Lanarkshire Botany

Newsletter update, February 2020

2019 - Looking back on a hectic year

Last year was a hugely significant year for British and Irish botany, as it marked the close of data-gathering for the BSBI's 'Atlas 2020' - the new plant atlas of the British Isles. As readers of this newsletter will recall, we were very focussed throughout last year on statistics - targetting our fieldwork carefully in order to ensure that 75% of the Lanarkshire flora has been found or refound in the current century.

Thanks to an extraordinary effort by many people, including much study, travel, photography - and extensive use of the BSBI's excellent network of referees in the identification of difficult species - the 75% target was achieved by the end of October.

A great big THANK YOU to everyone who contributed in any way!

In the course of this process, 2019 became the first calendar year in which over 1,000 distinct species have been recorded in the wild in Lanarkshire. These include a remarkable 72 species, subspecies, varieties or cultivars never previously recorded in our vice-county.

Sedum kamtschaticum (Kamchatka Stonecrop)
on a disused road near Blantyre

Factoid

The last four years have seen the greatest single-year botanical biodiversity recorded in Lanarkshire.

2016 700 species

2017 840 species

2018 956 species

2019 1,039 species

This reflects the growing network of active botanists, the wide range of locations visited, and the increase of individual field skill levels.

2019 Highlights

The first-ever Lanarkshire record of *Ophrys apifera* (Bee Orchid) and our second-ever record of *Hypopitys monotropa* (Yellow Bird's-nest) were reported last summer in this newsletter.

Here are some other highlights of the year:

Neottia nidus-avis (Bird's-nest Orchid)
a new location in a gorge near Carluke

Xanthium strumarium (Rough Cocklebur)
an unusual weed at King George V Dock

Nuphar advena (Spatter-dock)
still present on the Corehouse Estate, Lanark

Trifolium aureum (Large Trefoil)
by a stream entering the Clyde near Polmadie

Glasgow Botanic Gardens

A list of the wild plants of the Glasgow Botanic Gardens was drawn up in 1998 by Dr. Peter Macpherson, then the BSBI Recorder for Lanarkshire, following much survey activity. His study has now been updated by fieldwork undertaken by our current Team over the three-year period, 2017-2019.

The 1998 list included **276** species. The new list includes **313** species.

Lathraea clandestina (Purple Toothwort) has long been established in a hidden corner of the Botanics

Chelidonium majus (Greater Celandine) a newcomer since 1998

96 species noted in 1998 have not been refound, but **131** species on the new list were not on the 1998 list.

It is interesting that, in round terms, about **60%** of the wild flora of the Botanics appears to be stable across the last two decades, and that roughly **40%** has changed (many previously recorded species having been replaced by more recent arrivals). This broad level of change may well also be true of the Glasgow environment more generally: dynamic competition for habitat niches leads to winners as well as losers.

So, here's a benchmark for consideration: is it a realistic hypothesis that botanical diversity may generally change at a rate of between 1% and 2% per annum? This would mean that, for a given study area, one could expect to see 1 or 2 species in every hundred lost and replaced each year. Discuss!

BSBI

The Botanical Society of Britain and Ireland (BSBI) is the leading society for amateur and professional botanists in the British Isles.

Whether or not you are a member, please take time to explore the excellent website which is full of information and helpful advice:

Botanical Society of Britain & Ireland

www.bsbi.org

You can find lots of help in identifying plants, publicity for training courses and events, and news about what's going on locally. In fact, if you've not already done so - why not just take the plunge and join?

Fieldwork in 2020

Numerous ideas have been put forward for this year's fieldwork: exploring the margins of allotments, community gardens and arable fields; visiting hilltops, flushes, bings and gills (ravines in the Clyde valley); offering more training and working with schools; working in partnership with neighbouring counties along our mutual borders; arranging a series of evening recording outings in public parks; seeking out some of our rarest plants to check on their wellbeing; and encouraging members of the Team to do more recording themselves.

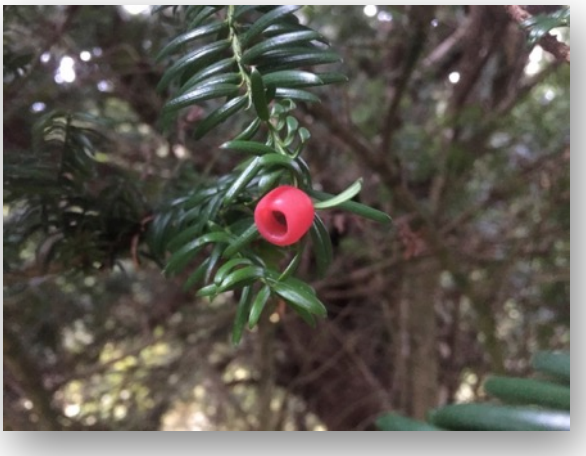
Whatever the programme eventually looks like, it will undoubtedly incorporate many of these elements - and, of course, feature lots of recording in map squares with no previous records.

The first instalment (covering April to June) will be circulated in early March. Please plan to join us in the great outdoors as often as you can: no previous experience is required and you will enjoy learning in the company of friendly and knowledgeable people.

Developing fieldwork skills

We are keen to facilitate the development of your field skills - starting from wherever you are and building to the next level. The BSBI website has information on all sorts of training opportunities, from free outings to week-long Courses and specialist workshops.

This year, we are delighted to be hosting a BSBI one-day course on 'Identifying Grasses'. This will be held at Chatelherault Country Park on Saturday 11th July, staffed entirely by members of our Team. Full details will be available in due course, but please save the date if you'd like to attend.



Late 2019 was particularly good for seeing the unique fruits of *Taxus baccata* (Yew)

Academic partnership

We are delighted to announce a partnership with Savanna van Mesdag, a PhD student at the University of Glasgow. We will provide some botanical fieldwork support for her project, whose title is:

Anthropogenic biodiversity and geodiversity – can legacy industrial waste help offset falling global biodiversity?

Savanna writes:

"Industrial waste can come in many forms and can impose noticeable changes on the local flora and fauna around the world. While one might first suppose that industrial waste, such as steel slag, would have a negative and deleterious impact on nature and biodiversity, studies have suggested that interesting, specialist and rare species and communities can exist on these sites. These sites are vulnerable to removal or remediation from people who are keen to 'improve' them for local communities, when they might already provide local communities with valuable wildlife. Not only this, industrial waste such as steel slag, being an anthropogenic, or man-made substrate, is unlike any natural substrate, offering potential geo-diversity in a world that is also losing important substrates and rocks through processes such as land-use change, erosion and industry.

"I will be specifically studying steel slag sites, to assess the geodiversity and biodiversity. The species I will be recording will be plants and certain species of invertebrate, to gain a good overview of site biodiversity. I will be taking slag samples next to/near the plants that will be recorded, to see if there is any correlation or link between the steel slag components and the plants present. I also plan to run plant growth experiments to assess how well plants grow on slag compared to 'non-toxic' substrate. I am keen to see whether or not legacy steel slag sites provide important and significant geodiversity and biodiversity and whether or not such brownfield sites/open mosaic habitats deserve better protection from development/other uses."

Keep in touch

You are welcome to contact me at any time on botanical matters. If you want to report a plant you've found, share ideas about fieldwork, or send photos of plants you want identified, just get in touch.

Also, if you know anyone who would be interested in receiving our programme of events and occasional newsletters, please let me know.

I look forward to seeing you in the field whenever you can join us - you'll be made most welcome.

Michael Philip (BSBI recorder, vc77) email: botany@opus44.co.uk

Picture credits:

Sedum kamtschaticum	Peter Wiggins, near Blantyre, 21st September 2019
Neottia nidus-avis	Michael Philip, near Carluke, 2nd August 2019
Xanthium strumarium	Michael Philip, King George V Dock, Glasgow, 12th August 2019
Nuphar advena	Michael Philip, Corehouse Estate, 24th August 2019
Trifolium aureum	Peter Wiggins, near Polmadie, 25th August 2019
Lathraea clandestina	Michael Philip, Glasgow Botanic Gardens, 15th April 2017
Chelidonium majus	Michael Philip, Glasgow Botanic Gardens, 19th May 2018
'Team 77' in the field	Peter Wiggins, near Bishopbriggs, 21st July 2018
Taxus baccata	Michael Philip, near Blantyre, 25th October 2019