

Central Chilterns Botany Group: Report on field meetings in 2021

1st April

Our very first outing was on April Fool's Day, which seemed appropriate because we were looking for a variety of primrose *Primula vulgaris* that had last been reported in this area in 1947! At that time, when war-time rationing was still in place, Roy Maycock (until very recently the Botanical Society of Britain and Ireland recorder for Bucks) led a group of experienced botanists from various parts of Britain and from America to explore places around Great Missenden. One of the botanists, JL Crosby had recently been doing research on varieties of primrose with different lengths of stamens and styles. As they walked through Rook Wood, he noticed several primroses known as "long homostyles", until then mainly known from an area of Somerset where they were very common. Primroses, as is fairly well known, are generally "pin" or "thrum". The former have, in the centre of the flower, a single style (female part), the stamens being short and hidden below in the flower tube. The latter have a ring of anthers in the centre of the flower, on long stamens, the styles being short and well below them. This arrangement ensures cross-pollination. "Homostyle" plants are different because their stamens and styles are of equal length. Long-homostyles* have both anthers and styles showing in the centre of the flowers. This means that they often self-pollinate, but can also contribute to cross-pollination. This ability should naturally lead to increasing proportions of long-homostyles in a population of primroses, as in Somerset (where they may form 80% of a population). Short-homostyles also occur, a form which would usually ensure self-pollination but prevent cross-pollination so that they do not affect the general population. One paper suggests that short-homostyles do not occur in the wild. We have, however, found that many garden primroses and escapes from gardens are of this form, and we have one record of this form in a wild population at Hampden Bottom a long way from housing.

We set out to see what had happened to the long-homostyles in Rook Wood. Fortunately Roy Maycock has a good memory and was able to give us a fair idea of where he had seen these plants. So after crossing Abbey Park from Great Missenden church we directly entered the wood where a major ride with many primroses came down to the entrance gate. After some searching we were amazed to find that there were indeed, after all this time, some long-homostyles here! But, contrary to the above predictions, they had not taken over the population and were still at quite a low frequency. Next year we hope we shall be able to search other wild populations and establish the frequency of long-homostyles more generally. The search, much on hands and knees, took some time, but once we had got our eye in we found we could spot likely long-homostyles even from a little distance. Afterwards we wandered to the top of the ride where there was a stony patch with Common Whitlow-grass *Erophila verna* (not common in these parts) and Parley-piert *Aphanes arvensis* (usually a plant of arable fields), after which it was time to return to the church, with a warm feeling of achievement, having seen flowers that no-one had noticed for 74 years. [There appears to be little literature on primrose homostyles, but we have come across Crosby, J. (1949) Selection of an unfavourable gene complex. *Evolution* 3, 212-230, and Curtis, J. & C.F. (1985) Homostyle primroses re-visited. *Heredity* 54, 227-234.]

22nd April

After the first very technical outing, our second was much easier. We went to see how the main colonies of Coralroot* *Cardamine bulbifera* were faring this year at Theeds Wood and Gomms Wood between Hughenden Valley and Cryers Hill. On this date several years ago these plants were in full flower, but this year things were late, so there was a worry they would not yet be evident. After a steep climb from Hughenden we suddenly came across a superb specimen in fresh flower right by the path - the best specimen we were to see all day! We entered the wood over the broken-down fence and found large groups of coralroot, although most were only just coming into flower. Higher up the hill, where the chalk changes to clay, we walked through huge colonies of Ramsons *Allium ursinum* or Wild Garlic, which were again late, with only a few in flower. We did, however, find a leaf with the small brown rings made by the fungus *Botryotinia globosa*, a species we had often sought before but which had always eluded us until now. We walked on to Gomms Wood where there was plenty more coralroot, but also Green Hellebore* *Helleborus viridis*, which became increasingly frequent as we moved south in the wood, sometimes forming dense colonies. They usually flower in February, so we expected to see only fruiting plants, but because of the lateness of flowers this year, we found plenty in fresh condition with their bright green flowers (technically sepals, as they have no petals).

6th May

We went in search of true Crab Apples* *Malus sylvestris*, following up recent reports in a couple of areas (just one-kilometre squares on the OS map, so we were not sure of the exact sites). Most of our wild apples, common

in hedgerows, are descendants of the alien *Malus domestica*. We have been able to authenticate very few older records of *sylvestris*, most of which turned out to be *domestica*, and it seems to be very rare. The crab apple produces small bitter fruit, but descendants of domestic apple sometimes degenerate to something similar. In the flowering season the best distinguishing character is the hairiness of the flower-stalk and the calyx, which are matted with white hairs in *domestica*, but almost bare or with a few erect hairs in *sylvestris*. Recent research has unfortunately shown that the two species hybridise, and that the hybrid is commoner than pure crab, but this was based on genetic analysis and in the field the hybrid and the crab cannot be reliably distinguished. Hybridisation leads to some flowers being intermediate in hairiness, but if specimens are mostly bare of hairs we can at least determine that they are true crab or an indistinguishable hybrid. The square we searched in the morning (either side of Holy Trinity church) actually yielded relatively few wild apples, but as they were just coming into flower they could be spotted from a distance. In each square we found one specimen that we could happily describe as true crab. The first was on the southern boundary of Lawrence Grove Wood (spotted earlier by one of our members, George Lewis, who was able to lead us to it) and the second along Church Path, at the edge of Lawrence Grove (a wood with a confusingly similar name). The second was accompanied by several domestic apples and some that were quite possibly hybrid. It is interesting that most of the true crab apples we have now authenticated are at the edges of woods and not in hedgerows where most wild apples occur, this perhaps indicating that woodlands were the original habitat of our native species. [In September two of us checked the newly discovered crab-apples in fruit as final confirmation that they were, as far as can be told in the field, *sylvestris*.] In the course of our walk we came across a Hybrid Hawthorn *Crataegus x media*, but this was in a newly planted hedge on the south side of Prestwood Park. Plants sold as true hawthorn for hedging these days are unfortunately often hybrids, even from approved suppliers. The same, we have found, applies to those sold ostensibly as native hazels. *Caveat emptor!*

In the afternoon three of us went on to explore the other OS square reported for crab apple, around Piggotts Wood. We found only one apple tree, with flowers out of reach. Here Karen showed her climbing skills and retrieved a specimen, which unfortunately for all her efforts turned out to be domestic apple. The afternoon was not wasted, however, because we came across other interesting plants, namely Wood Anemone *Anemone nemorosa* (first record in Piggotts Wood), Midland Hawthorn *Crataegus laevigata* (our other native hawthorn), and Wild Plum *Prunus domestica*, all useful records. Rarest of all, however, was finding a white-flowered variety of Early Dog-violet *Viola reichenbachiana*, which has only just been properly described and named in the botanical literature as *var. leucantha*. While in Piggotts Wood we visited the known colony of Coralroot, but unlike our previous outing in April, there were only a few plants and the management of this part of the wood does not seem to be suiting it.

In the morning, as we searched Lawrence Grove Wood, we noticed that many hollies *Ilex aquifolium* had dead leaves, especially on the lower branches. Later we discovered that this was the effect of a fungus *Phytophthora ilicis*, a common soil fungus, the spores of which, after a major spring storm (which had occurred just before our visit) may be splashed up on to low-lying plants of holly, causing major infections and die-back. In the rest of the day we saw similarly affected hollies at other sites, but by no means all those we visited. The infestation was particularly bad where we first saw it, presumably indicating the distribution of the fungus, which would otherwise go unrecognised.

27th May

This outing focussed on the very rare Chalk Milkwort *Polygala calcarea*. There had been two records in the 1990s for our area, one so far unchecked near Gomms Wood, the other in the field north of the Picnic Site. The latter location I have searched several times unsuccessfully. As mistakes can easily be made separating chalk milkwort from Common Milkwort *Polygala vulgaris*, I had assumed this record was mistaken. Our interest was renewed, however, by a 2019 record of chalk milkwort at the Picnic Site. This site has been visited many times by botanists over the years, so it would be surprising if it had been overlooked. Four of us searched there for an hour and found no plants that could be assigned to Chalk Milkwort. We then searched the neighbouring field where it was recorded in 1996, a particularly dubious record because it was made in September when most of the identifying characters would not have been showing. Again we could be quite sure that there was no chalk milkwort present, and probably all the records for it in this area should be rejected. This shows that even botanists' records need to be scrutinised carefully if they seem out of place.

After the milkwort search we went on to the area around Holy Trinity where two plants had been recorded in 2019 that were not otherwise in our records. The first, Lily-of-the-valley *Convallaria majalis*, would have been a garden escape, as it does not occur naturally in this area. The only plants we found were in a flower-bed by the entrance to the church. Although these were obviously spreading within the bed, we could find none

beyond, so that we rejected this record as occurring in the wild (that is, beyond a garden). The second, Annual Mercury *Mercurialis annua*, is frequent in rough disturbed places in many towns, but we have never seen it in our area. Our search for this drew a blank, too, but it is a plant that appears in different places in different years, so that the earlier record may well have been correct - unfortunately that record lacks a precise location. However, the visit to the churchyard enabled us to see Spring Cinquefoil *Potentilla neumanniana*, just a few clumps beside one grave. The plant had been well naturalised among marble chippings on this grave until a few years ago when the people tending it decided to remove all the plants and lay down slate chippings. It had been thought that the spring cinquefoil (at its only Chiltern site) had been lost, but now we know it is just hanging on. The native sites for this rare flower are far from our area, so we assume it was introduced at some time to the grave, as it is sometimes sold by garden centres as a rockery plant.

10th June

We walked a circuit around Hughenden and Cryers Hill. The Hughenden stream was this year, like the Misbourne, in full flow from its origin spring, enabling us to document marsh plants not observed for some years (even common marsh plants are notable in our overwhelmingly dry area). These included Water-cress *Nasturtium officinale*, Brooklime *Veronica beccabunga*, Hairy Sedge *Carex hirta* and (especially uncommon for us) Marsh Foxtail *Alopecurus geniculatus*. Just above the marsh is the Cryer's Hill roundabout, where we measured two old London Plane* *Platanus x hispanica* trees of over 4 metres girth. These are not quite as old as those in the avenue to Great Hampden Church, but still significant when we only know of five specimens in our area altogether. Interestingly, they appear to have been pollarded. On the other side of the marsh is an area of chalk scrub maintained as open space by the Village Hall Committee. While it has had a lot of disturbance, there are still some notable native plants like Hairy Dog-rose *Rosa corymbifera*, Mouse-ear Hawkweed *Pilosella officinarum*, Bee Orchid *Ophrys apifera*, Grass Vetchling* *Lathyrus nissolia*, Common Spotted Orchid *Dactylorhiza fuchsii*, Pyramidal Orchid *Anacamptis pyramidalis* and Common Centaury *Centaureum erythraea*. Between Hughenden and Cryers Hill we also saw Common Twayblade *Neottia ovata* at Provost Wood and Hoary Cress* *Lepidium draba* along Cryers Hill Road. The rare Longleaf *Falcaria vulgaris* that grew along this roadside for at least fifty years could not be found, destroyed when the council mowed it at the wrong time. But Karen van Oostrum spotted an unusual Ribwort Plantain *Plantago lanceolata*, what is known as a "pistillate" form*, having only female flowers and no male ones, making the flower-head look very different. This form only seems to occur very sporadically.

24th June

On this walk we explored Pipers Lane and nearby parts of Great Kingshill. We were particularly looking for wild roses and were not disappointed, finding eight different species, several of them uncommon: *Rosa arvensis*, *canina*, *canina x vosagiaca*, *corymbifera*, *multiflora*, *rubiginosa*, *sherardii*, *tomentella*. Near the school we logged an old Pedunculate Oak *Quercus robur* at nearly 5m girth, not quite our largest but certainly joining our top group. In a patch of gravel used for parking near Hatches Farm we saw an interesting assemblage of plants with the likes of Chives *Allium schoenoprasum* and Ratstail Fescue *Vulpia myuros*, along with a bedstraw that proved initially difficult to identify. It had previously been recorded as Wall Bedstraw *Galium parsisiense*, but we thought this unlikely. Although it seemed a dry spot, it turned out, with the help of Andy McVeigh, to be Marsh Bedstraw* *Galium palustre* ssp. *palustre*, a subspecies that is less robust than the commoner subspecies *elongatum* and can occur in drier places. Like all marsh plants it is uncommon in our area. It had previously been documented at only two pond-sides in Prestwood and Speen, the same subspecies in each case. Interestingly, the current spot was very close to where the largest pond on Kingshill Common formerly stood before it was filled in during the 1960s, so we may have been seeing the survival of a fragment of the old marsh known to have included the rare Starfruit *Damasonium alisma*, now close to extinction in this country. We added to our wetland list by a quick dip into Cockpit Hole, where there was plenty of Common Spike-rush *Eleocharis palustris*, one of only two sites in our area. Beside Kingshill Common we recorded Small-flowered Cranesbill *Geranium pusillum*, one of two cranesbills that seem to be getting more common around here, the other being Round-leaved *G. rotundifolium*, for which Karen has just added Hotley Bottom Lane as yet another site.

8th July

We visited a remote field on Hampden Bottom Farm, to which there is no public access. It is unusual in being entirely surrounded by woodland, being bowl-shaped with crops growing in the centre surrounded by a wide strip of chalk grassland. The target plant here was Great Burnet-Saxifrage *Pimpinella major* at our only local

site. It was plentiful, although not as evident as the year before at the same date because this year it was only just beginning to flower. Other plants here were Pyramidal Orchid, Sharp-leaved Fluellen *Kickxia elatine*, Grass Vetchling, Fairy Flax *Linum catharticum*, Grey Field-speedwell *Veronica polita*, and an unusual "double-flowered" Creeping Buttercup* *Ranunculus repens* that would grace any garden.

4th August

We walked between Speen and North Dean. We were seeking to check two unusual aliens that had been recorded two years before, but either they were transient or we did not pass the right spots, so this was less productive than our other walks so far. However, in a neglected arable field near North Dean we saw our first local specimen of the magnificent tall purple-stemmed, very spiny Great Lettuce *Lactuca virosa*. We also saw the similar Prickly Lettuce *L. serriola*, handy for comparison. This last was beside a narrow lane, awkward to walk with frequent delivery vans, now omnipresent since the start of the Covid pandemic, but there we also recorded single plants of Spurge-laurel *Daphne laureola*, Fennel *Foeniculum vulgare* and a true Filbert *Corylus maxima*. In a ditch at Speen we found some nettles that did not sting and had narrower leaves than usual, so we thought we might have found our first specimens of Stingless Nettle (an uncommon marsh plant), but we subsequently found many similar non-stinging nettles in quite dry spots. Examination of the leaves showed that instead of the downy covering of simple hairs that stingless nettle should have, our specimens had sparse hairs apart from the bristly stinging hairs (which have a sac of poison at the base). It is apparent that some Stinging Nettles *Urtica dioica* fail to sting, even though they have stinging hairs, perhaps on immature leaves appearing in late summer. This could be a sensible economy for a plant that does not need to protect its foliage from attack later in the season.

19th August

We did a circuit of Little Kingshill, along Hare and Windsor Lanes. We had two main targets - two different hawkweeds, both very rare in our area. We first saw Southern Hawkweed* *Hieracium argillaceum* in the upper part of Hare Lane on a roadside bank. There were plenty of leaf-rosettes, but frequent trimming of the roadside here, the road being very narrow, had left mostly a series of bare stalks where the flowering-stems had been sheared off. There were a few survivors, however, sufficient to check that they were the suspected species. Growing with the plants were other interesting flowers such as Slender StJohns-wort *Hypericum pulchrum* and Grey Sedge *Carex divulsa ssp. divulsa*, so this looks like the survival of an original acid grassland, now reduced to a precarious wayside verge. Despite the cutting (which is inevitable) the plants seem to be coping as well as they can in the circumstances. The other hawkweed Autumn Hawkweed* *Hieracium sabaudum* grows on the railway bridge and nearby rough grass where Nags Head Lane joins Windsor Lane. This had been documented before but there was a fear that it had been destroyed during recent bridge-cleaning. We were relieved to find that it was still doing very well and in full flower. Apart from flowering later, *sabaudum* is clearly different from *argillaceum* because of the large number of leaves crowded up the stems, the latter only having half a dozen or so. They also differ in the hairs on the stems and the flowers, which need examination with a lens. The lower part of Hare Lane is shady and damp and here the roadside banks had plenty of Hart's-tongue fern *Asplenium scolopendrium*. The verges of Windsor Lane were generally less interesting, but we did record Field Madger *Sherardia arvensis*, Stone Parsley *Sison amomum* (whose leaves smell of petrol when crushed), and Meadow Cranesbill *Geranium pratense*.

Tony Marshall