



# Urban Flora of Scotland

-a newsletter from our convener

John Grace, February 2020

For those of you who may be 'new' to the Urban Flora project, here's what we do: we record the plants and fungi found in towns and cities throughout Scotland, with associated data on habitat and abundance. For this purpose, 'towns' are defined as settlements with at least 1000 people. We cannot hope to visit every one of these settlements, but we do try to have a good sample – the length and breadth of the country. We especially like to work with the BSBI and Natural History groups – they know the most interesting sites, and they include the local experts on plant identification.

The motivation for this project is partly that we need to know how the flora may be changing. We have spotted several species that have arrived from the south of Britain, presumably in response to climate warming. We also are interested in observing garden species that have escaped and become integrated into the local flora – sometimes they are invasive, but often they make a contribution to biological diversity. Another motivation is that we realise that the urban flora is under-valued – too often the title 'weed' is applied, and interesting species are sometimes eradicated in order to make towns 'tidy'. Local councils in particular are spending thousands of pounds treating urban areas with glyphosate – sometimes they visit three times in the course of a few months. Unsurprisingly, many of the familiar plant species have become resistant to glyphosate – quite possibly glyphosate (sold as Round-up) will soon be banned because of health fears. What will

they do next? The alternatives are more toxic or not effective. Garden centres and Amazon.co.uk are now selling 'New Round-up without Glyphosate'. The active ingredient is 6 % acetic acid, the same as vinegar. It might work in hot, dry weather but Amazon customers have not been impressed so far. Perhaps urban floras will be allowed to flourish after all.



Fig 1. Finding abundant *Saxifraga tridactylites* in the centre of Annan, Dumfries and Galloway.

We began this project in 2015, hoping to involve young people as well as established botanists, and expecting that the project would take ten years to complete. We have training sessions to help beginners (this year, it's on the evening of 27<sup>th</sup> May with a follow-up field meeting at the weekend). If you are reading this as a young or old botanist (or would-be botanist), please consider joining in. Our visits this year will include long weekends in the towns of north Ayrshire, and a weekend in Aberdeen and the nearby towns. We'll also go to Dalkeith, including the ancient oaks at Dalkeith Country Park (lichen specialists

please note!) and Glasgow. See the field programme for details and contact names. Everyone is most welcome, but those of you who are lichenologists, mycologists and bryologists are especially welcome this year. The map shows progress so far.

Last year was our most successful. It included a long weekend in Dumfries and Galloway, with Chris Miles the BSBI's Vice-County Recorder and many of the local botanists. We also did a total survey of the Edinburgh tramline and associated verges, and found several surprises.



Fig 2. Where we've been so far.

With permission, we like to consult the records from the BSBI (although habitat data are not included in those records). Their database is a major source of information, which will soon be incorporated into the Atlas 2020. One of the questions we have addressed with the database is 'do urban sites hold more species than rural areas?'. This seemingly simple question is quite hard to answer, and we are still working on it: look at Fig. 3: you can see the number of species found in the BSBI data base for km squares in urban Scotland versus rural squares nearby. In this survey the urban areas have more species but when we visit actual sites and make our own survey the result is often different. It is hard to escape 'observer bias'. A related and easier question is 'what are the special features of urban species

which allows them to tolerate the frequently-harsh conditions?'.

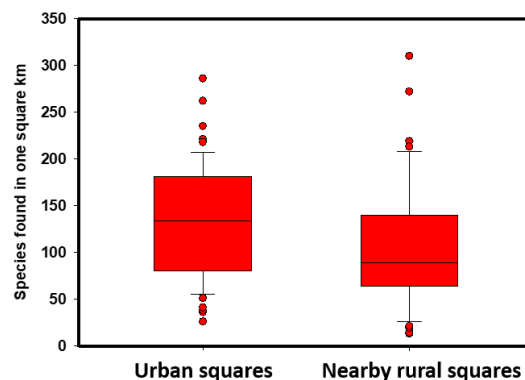


Fig 3. Analysis of BSBI's data to compare species richness of 59 urban versus 59 nearby rural squares, using Box and Whisker representation. Horizontal line inside the block is the *median*. Red blocks above and below that line are quartiles. Whiskers define likely upper and lower limits except for the improbably high and low values (the 'outliers').

In 2020 we want to start disseminating the results of our work more widely. The first item will be a Species List, prepared by Brian Ballinger. The first edition will be made available to all, via the internet, and it will be updated later as new species are discovered. The second item we are aiming for will be a Thematic Session at the December meeting of the British Ecological Society, held in Edinburgh 14-17<sup>th</sup> December. We ought not to forget the more local dimension: I want to prepare something for local councils – a publication and associated talk that highlights species diversity, management options, and attitudes to the use of alien species mixes to decorate parks, highways and byways.

**If you do want to become a recorder**, you can find joining information at: [https://www.botanical-society-scotland.org.uk/Urban\\_Flora\\_of\\_Scotland](https://www.botanical-society-scotland.org.uk/Urban_Flora_of_Scotland) You can also view my short talk, given to the Scottish Botanists' Conference in November 2019: <https://www.botanical-society-scotland.org.uk/content/Urban-Flora-News>