## Botanical Society of Britain & Ireland

## Citizen scientists reveal how our wild flowers are responding to changing weather patterns.

The results are in for BSBI's ninth New Year Plant Hunt, when plant-lovers across Britain and Ireland head out to see what is flowering in their local patch. 1,714 people took part this year – that's more than ever before. They hunted for up to three hours over the New Year period<sup>1</sup> and recorded more species in bloom than ever before. Here's what they found:

- A total of 14,724 records of plants in bloom across Britain and Ireland.
- 615 different species were recorded, compared to 627 last year and 532 in 2018.
- 778 lists were submitted, compared to 712 in 2019 and 612 in 2018.
- 1,714 people<sup>2</sup> participated, either individually, as part of family groups or as members of botanical recording groups. Many people also made casual observations on social media but didn't upload their records so we haven't included them in our totals.
- Plant hunters joined in from Shetland to Guernsey, from Donegal to Anglesey to Norfolk, from west Cork to Pembrokeshire to the Kent coast.
- Plant Hunts were held in the wider countryside and in urban areas including London, Newcastle, Leicester, Nottingham, Warwick, Bangor, Dumfries, Galway and Bristol<sup>3</sup>.
- In Northumbria, a team of expert botanists went head-to-head with a team of non-botanists to find the most species in bloom; each team found 40 species in bloom in very different habitats<sup>4</sup>.

As expected, the milder south and west of Britain and Ireland had the highest numbers of species in  $flower^5 - 115$  in Swanage – a similar number to 2019 but nowhere near the 2016 top total of 162 species recorded in Berkshire.

BSBI's Head of Science Dr Kevin Walker<sup>6</sup> has analysed this year's results<sup>7</sup> and compared them with those from previous years. He said "2020 appears to have been an average year in terms of winter flowering in comparison to previous years. New Year Plant Hunt data from the past six years shows that there were fewer species in flower this year than in 2015, 2016 and 2019 but more than in 2017 and 2018. The reason for this seems clear – temperatures in the two months preceding this year's Hunt were only a degree above average compared to 2015, 2016 and 2019, when the combined temperature anomalies were much higher. This was largely due to the cold and wet conditions experienced across much of the country in late 2019, especially in November when the Midlands and Northern England experienced widespread flooding".

The main findings from this year's data were:

- 53% of the records were of species which normally flower after midsummer and had managed to carry on flowering. These include 'Autumn Stragglers' such as Yarrow, Ragwort and Hogweed.
- Only 24% were 'Springtime Specialists' like Primrose and Lesser Celandine, so there is no indication of an early spring. This proportion is similar to previous years.
- 23% of the records submitted were of species we might reasonably expect to flower at New Year, or species which we cannot easily be categorised as either 'early' or 'late'. These include typical 'All Year Rounders' such as Shepherd's-purse as well as 'Winter Specialists' such as Winter Heliotrope.
- The top five species were Daisy, Groundsel, Dandelion, Annual Meadow-grass, and Common Chickweed – identical to last year's list and all (native) plants we would expect to be flowering at this time of year.
- 36% of species recorded were non-natives. This includes plants from warmer climates that have escaped from gardens or cultivation, become naturalised in the wild and were able to extend their flowering into the winter months.

As in previous years, urban areas tended to have more non-native species in flower than rural areas, as there are more sheltered and disturbed places with warm microclimates where alien plants can thrive.

Kevin said "We can't yet prove that more species are flowering in mid-winter nowadays, rather than in the past, but NYPH has shown that in milder winters, more plants flower because of warmer temperatures and fewer frosts. We don't yet know what the implications of this are for plants and associated insects - but what we do know is that weather patterns are changing and that plants are responding".

Daily highlights of people's Hunts across Britain and Ireland were posted on the BSBI News & Views blog<sup>8</sup> and shared via social media<sup>9</sup>.

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The Botanical Society of Britain & Ireland (BSBI) is the leading society promoting the study, understanding and enjoyment of wild plants in Britain and Ireland. Founded in 1836, we are now one of the world's largest contributors of biological records, many collected by our volunteer members, both amateur and professional botanists, who benefit from our research, training and outreach programmes.

## Notes:

1. The 2020 New Year Plant Hunt ran from Wednesday 1<sup>st</sup> to Saturday 4<sup>th</sup> January: <u>www.bsbi.org/new-year-plant-hunt</u>

2. 1,714 people registered their participation via our online recording app: <a href="https://www.nyph.bsbi.org/app2020/#records">www.nyph.bsbi.org/app2020/#records</a> and using these instructions: <a href="https://www.nyph.bsbi.org/sendfinds.php">www.nyph.bsbi.org/sendfinds.php</a>

3. Many people hunted alone or with friends and family but Group Hunts were also organised for anyone who preferred some botanical company: <a href="https://www.bsbi.org/New+Year+Plant+Hunt+2020+group+Hunts">www.bsbi.org/New+Year+Plant+Hunt+2020+group+Hunts</a> 4. Some background about this at: <u>www.bsbi.org/north-east-new-year-plant-hunt-off</u>

5. The New Year Plant Hunt website has an interactive map showing where plants were recorded; zoom in and click on the red markers to view individual lists: <u>www.nyph.bsbi.org/results.php</u>

6. Dr Kevin Walker is BSBI's Head of Science and conducted the New Year Plant Hunt analysis. Kevin is available for interview by phone or email on Monday 20<sup>th</sup> January:

Email: kevin.walker@bsbi.org Phone: 07807 526 856

7. To download Kevin's analysis in full, please visit: www.bsbi.org/new-year-plant-hunt

8. For New Year Plant Hunt 2020 daily blogposts, please follow these links:

Day One; Day Two; Day Three; Day Four.

9. See images and comments on Twitter: <u>#NewYearPlantHunt</u>

Please contact Louise Marsh to request images at higher resolution.