

THE 1KM SQUARE STUDY was a new addition to the Wild Flower Society in 2019. It is designed to encourage people to become familiar with their local area by, in the first instance, choosing a 1km square of the Ordnance Survey grid that is local to them. They then record as many of the flowering plants and ferns, which are wild and unplanted, as they can find within that area, over the space of a year. Further finds can be added in future years and, if they enjoy the challenge, further 1km squares can be surveyed. Results of this hunt are sent to the Branch Secretary and then compiled and reported on in the Summer issue of the magazine of the following year.

Due to the lockdown, 2020 proved to be a particularly fruitful year with participants making the most of their time exploring the areas close to where they lived. Below is a report from one of the Branch Secretaries.

1km Squares in Monmouth, Shrewsbury, Somerset and Gloucestershire

When it became clear that field meetings and most personal botanical travels would be impossible in 2020, I did wonder if the 1km Square Study might come into its own, and certainly this has proved to be so for Branch P. Lists came in from six members, all of whom commented on the pleasure generated by botanising so intently really close to home. There would have been seven submissions, but my own effort lost impetus for unavoidable reasons and will be taken up again in 2021!

Sarah Beetham's square is in South Gloucestershire, near Yate. It includes a stretch of the River Frome and has parts of a local Ring Road which adds interestingly to the range of habitat. Her list therefore included nice native plants such as Sneezewort *Achillea ptarmica*, Ragged-Robin *Silene flos-cuculi* and Small Teasel *Dipsacus pilosus* which flourishes in my garden but feels like a great rarity when I see it in the wild. Sarah also lists interesting casuals such as Gallant-soldier *Galinsoga parviflora* and Round-leaved Crane's-bill *Geranium rotundifolium* which always seems to have had really erratic vectors of establishment – widely distributed in Bristol for instance, but rare enough in Ireland to have been on the Red Data list. She found the exercise 'very worthwhile' and looks forward to adding more.

Monica Davis had a very difficult year with a badly fractured ankle, so she couldn't really get into her square till late summer and autumn. However she has chosen one in Warmley Forest Park, near Bristol, which sounds a fascinating area with parts of an old railway line and quite a range of habitats. An exciting find was Marsh-mallow *Althaea officinalis*, and Guelder-rose *Viburnum opulus* and Sweet-briar *Rosa rubiginosa* indicate a nice shrubby element. Monica keeps in touch with Pauline Wilson who ensures that significant records are passed on to the BSBI Recorder, showing that these close studies can contribute to much wider botanical data sets.

Pauline's own square, near Old Sodbury, manages to have a wonderful range of habitats. She mentions grassland, arable, road verges, 'railway components and bank', and most interestingly a piece of the famous old commons still a prominent feature of the area. This added Pepper-saxifrage *Silaum silaus*, an inconspicuous but charming umbellifer which becomes ever rarer as ancient grasslands are lost or under-grazed. Other species found were Betony *Betonica officinalis* and Salad Burnet *Poterium sanguisorba* also suggesting how rich grasslands here must have been.

Anne Hercock chose two squares because she says that large parts of both are 'inaccessible and/or under trees' and feature rocky and slippery valley sides. Both are near Beacon Hill in Monmouth and the project looks like being on-going. Anne writes that she 'hasn't covered every part as in places the very narrow paths would not allow for social distancing' and she did not embark on ferns in 2020. In spite of the difficulties, the results were most pleasing. One square has a path between dry stone walls, running through a meadow and into a network of woodland rides. Part is managed by Gwent Wildlife Trust and digging along one of the paths allowed a thrilling appearance of the very rare Upright Spurge *Euphorbia stricta* (which I and most Wye Valley botanists prefer still to call 'Tintern Spurge!'). This used to be much more frequent when woodlands round here were more intensively managed, with logs being dragged out by horses or tractors which kept the paths well churned up.

This annual spurge has an efficient seed bank and pops up after disturbance to flourish until perennial vegetation becomes dominant again, so the appearance in Anne's square after the work follows a classic pattern. Her second square has woodland edges, a heathy area and two ponds which added some different nice plants including the delicate Climbing Corydalis *Ceratocarpus calviculata*, Common Cow-wheat *Melampyrum pratense* and Lousewort *Pedicularis sylvatica*.

John Martin chose a square near home in SE Shrewsbury, and really went for it, doing an all-taxa count which totalled 1250 species 'with a few micro-moths and other insects which might be added'! His square is in a 'pleasant valley with bits of wet woodland and some meadow and pasture', though he notes that these habitats have low diversity and none of the woodland is old. Nearby road verges and 'garden escapes' helped the final plant total to 378, which is pretty wonderful! I was impressed by two good Fumitory records, Tall Ramping-fumitory *F. bastardii* 'in an alley' and Purple Ramping-fumitory *F. purpurea* – a single plant in a neighbour's garden where it is sometimes abundant. A beautiful alien was Argentine Needle-grass *Nassella tenuissima*, which had seeded from neighbouring gardens into roadside gutters. John also recorded Bird Cherry *Prunus padus*, coming into flower on a Local Nature Reserve. This shrub is by no means uncommon except in the South West but it always gives me special pleasure when I see it as it seems a sign that vegetation is becoming more northern and I'm on an adventure!

Caroline Giddens also reached the high total of 317, choosing a square on the outskirts of Minehead in West Somerset which made the best of all available habitats in this part of town. She kindly sent in a full-page scan of the OS map, and as Minehead is one of my shopping towns as well as a good botany area (with plenty of teashops for tired square-bashers when meetings are allowed!) I was able to visualise exactly where she had found things. Minehead has a remarkable microclimate, something like that of the Cornish Riviera, so I didn't get a shock even when I found Cabbage-palm *Cordyline australis* on her list – such things really do self-seed in the streets here. Because Butlins and some of the trading estates are built on former wet salt-grazing fields it is possible to see Sea Club-rush *Bolboschoenus maritimus* growing in a ditch almost outside Morrison's car park, and the abundance of ruderal habitat enabled Caroline to add 6 Willowherbs and 6 Docks to a fascinatingly varied list.

These results are really good because of the interest the studies have given to members at a time when we all need positive pleasures to focus on, and because of the really interesting results which are adding to county and national records. I hope that even more members may find satisfaction and mental sustenance by starting this exercise. Even when the lists get comprehensive the 'find just one more species' challenge remains enjoyable, and starting more squares which fit into your neighbourhood might always be possible?

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