

Plant Group Field report: Stonepit Field 14 June 2026

Taking a closer look at Daisies/Composites (Asteraceae) and Legumes (Fabaceae)

Introduction

This event was an innovation for the Group since it asked participating members to undertake some preparatory homework and to be ready to get down on their hands and knees for a closer look at species! As the wording from the 2026 Programme quoted above indicates, the plan was to take a closer look to identify species which can be difficult to identify in the field. For this reason, participants were provided with a checklist of species for the two families listed at the Group's June 2024 visit and from other mainly Society sources but including an independent report of 2025 for which thanks to Mike LeRoy. Given the uncertainty about member attendance, I also decided to prepare a summary identification of the close observation target species with page cross references for each of the three most widely used Field Guides: Collins, Harrap, and Rose. This I shared with my fellow 'prompter', the two listers and note takers, and the photographer.

Additionally, Charles Kessler provided a Briefing Note (see Annex 1 below) which gives an overview of the two Families.

The Event

The Group assembled at 10.30 am on a bright sunny day with eight of us present, four of whom had also attended the recce the previous Sunday and four who had not. The Briefing Note from Charles (with some change in the species used for demonstration purposes) quickly got us involved on the picnic table in the practical elements of identification. These activities were also a useful opportunity to practise use of a Hand Lens x10.

For the composites Charles advised the Group to cut through Ox-eye Daisy flower to understand the key difference between the white strap-shaped Ray Florets and tiny yellow Disc Florets, the latter providing most of the seeds. We then turned to the oblong purple edge colour bracts that join the stem to the receptacle. We also took advantage of a Goatsbeard's post-flowering head to identify its 'beak' – the thin stem that joins the pappus to the seed head.



a) Goatsbeard seed head, b) individual beaked seed showing the pappus and the thin 'stem' (the beak) that joins the pappus to the seed head which is darker and thicker (Photos©Julian Lambley)

The beak is an important identification feature in some species and is one of the differences between the Beaked and Smooth Hawksbeard. Conclusive identification of these two species remains unresolved as it had in 2024. Both are listed to be confirmed (tbc).

This led on to the Legume Family which provided a different challenge – Common, Bush, and Tufted Vetch were no longer in flower. The substitute used to examine the structure of the pea family flower in more detail was Meadow Vetchling (though this is not listed at Stonepit Field).

Some Asteraceae

We now moved on slowly (because participants wanted to identify other species -in flower see section 3 of the Consolidated List) to close observation in the field starting at the top of the bank above the scrape, on hands and knees to examine a small group of Asteraceae. Some questions to members were prompted. Is the flower solitary? Yes. Is the stem single or branched? Very limited branching. What other features can you see? Leaf-less other than at the base but in place of leaves there are a small number of scale-like bracts with a dark tip on the stem. The conclusion was Catsear.

Now onto the scrape itself where we noticed the miniaturisation of most of the plant species surviving under these ground conditions. A good example was a 3-feet wide circular patch of dark green hairy leafed plants with a few pale single-stem primrose yellow flowers and reddish florets in an outer ring. It was back onto our knees to look at the downy underside of the leaves. This was Mouse-eared Hawkweed, a patch-forming species which spreads through runners.



Mouse-eared Hawkweed (Photo©Julian Lambley)

Our third close observation species was found on the greener far corner of the scrape. This was another species with a solitary yellow flower on an unbranched leafless grooved stem and basal rosette of leaves. The flower itself was shaggy and the whole plant hairy. This narrowed down the species to Rough Hawkbit. This was on our checklist but had not been listed at our visit of June 2024.



Rough Hawkbit (Leonotodon hispidus) (Photo©Julian Lambley)

Some Fabaceae

The scrape is also an important habitat for Legumes. Common Bird's-foot Trefoil was abundant in places, and we were satisfied by the eggs and bacon colours of the flowers that it was not one of the introduced garden varieties. Horseshoe Vetch was in flower but not yet showing its remarkable four wavy seedpods. Before leaving the scrape area we listed Bee Orchid, Common Rock Rose, Bladder Campion, and Small Scabious in flower.



Common Bird's-foot Trefoil (Lotus corniculatus) (Photo©Julian Lambley)

Our next stopping place for legumes was across the meadow to the gap in the hedge to the west of the scrape. Overwhelming one side of the hedge gap is Wild Liquorice Vetch an uncommon species that has found its way to Stonepit Field. Its creamy yellow flowers, 3-7 pairs of oval leaves, and overall size and shrubby appearance made it relatively easy to identify.



Wild Liquorice vetch (Astroagalus glycyphyllos) (Photo©Julian Lambley)

Growing from beneath the Wild Liquorice was a clover-type species. Its identification features were its flowers, its densely hairy stem, and trefoil leaves. The inflorescence was made up of 20-25 tiny yellow flowers and with these clues we were able to identify it as Hop Trefoil – another species on the checklist but not listed by the Group in 2024.



Hop Trefoil (Trifolium campestre) (Photo©Julian Lambley)

At the other side of the path all the Legumes were past flowering. We were unable to decide between Bush Vetch and Common Vetch. There was also a Tare: it was a ball like loose tangle of trailing stems, and branched tendrils. Our conclusion was Hairy Tare. Our final legume from this area (but not only found here) was Kidney Vetch. It is widely distributed at Stonepit Field as a food source for the Little Blue butterfly.

The walk back to the car park gave the opportunity to list several meadow plants in flower, including Pyramidal Orchid, Yellow Rattle, Cut-leaved Cranesbill, Musk Mallow, and Common Broomrape. We then followed the path between the bank top of the scrape and the woodland strip. This gave us good views of Deptford Pink as well as more Kidney Vetch, Lady's Bedstraw, and Perforate St. John's Wort.

Overview and thanks

The attendance of 8 members was probably an ideal number given the nature of the activities and the expertise to be shared. Thank you to Charles Kessler for providing his briefing note, Martin Ferns who stood in to help me on the day at very short notice and has as always been very supportive as webeditor, Joan Hughes and Frank Goates for field listing and note taking, Julian Lambley for acting as photographer, and not least the others who participated: Ann Lambley, Dawn Maynard, and Kay Griffiths.

Joe Clinch Leader

13..07.26

Bibliography

McClintock, D. and Fitter, R.S.R. (1956) *Collins pocket guide to wild flowers*, London: Collins

Harrap, S. (2013) *Harrap's wild flowers*, 2nd edition, London: Bloomsbury

Rose, F. and O, Reilly, C. (2006) *The wild flower key*, 2nd edition, London:Warne

Annex 1: Briefing Note on Asteraceae and Fabaceae –from Charles Kessler (below)

Annex 2: Consolidated List (separate document)

Annex 1 – Briefing note on Fabaceae and Asteraceae – Charles Kessler

1. A closer look at the Daisy family (*Asteraceae*) -

I suggest having an Oxeye Daisy as prop

Also known as Composites; former family name *Compositeae*.

The family is characterised by having small flowers in dense heads. What appears to be a single daisy-type flower is actually a composite of several much smaller flowers which attract insects for pollination.

Oxeye Daisy is an example of the family. The 'petals' in the head are in fact individual flowers called **ray florets**, and the central 'sun' is made up of smaller, individual flowers called **disc florets**. The word *aster* means 'star' in Greek, referring to the appearance of most family members as a 'celestial body with rays'

Now cut the Oxeye Daisy across with a sharp knife and examine the ray florets and disc florets

Ray florets are zygomorphic (bilaterally symmetrical - like a human face, there is only one way to cut the flower in half to make both sides match); disc florets are actinomorphic (radial symmetry - can be divided into identical halves through two or more planes)

Ray florets are often referred to as 'strap-shaped' because the petals are fused together to form one 'strap'. In disc florets the petals are fused together to form a tube. Both florets are seated, unstalked on the rounded receptacle at the top of the stem.

The combination of the different florets and their arrangement makes the head look like a single flower.

Most seed is produced by the disc florets (one seed per floret); think of sunflower seeds or a dandelion clock.

Bracts are leaf-like structures located just below the point where the flower joins the stem. Look at the bracts of the Oxeye Daisy. They are oblong, overlapping and have purple edges. Together, they are called the involucre and have the appearance of sepals (which together are called the calyx). In the Asteraceae, sepals are highly reduced or absent; as an example, in Dandelion, the parachute arms of the seed are in fact the sepals.

Find a Buttercup flower to demonstrate petal and sepal arrangement and how the Asteraceae head is really like a mass of modified flowers

The family has no stipules - small, leaf-like appendage found at the base of a leafstalk (petiole) – we will see them in Fabaceae

Next specimens to look at:

Dandelion and Catsear (substitute Hawksbeard sp for Cats-ear). – only ray florets (no disc florets). Catsear – see scales among florets (Rose page 475 Aa, Collins 483, Harrap 262/338)) distinguishing it from Hawkbits (Rose page 475 Ea, Collins 483, Harrap 262/338).

A closer look at the Pea family (Fabaceae)

*Props could be Common Vetch (single flower), Tufted Vetch (raceme), Red or White clover (head)*¹

Also known as Pea and Bean family, legume family or Leguminosae. The largest subfamily of the Fabaceae is the Papilionaceae (the other subfamilies are mainly tropical), from Latin *Papilion* meaning 'butterfly' because of the butterfly-like shape of the flower.

With flowers in hand

Distinctive flowers show bilateral symmetry with 5 petals. An upper **standard** at the top, two **wing** petals at the sides and two lower boat-shaped **keel** petals. Also look at the calyx (all the sepals) – see Rose page 283 Ca and Da, Collins 284, Harrap 49/57.

Depending on species, Fabaceae flowers can be solitary, or in heads or spikes.

Rest of the plant characteristics: stipules present; leaves trifoliate or pinnate; presence or absence of tendrils. Some leaflets terminate in a bristle-like projection or 'mucro', making them 'mucronate'.

Fabaceae are nitrogen fixers, making them important in early ecological succession and in agriculture. Fruit is a like a pea- or bean-pod that splits open to release seeds. The number of seeds in the pod can be indicative for some species.

Charles Kessler

June 2026

¹ On 14th June 2026, Meadow Vetchling was substituted, which is not listed at Stonepit Field