ovary.

- Petals are usually (but not always) brightly coloured or flashy.
- Sepals often, but not always, appear as small leafy appendages beneath the petals. A second ring of sepals is known as the “epicalyx”.

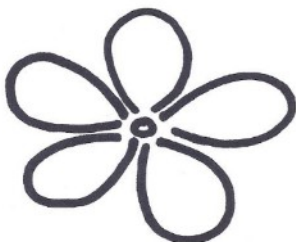


Fig 2. Radial symmetry



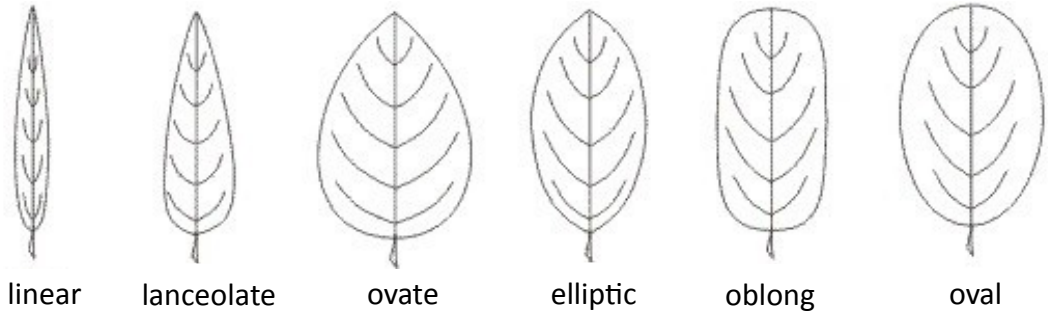
Fig 3. Bilateral symmetry

The type of symmetry exhibited by a flower is useful for differentiating between families. Flowers can either have radial symmetry (Fig 2.) or bilateral symmetry (Fig. 3).

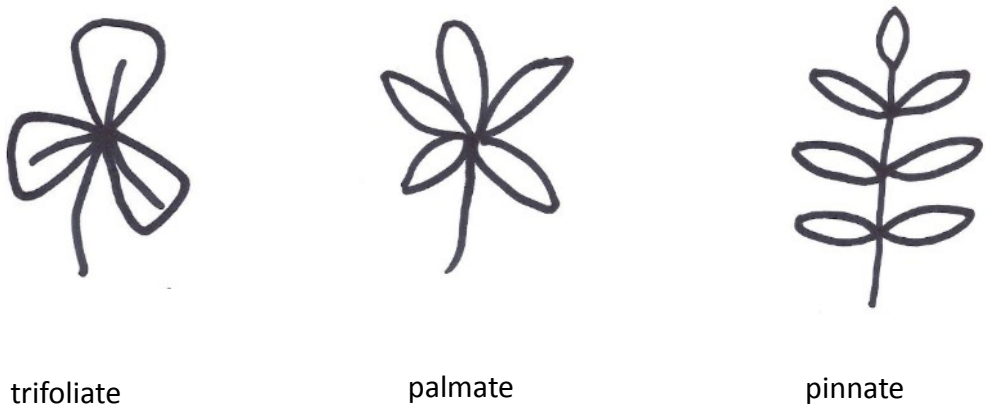
Leaf structure

Leaves may be simple (undivided) or compound (divided into leaflets). The shape of a leaf or leaflet, and their arrangement on the stem, are also important for identification.

Leaf shapes



Types of compound leaf



Stipules



Stipules are leaf-like appendages at the base of the leaf, where it joins the stem.

Whorls



Leaves arranged in whorls are in a ring around the stem.

Guide to wild flowers on Cove coastal path

Terms in **bold** are described in the terminology guide.

1. Minute flowers in heads appearing like a single flower: includes the daisies, dandelions and thistles. Go to Asteraceae.

2. Plants with **bilaterally symmetrical** flowers.

- Flowers like a pea flower, with five **petals** (A): an upper, upright petal, two side wings, and two lower petals fused into a lower lip. Leaves **trifoliate** or **pinnate**. Go to Fabaceae.
- Flowers tightly clustered at top of stem, each with 6 petals. Lowest petal forming a 2-3 lobed lip at bottom, and flower often with a backwards pointing spur. Petals pink-purple; leaves longer than wide, **lanceolate**. Orchidaceae, Northern marsh orchid *Dactylorhiza purpurella* (B)



3. Plants with **radially symmetrical** flowers with petals not fused into tube along any of their length

- 4 petals and **sepals**. Pink flowers 2-3 cm across, tightly clustered at tip of stem in a long inflorescence. Leaves **lanceolate**, 5-15 cm long, arranged spirally around a single stem. Onagraceae, Rose bay willow herb *Chamerion angustifolium* (C)
- 4 petals, flowers tiny, no sepals; leaves simple, arranged in **whorls** of 6+ around the stem. Go to Rubiaceae.
- continued over page....



• 4 or 5 **petals** and **sepals**, with an '**epicalyx**' beneath the sepals; stamens 2-4 x number of sepals. Leaves often much lobed or divided or toothed, always with **stipules**. Go to Rosaceae.

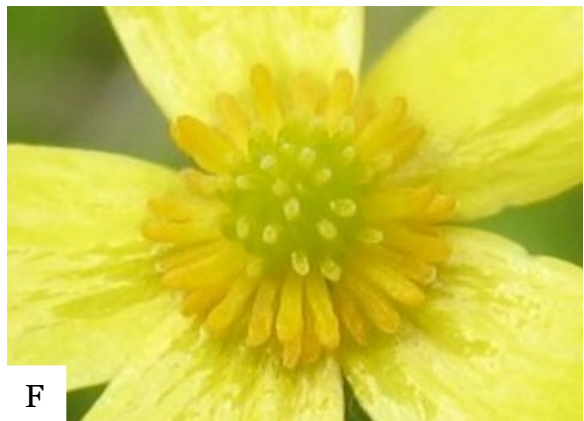
• 5 petals and sepals, with crimson flowers borne singly on long stems; **ovary** has a long "beak". Leaves **palmate** with deep divisions. Geraniaceae Bloody cranesbill *Geranium sanguineum* (D)



• 5 petals, sepals fused into a tube round base of pink flowers. Leaves **ovate**, longer than wide, in opposite pairs attached directly to stem. Caryophyllaceae Red campion *Silene dioica* (E)



• 5 petals and sepals; flowers with many unfused **ovaries** and many **stamens** (F). Leaves 3-5 lobed. Go to Ranunculaceae.



4. Plants with **radially symmetrical** flowers, with petals fused into a tube for at least part of their length:

- Blue bell-shaped flowers (petals entirely fused) on nodding stalks; basal leaves rounded, on long stalks; stem leaves linear, attached directly to stem. Campanulaceae
Hare bell or Scottish blue bell *Campanula rotundifolia* (G)
- Petals intense blue, only fused in lower half of flower, in dense, long-stalked inflorescences. Plant hairy all over, leaves ovate, alternate on stem. Boraginaceae
Green alcanet *Pentaglottis sempervirens* (H)
- Petals pink, forming funnel, fused only at base, in many-flowered, globular heads. Leaves narrow, linear, forming dense tufts. Often growing on rocks. Plumbaginaceae
Thrift *Armeria maritima* (I)



Asteraceae (daisy family)

1. Flowers purple, in medium-large globular heads; leaves spiny, often highly divided. (2)

Flowers white, or white and yellow, with both small, central disc-florets and strap-like ray florets around the edge. (3)

2. Flower heads large (2.5-5 cm), narrowing toward tip. Stems with discontinuous spiny wings. Upper leaf surface bristly and dull. Spear thistle *Cirsium vulgare* (J)

Flower heads 1.5-2.5 cm. Stems much branched, unwinged, leafy to top; leaves highly spiny, upper surface shiny. Creeping thistle *Cirsium arvense* (K)

Flower heads 1.5-2 cm, in clusters at the end of arching branches. Stems with continuous spiny wings; upper surface of leaves hairy and shiny. Marsh thistle *Cirsium palustre* (L)



3. Large, white and yellow daisy-like flower heads 1.5-4.0 cm in diameter, held solitary on long stalks. Leaves deeply divided, reduced to thin strands along the veins. Scentless mayweed *Tripleurospermum inodorum* (M)

Small mostly white flower heads clustered in a flat-ish inflorescence. Leaves much longer than wide, deeply divided, giving a feather-like appearance; scented when crushed. Yarrow *Achillea millefolium* (N)



Fabaceae (pea family)

1. Leaves **trifoliate** (2)

Leaves **pinnate** (3)

2. Prostrate plant with stems 10-40 cm long. Leaves trifoliate, but with two leaf-like stipules at stem making leaves look as though there are five leaflets. Flowers yellow with red tinges in clusters of 2-8. (*Lotus corniculatus*) (O)

Creeping, hairless, to 14 cm, but often shorter. Leaf stalks bearing one set of three leaflets usually >1 cm, each with a white "V". Flower heads globular, borne on separate stems; flowers 0.7-1.2 cm long, white to pale pink. (*Trifolium repens*) (P)

Hairy, 10-40 cm tall. Leaflets grey-green, 1.0-3.0 cm, with a white crescent-shaped spot. Globular flower heads, to 3.0 cm across, often occurring in pairs. Flowers pink-purple, 1.2-1.8 cm. (*Trifolium pratense*) (Q)



3. Yellow flowers in globular/hemispherical heads; leaflets silky-hairy below, stem silky-hairy. Kidney vetch *Anthyllis vulneraria* (R)

Leaflets in 8-13 pairs, 1.0-2.5 cm long, tips with a very short fine point, grey-green. 10-40 purple flowers (1-1.2 cm long) in 2-10 cm long inflorescences. Tufted vetch *Vicia cracca* (S)

Leaflets in 5-9 pairs, 1.0-3.0 cm long, ends truncated but with a short fine point. Inflorescence of 2-6 dull pink purple flowers (1.2-1.5 cm long) in a 1-2 cm inflorescence. Bush vetch *Vicia sepium* (T)

Leaflets a single pair with similar-looking stipules, blade-like, grey green. Flowers yellow, 1.0-1.8 cm long, with 5-12 flowers in an inflorescence. Meadow vetchling *Lathyrus pratensis* (U)



Rubiaceae (bedstraw family)

Mat-forming herb. Stems hairless, highly branched; leaves elliptical, 5-10 mm long, ending with a short, fine tip, 6-8 per whorl. Flowers white, 3 mm across, in open, branched clusters.

Heath bedstraw *Galium saxatile* (V)

Plant with creeping stems at base; flowering stems +/- erect, hairless, 15+ cm tall. Leaves linear, 0.6-2.5 cm long, and very narrow (0.5 mm), with margins rolled back, in whorls of 8-12.

Inflorescences terminal leafy panicles with yellow flowers 0.2-0.3 cm across. Ladies bedstraw *Galium verum* (W)

Sprawling or ascending herb to 100 cm long, with very rough stems. Leaves almost linear, 1.2-5.0 cm long, 6-8 to a whorl, with tiny hooks that stick to clothing. Flowers in 2-5 flowered inflorescences growing from between the joints between stem and leaf; whitish green, 0.2 cm wide. Cleavers or Goosegrass or Sticky willy *Galium aparine* (X)



Rosaceae (rose family)

Flowers with 4 yellow petals, 0.7-1.1 cm across, each on a 2.0-4.0 cm stalk. Leaves shiny, deep green, hairless above, silky below, divided into three deeply toothed leaflets. Plant creeping or ascending, to 10 cm tall. Tormentil *Potentilla erecta* (Y)

Flowers with 5 yellow petals, on long stalks, 1.5-2.0 cm across. Leaves pinnate, silvery-hairy, leaflets toothed. Plant creeping. Silver weed *Potentilla anserina* (Z)

Scrambling shrub 1-3 m tall; stems arching, with hooked spines. Leaves with 3-5 oval/oblong palmately arranged leaflets; flowers white-pink on end of last year's stems. Blackberry *Rubus 'fruticosus'* (AA)



Ranunculaceae (buttercup family)

Erect, hairy herb 20-60 cm tall; stems branched, with no runners. Leaves deeply 3-5 lobed, into almost linear, branching blades. Meadow buttercup *Ranunculus acris* (AB)

Creeping herb, rooting at nodes. Leaves 3-lobed, with the middle lobe held separately on a slightly longer stalk. Meadow buttercup *Ranunculus repens* (AC)

