

*A Year
on the
Commons*

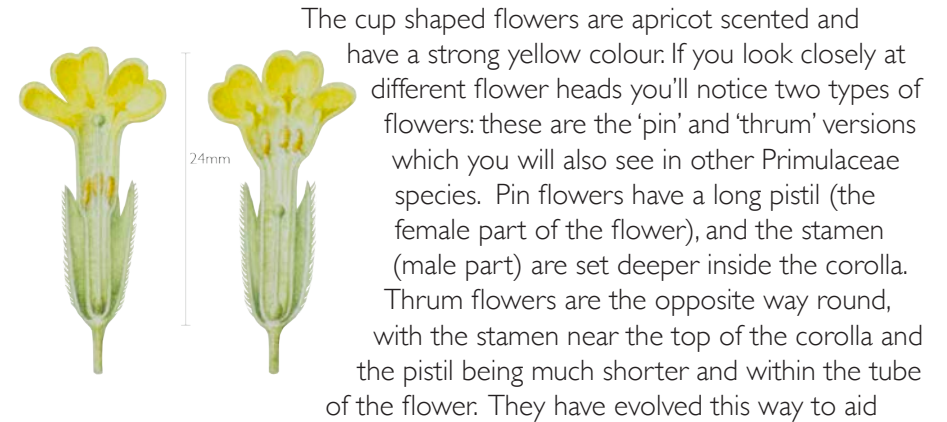
*A Study of the Chalk Flowers
Growing on the Coulsdon Commons*



April to Early May: Cowslip Primula veris



The delicate nodding heads of cowslips can be found in abundance at Hilltop, Kenley, and can also be found in patches on the slopes of Farthing Downs leading down towards Woodplace Farm Fields. Cowslips are members of the Primulaceae family and have many similarities to primroses. However, they are distinctive in that they have an umbel of smaller, more dainty flowers, set on a tall, upright stem with some of the flowers tending to droop down.



The cup shaped flowers are apricot scented and have a strong yellow colour. If you look closely at different flower heads you'll notice two types of flowers: these are the 'pin' and 'thrum' versions which you will also see in other Primulaceae species. Pin flowers have a long pistil (the female part of the flower), and the stamen (male part) are set deeper inside the corolla. Thrum flowers are the opposite way round, with the stamen near the top of the corolla and the pistil being much shorter and within the tube of the flower. They have evolved this way to aid

cross-pollination; when the flowers are visited by pollinators such as bees and hoverflies, the stamen are in positions that can deposit pollen onto the insect which will then rub off on the female part of the opposite type of flower.

The common name cowslip is said to date back to Old English 'cūslippe' meaning 'cow slime', referring to the flowers growing near cow dung. Another traditional name given to cowslips is 'bunch-of-keys', the bunched flowers suggesting the emblem of St. Peter. Cowslips are not endangered, but have declined in number due to habitat



loss. The sight of a field of cowslips is certainly an early spring treat. In later spring months through to summer, their seed heads remain and are like tiny shakers, spreading their seed as they are blown in the wind or knocked by animals or humans.



Mid-May to Early June: Man Orchid Orchis anthropophora



A surprising number of species of orchid can be found on the Commons. Man orchids are endangered and quite a rare sight, although the chalk downs of South-East England are a good place to locate them. Sheep grazing and removal of scrub are two ways of maintaining a good habitat for these fascinating plants.

On the Commons, examples can be found on Whyteleafe Bank at Kenley, although they can be hard to spot: despite their stems and leaves having a zingy green shade, they seem to blend into the grass. If you do find one they are well worth close inspection.



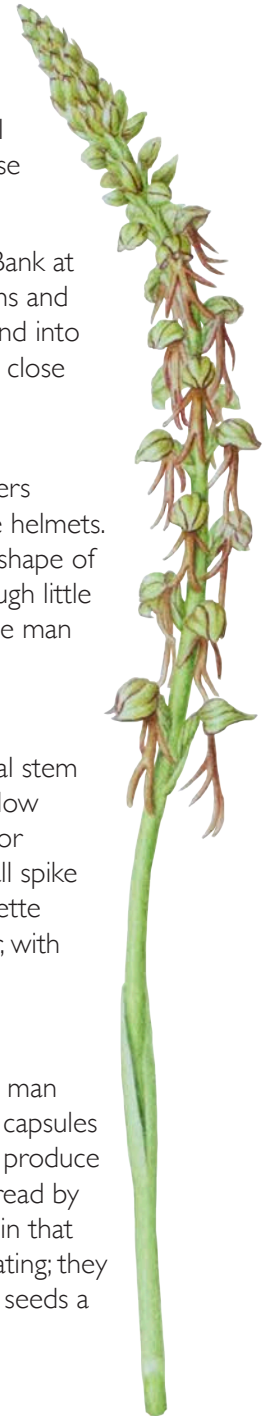
The plant has very unusual red-green flowers which look like small people wearing cycle helmets. Orchids are known to have adapted the shape of their flowers to attract pollinators, although little is actually known about pollinators of the man orchid.



The flowers are attached to the central stem by a small ovary which is twisted to allow them to hang in the correct position for pollination. The flowers are set on a tall spike and the leaves of the plant form a rosette arrangement at the base of the flower, with some encasing the lower stem.



Following pollination, the ovaries of the man orchid swell and you can observe small capsules developing on the flower stem. Orchids produce high numbers of tiny seeds which are spread by wind dispersal, and the seeds are unusual in that they are simply an embryo with a seed coating; they need a fungal partner in the soil to give the seeds a food supply in the first stages of growth.



Mid-May to August: Greater Yellow-rattle *Rhinanthus angustifolius*



From the middle of May onwards, spikes of greater yellow-rattle can be seen in many locations on the Commons including Riddlesdown, Farthing Downs and Whyteleafe Bank at Kenley. The flowering stems vary in size and have pairs of toothed leaves alternating up the spotted stem. The flowers emerge from a delicate, inflated casing which is the calyx of the flower.

Greater yellow-rattle is an extremely important plant on the chalk grasslands due to the species being hemi-parasitic; it draws carbohydrates and minerals from the roots of certain grasses and meadow plants. In doing so, it keeps the grasses under control allowing other wild flowers to thrive.



Greater yellow-rattle is very similar to the much more common yellow-rattle (*Rhinanthus minor*). One difference is that the flower itself is larger and has longer violet teeth on the upper lip. It also has a longer, more curved tube than its cousin. Whilst yellow-rattle is common, greater yellow-rattle is very rare in the UK and therefore we are lucky to have this species growing on the Commons.

The name 'yellow-rattle' derives from the seed heads which you can hear when they rattle in the wind. The species is also known as 'hay-rattle' as the ripening of the seed and rattling seed heads indicated to farmers that the meadows were ready to be cut for hay. You can see and hear seed heads from June onwards, but the majority are found in July and August.



Mid-May to July: Common Spotted-orchid Dactylorhiza fuchsii



Many of us are familiar with non-native orchids which we keep as house plants, but there are many native species of orchid to be found growing in the UK. As the name suggests, the common spotted-orchid is a prevalent species on grasslands in the UK. They are particularly easy to find in the Hilltop area of Kenley Common, and can also be found on Farthing Downs, for example in Stoney White Piece and on New Hill. These orchids vary in colour, from white and pale pink through to deeper pink and purple flowers.



All of the flowers have distinctive patterns of markings on the flower lips. They grow in a conical spike, with the lower flowers emerging whilst those at the top of the spike are still in bud.

The leaves are a strong, yellow-green colour and have deep red-brown spots on them. They grow in a rosette formation with larger leaves around the base of the plant. You will notice the beautiful flower spikes standing tall if you wander around the Commons but may have to look more closely to find the spotted leaves at the base.

Each flower has a spur which projects backwards tempting in insects to aid pollination. If you look carefully at the flowers, you can see a twisted ovary that attaches to the stem, helping the flower to be in the correct position for pollination. The ovaries swell to a capsule containing hundreds of tiny seeds which are wind-dispersed. The developing seeds and plants have a symbiotic relationship with fungi in the soil to give them the nutrients they need to grow.

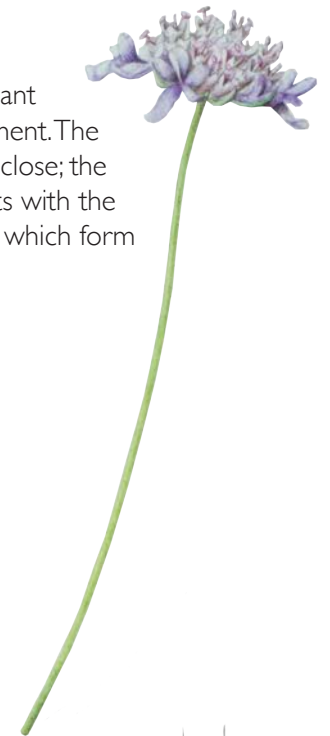


Late June to October: Small Scabious Scabiosa columbaria

The purple heads and wispy stems of small scabious can be spotted across the Commons when the meadows and banks are bursting with life from late June. A good place to see a large number of these flowers is on Farthing Downs in late July and August, but they will continue to appear into September and sometimes October. In these later months, they provide welcome colour when other species have died back or gone to seed.

Small scabious is a common species on chalk grasslands. It has smaller flower heads and leaves than other family members such as the field scabious. The name 'scabious' derives from the Latin word for itch and refers to the use of the plant as a traditional remedy for skin conditions.

Single flower heads sit on long, thin stalks, and each plant may have several stalks in different stages of development. The beautiful lilac flowers are fascinating when viewed up close; the heads are made up of lots of tiny flowers called florets with the outer florets being much larger than the central ones which form a disc.

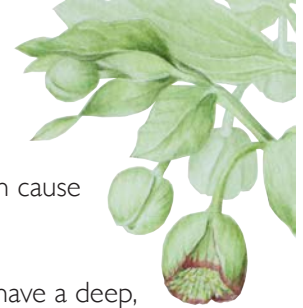


Each floret has five calyx teeth which become very visible, looking like black hairs, when the seed head has formed. On the domed seed head the florets becomes fruits, each containing a single seed.



Late January to March: Stinking Hellebore *Helleborus foetidus*

On the slopes of Riddlesdown close to the Godstone Road, in the early months of the year, you can spot a small number of vigorous clumps of stinking hellebore. The plants seem quite out of place on the fairly bare slopes at this time and are well worth a second look. However, do take care as these plants are toxic and can cause skin irritation or poisoning.



Stinking hellebore are evergreen and the lower leaves have a deep, glossy blue-green appearance. These leaves are toothed and have a number of segments that fan off two arches.

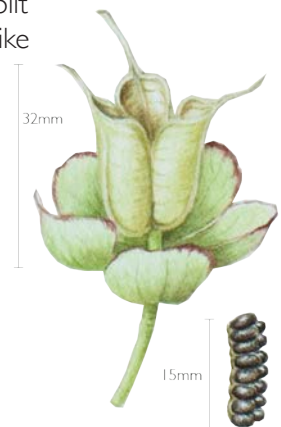
From late January you can see the flower stalks growing. The plants are interesting in that the lower foliage contrasts strongly with the flowering stems and almost look like two different species. The flowers are cup-shaped and have sepals rather than petals which are light green in colour. When the flower develops further they still remain cup-shaped but have a deep purple-red edge which stands out against all of the green colouring.



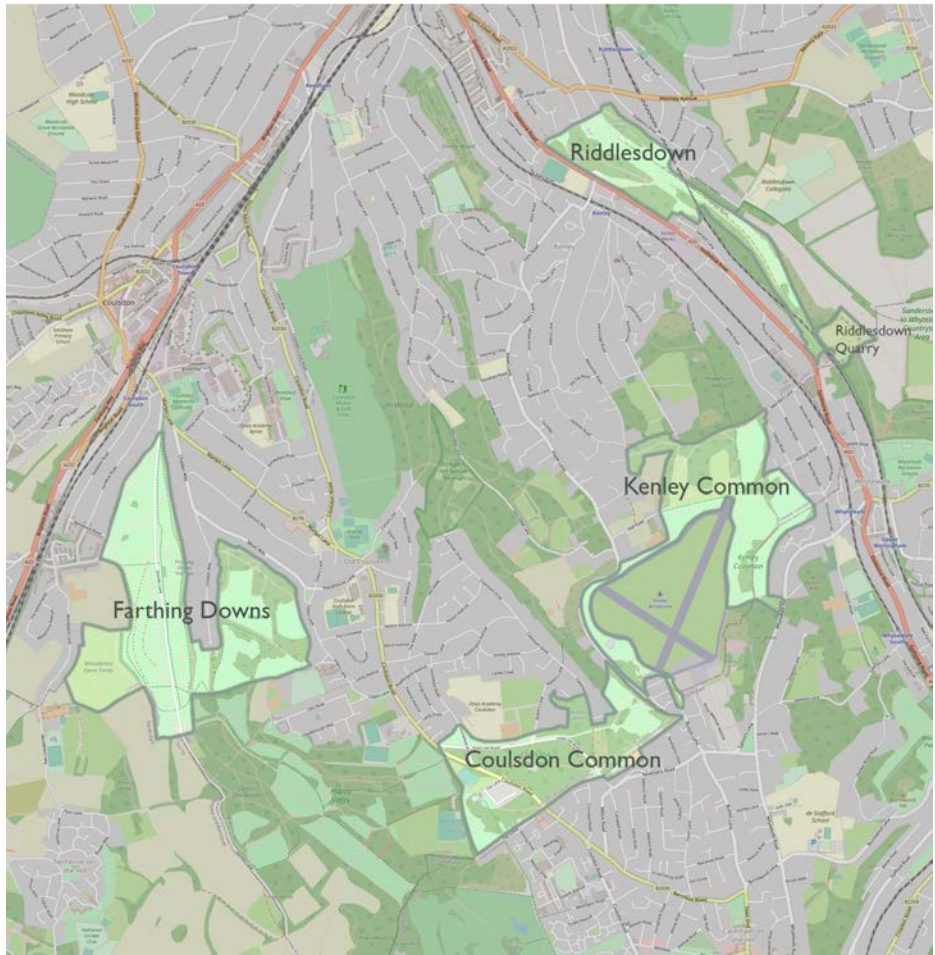
Inside the cup of sepals, nectaries surround the base of the flower and these have been found to contain yeasts which warm the flowers. Current research suggests that this may help to attract early pollinators to the plant. Bumblebees find the plants on Riddlesdown particularly attractive and can be observed visiting them from February onwards.

The flowers form large seed heads which swell up and split open to release the seeds. At this stage the sepals open like a skirt around the seed head.

It is impossible to talk about this plant without referring to its name! The plant does not stink if you are near to it, but the leaves can give off a musky smell if crushed. It has several traditional names; 'dungwort' refers to the smell, 'bearsfoot' refers to the shape of the leaves and 'setterwort' comes from a traditional use of the plant when setting cattle, setting being the name for a treatment involving the root of the plant.



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The text and illustrations in this publication are by Elanor Wexler.
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