



# Botanical Society of Britain & Ireland

## Cold snap impacts number of wild or naturalised plant species in bloom at New Year 2023

The results are in for BSBI's twelfth New Year Plant Hunt, when plant-lovers across Britain and Ireland head out to see what is flowering in their local patch. 1,691 people took part in the Hunt in a year which saw the hottest summer on record followed by severe frosts in the weeks before New Year. Plant Hunters were out recording wild and naturalised plants in bloom in their local area for up to three hours over the New Year period<sup>1</sup> - here's what they found:

- Only 477 different plant species were recorded in bloom across Britain and Ireland compared to 669 last year and 710 in 2021.
- A total of 10,199 records of plants in flower were submitted: less than half last year's total of 20,612.
- 1,002 lists were submitted, a decrease of 20% compared to 1,256 last year.
- 1,691 people<sup>2</sup> participated, either individually, as part of small family groups or by joining organised group Hunts, a decrease in 10% compared to last year's total of 1,895.
- Plant hunters joined in from Shetland to Guernsey, from Anglesey to Kent, and from Donegal to Wexford.

The 50.5% reduction in the number of records of plants in bloom cannot be explained only by the decreased numbers of participants (-10%) and lists submitted (-20%). Many seasoned recorders who follow the same route every year reported seeing only half as many species in flower as usual, and 37 recorders found no species at all in bloom. As in previous years, the milder south and the coastal areas of Britain and Ireland had the highest numbers of species in flower<sup>3</sup> – but totals were lower than in previous years: 71 species in Swanage compared to 107 on the same route last year; 56 species in Bath by recorders who found 92 species there last year. This year's longest list was of 77 species in Cornwall – last year, eight lists were submitted containing more than 77 species.

Although there was a thaw in many parts of Britain and Ireland shortly before the 2023 New Year period, this was preceded by severe frosts in early December, which saw the coldest winter since 2010, and many areas experienced cold, wet weather at New Year. This contrasts with temperatures leading up to both the 2022 New Year Plant Hunt<sup>4</sup>, which were only 1.1 degrees above average, and the 2021 Hunt, when temperatures were 2.7 degrees above average and the highest number of species in bloom (710) was recorded.

Julia Hanmer, BSBI's Chief Executive said "Long term citizen science projects such as the New Year Plant Hunt are essential to help us understand how our wild plants are responding to climate change. We are very grateful to everyone who intrepidly went out plant hunting in all weather over the New

Year period – their contributions further our understanding of the pressures that plants face, and encourage many others to become passionate about our wild plants.”

The main findings from this year’s data were:

- 51% of the flowering species recorded were of plants which normally flower after midsummer and had managed to carry on flowering. These include ‘Autumn Stragglers’ such as Yarrow, Ragwort and Hogweed. This proportion is very similar to previous years.
- Only 11% were ‘Springtime Specialists’ like Primrose and Lesser Celandine, so there is no indication of an early spring. This proportion is lower than previous years.
- 38% 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 four most frequently seen species were Daisy, Groundsel, Dandelion and Red Dead-nettle – the first three native species have been among the four most frequently-recorded plants in every Plant Hunt, but this is the first time that Red Dead-nettle, an archaeophyte<sup>6</sup> (non-native plant introduced before 1500), has been recorded as frequently; all four are however plants that we would expect to be flowering at this time of year.
- Sun Spurge, an archaeophyte which, like Red Dead-nettle, is usually found in fertile disturbed soils of gardens, waste ground and arable field margins, entered the Top Twenty list of most frequent plants for the first time.
- 49% of species recorded were non-natives (aliens). This includes plants from warmer climates that have escaped from gardens or cultivation, become naturalised<sup>6</sup> in the wild and were able to extend their flowering into the winter months. This is the highest proportion of non-native species ever recorded during the Plant Hunt: 2017 to 2022 saw between 36% and 38% of non-natives.

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 Walker, BSBI Head of Science<sup>7</sup> said “As the analysis of the New Year Plant Hunt data shows, our plants are responding to changing weather patterns, with more flowers being recorded during the past decade as we experience autumns and winters with warmer temperatures and fewer frosts. We cannot, however, prove conclusively that more species are flowering nowadays in mid-winter compared to in past years or what that will mean for the wildlife that rely upon them - but we can see that weather patterns are changing and our plants, both native and non-native, 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.

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**Notes:**

1. The 2023 New Year Plant Hunt ran from Saturday 31<sup>st</sup> December 2022 to Tuesday 3<sup>rd</sup> January 2023: [www.bsbi.org/new-year-plant-hunt](http://www.bsbi.org/new-year-plant-hunt)

2. 1,691 people registered their participation via our online recording app: [nyph.bsbi.app](https://nyph.bsbi.app) and using these instructions: [nyph.bsbi.org/take-part/](https://nyph.bsbi.org/take-part/)

3. The New Year Plant Hunt website has an interactive map showing where plants were recorded; zoom in and click on the markers to view individual lists: [nyph.bsbi.org/results.php](https://nyph.bsbi.org/results.php)

4. The 2022 NYPH analysis is available here: [https://bsbi.org/wp-content/uploads/dlm\\_uploads/2022/02/BSBI-New-Year-Plant-Hunt-2022-Report-FINAL.pdf](https://bsbi.org/wp-content/uploads/dlm_uploads/2022/02/BSBI-New-Year-Plant-Hunt-2022-Report-FINAL.pdf)

5. Download the 2023 NYPH analysis in full: [https://bsbi.org/wp-content/uploads/dlm\\_uploads/2023/01/BSBI-New-Year-Plant-Hunt-2023-REPORT.pdf](https://bsbi.org/wp-content/uploads/dlm_uploads/2023/01/BSBI-New-Year-Plant-Hunt-2023-REPORT.pdf)

6. An explanation of terms such as 'wild', 'native', 'naturalised', 'aliens' and 'archaeophyte' is available here: <https://bsbi.org/definitions-wild-native-or-alien>

7. Dr Kevin Walker is Head of Science at the Botanical Society of Britain & Ireland: <https://bsbi.org/research>. Kevin is available for interview (phone or Zoom) on 24<sup>th</sup> January 10am – 5pm.

Email Kevin for comment or to arrange an interview: [kevin.walker@bsbi.org](mailto:kevin.walker@bsbi.org)

8. For New Year Plant Hunt 2022 daily summaries, please follow these links:

Day [One](#); Day [Two](#); Days [Three & Four](#).

9. See images and comments on Twitter: [#NewYearPlantHunt](https://twitter.com/NewYearPlantHunt)