National Plant Monitoring Scheme

Annual Report 2022

Robust research on and monitoring of plant species, the life-supports of our habitats and ecosystems, are essential in understanding the effects of growing pressures on the countryside.

The National Plant Monitoring Scheme is a nationwide partnership project, supported by hundreds of dedicated citizen scientists, heading out annually to conduct botanical surveys at their allocated sites. These long-term surveys in random 1 km squares continue to provide a growing dataset across the UK, enabling us to study the abundance and diversity of plants through time across 30 different semi-natural habitats.

www.npms.org.uk

Botanical Society of Britain & Ireland

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Plantlife

NIEA Northern Ireland Environment Agency www.daera-ni.gov.uk

An Agency within the Department of Agriculture, Environment and Rural Affairs www.daera-ni.gov.uk

UK Centre for Ecology & Hydrology

Highlights in numbers

©Sarah Shuttleworth

Number of surveys (day visits) overall
6,937

Percentage of NPMS indicator species recorded overall
93%

Total number of squares allocated
1,931

Number of species/ species groups recorded overall
1,673

Total number of volunteers with squares
1,709

Number of records overall
206,079

©Cath Shellswell

Total number of squares with data
1,159

Total number of plots with data
4,656

▲ Since 2015

In 2022 ▼

Number of species/ species groups recorded in 2022
943

Number of surveys (day visits) conducted in 2022
633

Number of records in 2022
18,063

Number of squares with data in 2022
302

Number of plots with data in 2022
1,207

Percentage of NPMS indicator species recorded in 2022
77%

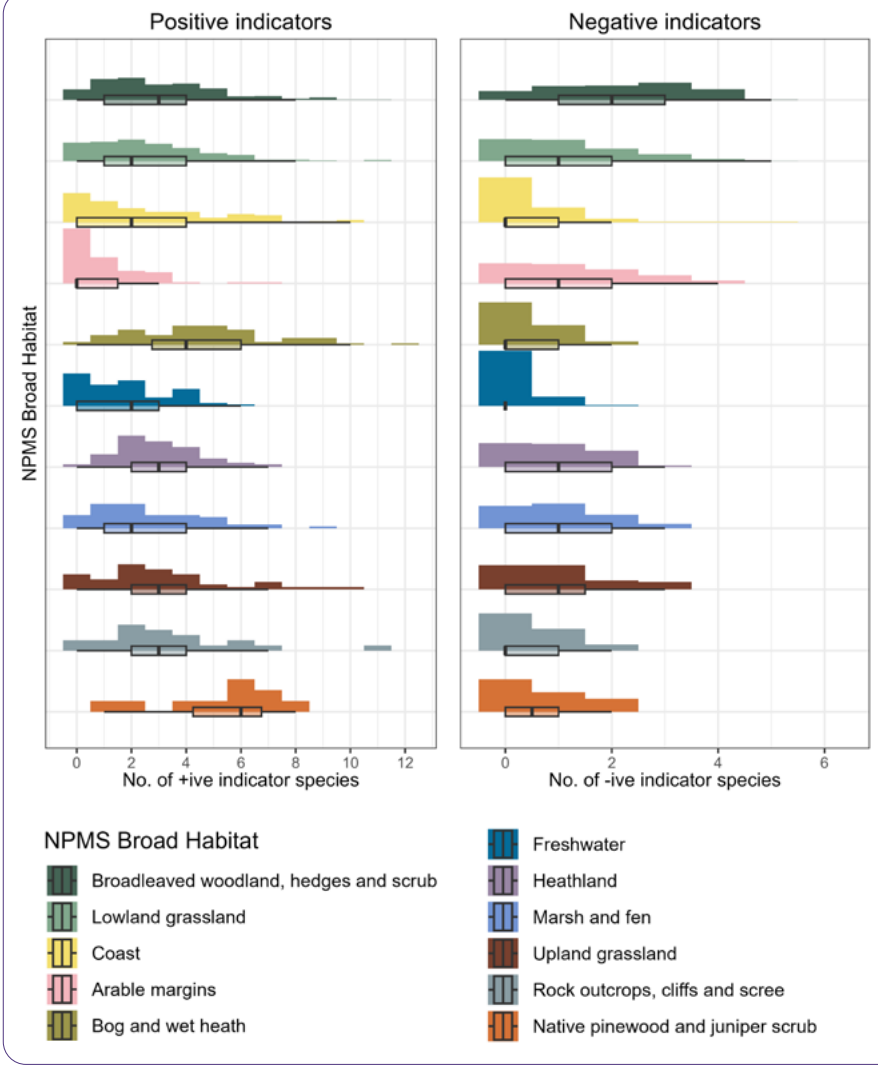
©Louise Marsh

Number of indicator species across habitats

Broad habitat	Number of plots (and samples) overall	Number of plots (and samples) 2022
Broadleaved woodland, hedges and scrub	1,490 (6,629)	359 (582)
Lowland grassland	1,370 (5,824)	354 (564)
Coast	304 (1,446)	93 (133)
Arable margins	385 (1,672)	87 (146)
Bog and wet heath	373 (1,156)	80 (113)
Freshwater	324 (1,312)	77 (127)
Heathland	347 (1,335)	76 (121)
Marsh and fen	234 (815)	58 (90)
Upland grassland	147 (473)	43 (73)
Rock outcrops, cliffs and scree	73 (361)	21 (33)
Native pinewood and juniper scrub	52 (162)	10 (16)

*Plots are the unique locations within squares that surveyors visit. Surveyors may visit their plots more than once each year, which results in a higher number of samples.

Photos: Meadow ▲
Arable margin ▶



These plots show the number of indicator species for each NPMS broad habitat found in 2022, with histograms and boxplots illustrating the distribution of values across all plots sampled. The NPMS broad habitats with the most plots visited in 2022 are at the top and those with the fewest are at the bottom.

Most broad habitats were quite variable in the number of positive indicator species found in each plot, ranging from zero to 12 out of a maximum of 25. Arable margins rarely had more than four positive indicator species and, in comparison to habitats such as Bog and wet heath, and Native pinewood and juniper scrub, had a higher proportion of plots with fewer positive indicators present. Each NPMS broad habitat has a maximum of five negative indicator species, except for Native pinewood and juniper scrub (four) and one of the fine habitats within the Coast broad habitat, Saltmarsh (one). There was little difference between NPMS broad habitats in the number of negative indicators found per plot, and many had none, for example over half of the plots recorded as Coast, Bog and Wet Heath and Freshwater.

Top positive and negative species recorded in each NPMS Broad Habitat in 2022:

NPMS indicator species recorded for each habitat type have been selected as either positive or negative indicators of habitat health. This enables the quality of a habitat to be monitored over time. The top indicator species/aggregates recorded within each broad habitat type within 2022 are shown in the table below. The original scheme selection of positive and negative indicators is discussed in our scheme design paper here: https://tinyurl.com/npmsDesign

In general, however, negative indicators suggest some degree of eutrophication, a lack of traditional management or, in some cases, the presence of invasive non-natives. Positive indicators point towards a habitat that is more typical of high-quality vegetation of the habitat, as judged by the abundance and frequency of the plants making up the communities in the underlying National Vegetation Classification (see the "Conservation and research" section of the NPMS website).

Broad habitat	Top three positive indicators	Top three negative indicators
Arable margins	1. Fat-hen (*Chenopodium album*)	1. Creeping Thistle (*Cirsium arvense*)
	2. Shepherd's-purse (*Capsella bursa-pastoris*)	2. Common Nettle (*Urtica dioica*)
	3. Scentless Mayweed (*Tripleurospermum inodorum*)	3. Cleavers/Goosegrass (*Galium aparine*)
Bog and wet heath	1. Heather (*Calluna vulgaris*)	1. Hard Rush/Compact Rush/Soft Rush (*Juncus inflexus/effusus/conglomeratus*)
	2. Bilberry (*Vaccinium myrtillus*)	2. Downy Birch/Silver Birch (*Betula pubescens/pendula*)
	3. Cross-leaved Heath (*Erica tetralix*)	

Bog and wet heath **negative indicators**

Birches (*Betula pubescens/pendula*)

Whilst an important part of many UK semi-natural habitats, in this NPMS broad habitat type the two UK birch species were selected as negative indicators due to their ability to rapidly colonise drained and/or burnt areas of bog and wet heath. For example, drained and degraded raised bogs are more heathery and sometimes support a more open canopy of birch, Scots Pine and Rhododendron.

©Bob Gibbons/Plantlife

Broadleaved woodland, hedges and scrub	1. Hawthorn (*Crataegus monogyna*)	1. Common Nettle (*Urtica dioica*)
	2. Wood Avens (*Geum urbanum*)	2. Cleavers/Goosegrass (*Galium aparine*)
	3. Common Ivy (*Hedera helix*)	3. Bramble (*Rubus fruticosus* agg.)
Coast	1. Sea Aster (*Aster tripolium*)	1. Bramble (*Rubus fruticosus* agg.)
	2. Sea Plantain (*Plantago maritima*)	2. Common Cord-grass (*Spartina anglica*)
	3. Sea Arrowgrass (*Triglochin maritimum*)	3. Gorse (*Ulex europaeus*)
Freshwater	1. Water Mint (*Mentha aquatica*)	1. Reed Sweet-grass (*Glyceria maxima*)
	2. Marsh-bedstraw (*Galium palustre*)	2. Canadian Waterweed/Nuttall's Waterweed (*Elodea canadensis/nutallii*)
	3. Bulrush (*Typha latifolia*)	

Freshwater **positive indicator**

Marsh-bedstraw (*Galium palustre*)

This sprawling perennial herb is common amongst the more robust marginal vegetation of ditches, ponds and lakesides, as well as in wet meadows and marshes. An ability to readily colonise newly available habitat has been suggested as a reason for its persistence at large scales despite the widespread destruction of lowland wetlands over the past 70 years. NPMS data could be very useful for investigating this phenomenon.

©Rob Still_Chris Gibson

Heathland	1. Heather (*Calluna vulgaris*)	1. Bracken (*Pteridium aquilinum*)
	2. Heath Bedstraw (*Galium saxatile*)	2. Downy Birch/Silver Birch (*Betula pubescens/pendula*)
	3. Bell Heather (*Erica cinerea*)	3. Bramble (*Rubus fruticosus* agg.)

Lowland grassland	1. Creeping Buttercup (*Ranunculus repens*)	1. Creeping Thistle (*Cirsium arvense*)
	2. Yorkshire-fog (*Holcus lanatus*)	2. Common Nettle (*Urtica dioica*)
	3. Common Sorrel (*Rumex acetosa*)	3. Hawthorn (*Crataegus monogyna*)

Lowland grassland **positive indicator**

Common Sorrel (*Rumex acetosa*)

Found across many habitats, although selected as an indicator for two neutral grassland types within the NPMS (in addition to the Inland rocks and scree fine habitat), this delicate species again emphasises the importance of monitoring at different scales: its 10 km distribution is essentially stable in the UK, but loss at smaller scales is connected to the widespread loss of species-rich grassland over the 20th century.

©Rob Still_Chris Gibson

Marsh and fen	1. Marsh Thistle (*Cirsium palustre*)	1. Hard Rush/Compact Rush/Soft Rush (*Juncus inflexus/effusus/conglomeratus*)
	2. Water Mint (*Mentha aquatica*)	2. Common Nettle (*Urtica dioica*)
	3. Meadow Buttercup (*Ranunculus acris*)	3. Tufted Hair-grass (*Deschampsia cespitosa*)

Marsh and fen **positive indicator**

Marsh Thistle (*Cirsium palustre*)

Common in the north and west of the UK, but locally scarce in many other areas (despite its near-ubiquitous 10 km distribution), this statuesque species can often be seen bedecked with nectaring

©Rachel Murphy

Native pinewood and juniper scrub	1. Heather (*Calluna vulgaris*)	1. Conifer seedlings/saplings
	2. Rowan (*Sorbus aucuparia*)	2. Bracken (*Pteridium aquilinum*)
	3. Bell Heather (*Erica cinerea*)	3. Common Nettle (*Urtica dioica*)

Native pinewood and juniper scrub **positive indicator**

Rowan (*Sorbus aucuparia*)

A widespread tree, both planted and as a native, within the NPMS it was specifically selected as a characteristic, although occasional, species of these northern woodland habitats. Whilst a sexually reproducing diploid itself, the species has contributed to the formation of some endemic Whitebeam (*Sorbus*) species that reproduce asexually.

©Rob Still_Chris Gibson

Rock outcrops, cliffs and scree	1. Maidenhair Spleenwort (*Asplenium trichomanes*)	1. Bramble (*Rubus fruticosus* agg.)
	2. Harebell (*Campanula rotundifolia*)	2. Common Nettle (*Urtica dioica*)
	3. Herb Robert (*Geranium robertianum*)	3. Creeping Thistle (*Cirsium arvense*)

Rock outcrops, cliffs and scree **positive indicator**

Maidenhair Spleenwort (*Asplenium trichomanes*)

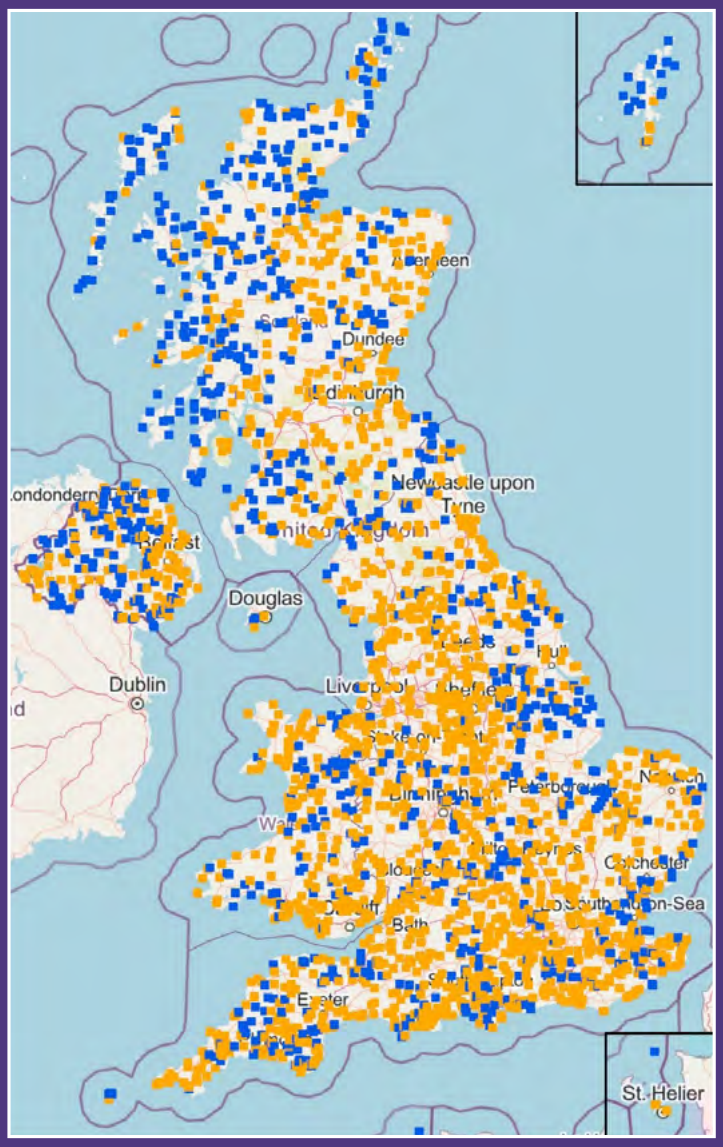
Used within the NPMS has an indication of habitat quality within our “rocky outcrop”-type habitats, most of our surveyors will likely be more familiar with this plant from the walls of their towns and villages. Preferring base-rich substrates, it seems likely that the provision of urban and suburban mortar must have radically expanded the availability of habitat for this taxon over human history, but we so far have little idea of how it is faring in more natural locations.

©Ray Woods

Upland grassland	1. Bilberry (*Vaccinium myrtillus*)	1. Sweet Vernal-grass (*Anthoxanthum odoratum*)
	2. Heath/Common Milkwort (*Polygala serpyllifolia/vulgaris*)	2. Creeping Thistle (*Cirsium arvense*)
	3. Tormentil (*Potentilla erecta*)	3. Wavy Hair-grass (*Deschampsia flexuosa*)

See www.plantatlas2020.org for more information on these species and their 10 km distribution trends in Britain and Ireland.

Highlights in numbers



NPMS survey monads across the UK, December 2022.
Orange = Allocated, Blue = Available

There are currently 2,884 NPMS survey monads (1 km²) nationwide, from the Channel Islands to the northern-most Shetland Islands, and west to Northern Ireland, with 67% of these monads allocated to volunteer surveyors at the end of 2022. These monads are randomly generated, weighted for the semi-natural habitats the scheme is investigating and to minimize surveyor selection bias. Each time ~70% of survey monads are allocated nationally more monads are released from the weighted-random selection process. Squares can also be released by volunteers who are no longer able to survey, and can then be adopted by new volunteers in the area.

Survey coverage is widespread across the four nations, but there is greater need for survey monad uptake in more remote regions including the Scottish Highlands and Islands, Northern Ireland and the east coast of England. As well as generally less surveyed habitats, such as our uplands and certain coastal habitats such as saltmarsh and machair.

Machair

©Theresa Lewis

Overall	England*	Scotland	Wales	N. Ireland
Number of surveys (day visits) overall	5,006	1,063	650	218
Number of records overall	145,821	33,759	20,593	5,906
Number of species/species groups recorded overall	1,485	824	762	398
Number of squares with data submitted in 2022	227	49	19	7
Number of plots with data submitted in 2022	891	207	83	26
Number of surveys (day visits) in 2022	468	98	51	16
Number of records in 2022	12,879	3,253	1,465	466
Number of species/species groups recorded in 2022	802	444	294	117

*Channel Islands and the Isle of Man have been combined with England

Figures of 8!

Continuous monitoring over the first eight years of the NPMS

Long-term monitoring using a consistent methodology is incredibly important for enabling us to understand the health of our habitats and the drivers and processes impacting our landscapes. All data are important for the NPMS, and the fact that information on habitats can arise from a "rotating" set of plots and squares between years is also highly valuable; this process helps to pick up variation across locations and times that may be important for understanding plant communities. Continuous time series within individual squares complement this and provide us with equally valuable information on variation within a single location over time: such data can be especially fascinating for individual surveyors and communities as they produce detailed chronologies of local nature and how it is changing.

From the Channel Isles to the northern-most Shetlands, Northern Ireland to Norfolk, whilst the NPMS dataset currently includes data from an impressive 1,159 squares, there are 44 of these squares for which we have eight years of continuous data. These comprise plot data every year since the scheme was officially launched in 2015.

Even for just these 44 squares, this effort equates to a total of 2,734 surveys, for which the allocated volunteers have submitted 27,621 records of 722 species across the eight years the scheme has run! This is an incredible achievement by those volunteers involved and we are incredibly grateful for their contribution to the scheme. Meet just some of our dedicated volunteers that have been with us since 2015 as we celebrate the efforts of all.

CASE STUDY

Michael and Catherine Pettipher

Region: Peak District and North Cheshire

Michael and Catherine have together been surveying two separate NPMS squares since 2015. Altogether totalling an enormous 162 surveys over 12 individual plots for the scheme!

One square is a lowland site close to a tidal section of the river Mersey and above extensive reedbeds. Habitats in which plots have been selected include grassland and deciduous woodland. The second square offers an upland site in the Peak District, including some grouse moorland. Habitats within include blanket bog (with both heather moorland and areas of Purple Moor-grass), heathland and deciduous woodland. Some areas are significantly managed and some are unmanaged.

"Our identification skills may have improved, but it is never easy and grasses in particular are always challenging. Surprises such as Bee Orchid and Grass Vetchling are always appealing, as are some of the visiting insects and other fauna seen while surveying."

While not trained botanists, a description of the NPMS in a Plantlife newsletter attracted their interest. Both have had an interest in flora (and fauna) for many years and have always been keen to identify what they have seen.

Through taking part in the NPMS, they feel they have gained a better insight into the way plots may change with time. Also finding that the identification of plants they considered themselves familiar with, can be difficult when they are not in their most familiar form (not in full flower).

©Michael Pettipher

CASE STUDY

Anne Haden
Region: Channel Isles

Anne first became an NPMS survey volunteer following a presentation about the scheme at a BSBI recorders conference. She felt it was important that survey monads on the Channel Islands were included in this national scheme. Indeed, Anne has submitted data for an impressive 81 NPMS plot surveys since 2015.

©Anne Haden

The square allocated includes Arable field margins and grassland plots. Largely fields of Jersey Royal New potatoes, and a steeply wooded valley leading down to the sea. An interesting feature in the square is La Hougue des Geonnais, a neolithic dolmen, which is one of the grassland plots surveyed annually. Unfortunately, Anne has witnessed a fair amount of debris left behind from visitors to this site and considers they are likely unaware of the centuries old short turf ancient grassland they are using.

Members of a local botanical group enjoy joining Anne each season, searching the plots to identify all the species seen.

"That spurs me on to advertise when the monitoring is going to take place and invite anyone interested to come along."

CASE STUDY

Sue Thomas
Region: Scottish Highlands

Sue is lucky enough to live in the Spey Valley and her allocated square takes in a small lochan, grassland, birch woodland and some boggy moor. So there is a great variety of habitats to explore.

The scheme was a bit of a challenge to start with, getting to grips with pinpointing the plots. Once these were laid out, the list of plants to ID was the next challenge. However, it inspired Sue to undertake the Identiplant course. This helped Sue to move from the Wildflower to Indicator survey level.

Initially frustratingly, one plot had no indicator species, and on another Sue recognised plants that were not in the Indicator list to record. But "I understand that a null result is just as valid and important". Sue decided to start recording these additional species for the BSBI database.

Few changes have been seen in Sue's plots over the years, which she believes reflects the stability of management in the area. Though excavations in the grassland plot to lay an electricity cable meant that the one Greater Butterfly Orchid that had appeared recently has vanished. Hopefully just dormant!

"All in all, the NPMS has spurred me on to become a more knowledgeable botanist."

Photos ©Sue Thomas

CASE STUDY

Neill Talbot
Region: Avon and Somerset

Located in the internationally important Severn Estuary Special Area of Conservation (SAC), Special Protection Area (SPA) and Ramsar Site; The habitat of Neill's NPMS survey square is predominantly coastal saltmarsh, also with hedgerow/scrub/grassland.

A professional ecologist and a botanist of 27 years, Neill has been involved with NPMS since it began, as well as its predecessors prior to that. First starting in 1999, then being part of the Wildflowers count project from 2010, before starting with the NPMS, Neill has been monitoring sites for 24 years (3 different sites in total).

Neill has found that regular monitoring of a site using strict methodology has been a benefit. Seeing a range of saltmarsh species, including the colourful ones such as Sea Aster, Thrift and Sea-lavender have been a highlight. But also, some of the more obscure plants such as common saltmarsh-grass and mud rush.

"I have learnt some new species as my coastal ID skills weren't my best, having lived in the Midlands for 15 years!"

©Neill Talbot

Over the last eight years, Neill has mainly seen subtle differences each year in each of his NPMS plots, with no major declines or increases observed.

Cumulative number of squares with data returns

Year	2015	2016	2017	2018	2019	2020	2021	2022
No. squares	461	658	821	907	992	1046	1121	1,159

Within the scheme, there are now over 1,000 1 km squares that have been surveyed at least once. However, as more squares are released and allocated to volunteers, the number of squares for which data has been submitted for two, three, or even more years is increasing. For example, nearly 100 squares have data for at least five years.

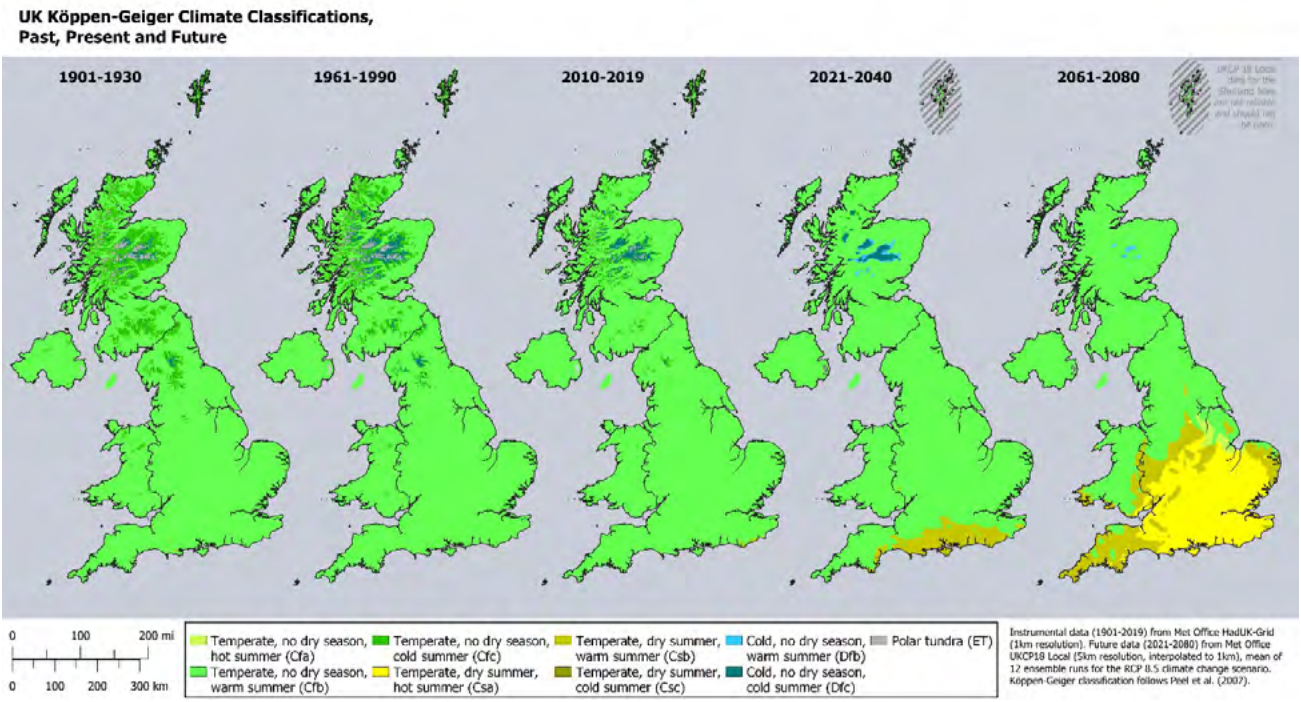
Number of squares with data returns for a given number of years:

No. years surveyed	1	2	3	4	5	6	7	8
No. squares	429	239	137	101	89	63	57	44

©Sarah Shuttleworth

NPMS square climate change exposure estimates coming soon!

Our work estimating how your NPMS plots cover gradients of expected climate change across the UK will be published soon. We looked at how well the habitat plots of different UK recording schemes, including the NPMS, sample a measure of exposure to change over the next 60 years. As a part of this work exposure "surfaces" were also estimated, and we are working on making this geographic information available through the National Plant Monitoring Scheme website: this would make it straightforward for surveyors to see how their square and plots, and indeed any other location, are likely to be exposed to future climate change. Numerous measures of climate change are available, but one particularly striking visualisation, created by Dr Oli Wilson as a part of this work, suggests how the UK is likely to change in terms of a global scheme called the Köppen-Geiger climate classification. As the figure here shows, over the next 20 years a swathe of the south of England is predicted to become more similar to the "temperate, dry/warm summer" climate type than to the historic southern type with more evenly distributed annual rainfall. This new climate type has previously been associated with the north-western part of the Iberian peninsula.



Studies using or acknowledging NPMS data in 2021/2022

Butler, L. & Sanderson, R.A. 2022. National-scale predictions of plant assemblages via community distribution models: Leveraging published data to guide future surveys. Journal of Applied Ecology, 59(6), 1559-1571.

Macgregor, C.J., Bunting, M.J,, Deutz, P., Bourn, N.A.D., Roy, D.B. & Mayes, W.M. 2022. Brownfield sites promote biodiversity at a landscape scale. Science of The Total Environment, 804, 150162.

Moreover, the NPMS species occurrences records shared with the Global Biodiversity Information Facility (www.gbif.org) via the UK's National Biodiversity Network Atlas (https://nbnatlas.org) have now been included within the GBIF datasets supporting almost 300 academic publications! See https://tinyurl.com/npmsRecordsUsage for more information.

2022 training events

Training sessions

9 Methodology and Data focussed webinars

10 Habitat and species specific webinars

2 Interactive workshops

3 Live support sessions

©Rachel Murphy

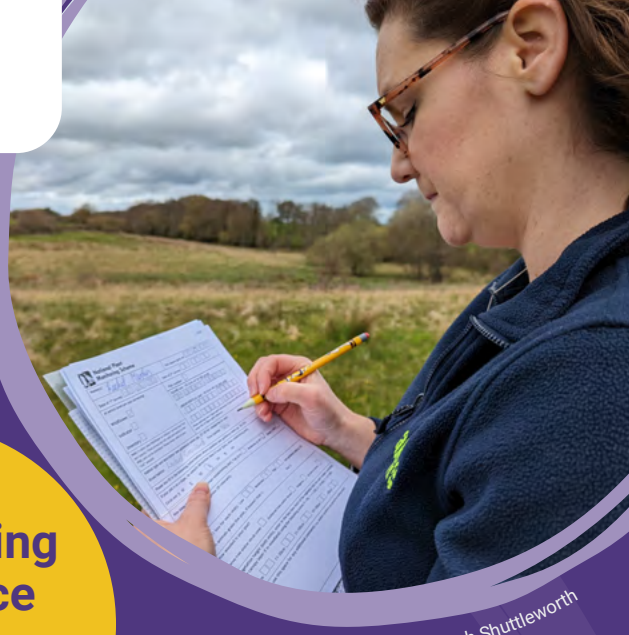
2022 training attendance

640 Participants

"I loved the interactive nature of these sessions. It helped make them far more engaging."

18 Mentors In 7 Regions

Mentor Directory



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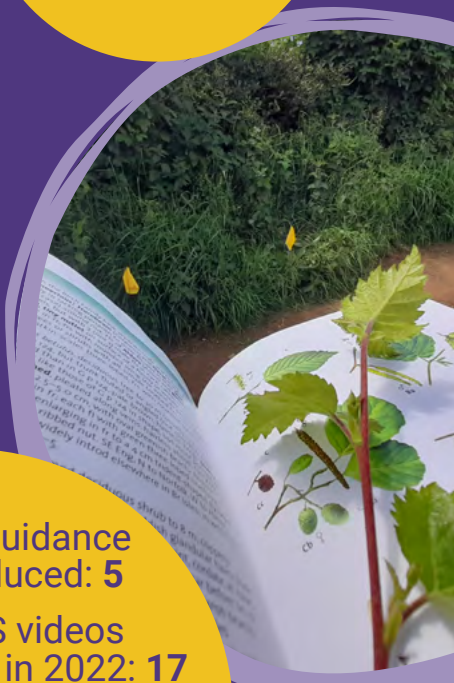
6 Additional Plant anatomy and ID webinars in collaboration with Plantlife



©Cath Shellswell

"A great event. Well presented and informative."

Most popular training session

Botanical photography for beginners

Additional guidance videos produced: **5**

Total NPMS videos shared publicly in 2022: **17**

Total NPMS videos shared 2015-2022: **30**

Video views 2022: **12,300**

Total video views 2015-2022: **26,100**

All training webinars and videos have been made available to view any time on the NPMS YouTube Channel: NPMS Support — YouTube

NPMS NEWS

©Sarah Shuttleworth

NPMS 2022 data available for research!

With the spring come the flowers, but also the annual publication of the NPMS dataset. The 2015–2022 dataset is now available through the NERC Environmental Information Data Centre (https://eidc.ac.uk/). We are continually improving these data to make them more useful to researchers and policymakers, and the publication process now involves a review of all plot locations and the provision of plot grid references and country locations in a standardised format.

This year we have also released an additional dataset, *Habitat samples from the National Plant Monitoring Scheme, 2015–2022*, which combines surveyor habitat classifications with plot locations, and also indicates where the surveyed habitat for a plot is suggested to have changed between samples. We hope such processed data products will continue to support the quality assurance and evaluation of Earth Observation initiatives, where satellite-derived information is used to classify land into habitats from space, as well as flagging specific locations that may be of particular interest due to local habitat change.

NPMS Equality, Diversity and Inclusivity (EDI)

An EDI review was carried out at the start of 2022 to inform the National Plant Monitoring Scheme of the current demographic of participants. It also provided an opportunity to review the inclusivity of the scheme and any current barriers to participation that could be addressed. Over 250 responses to the anonymous participant questionnaire were submitted.

©Rachel Murphy

The responses to this survey suggested that NPMS volunteers do fall within a fairly narrow demographic, with the vast majority responding that they are white British, mostly in England and above 55 years of age.

Seventy percent of respondents reported that they were already involved in another form of environmental volunteering before joining the NPMS, with two-thirds having previous biological recording experience. Nearly 90% of the survey respondents have registered with the scheme as individuals, rather than through existing local interest or volunteer groups.

Along with informing our own initiatives to improve the accessibility of the scheme, this review has been helpful for receiving suggestions from participants on ways in which the scheme may be made more inclusive. For example, by facilitating volunteers to connect locally through buddying opportunities, which we have been supporting through 2022; reviewing survey square availability, scheme promotion and the provision of training resources were also all suggested.

Along with providing a snapshot of the NPMS participant demographic, this review has also been used to recommend changes to participant registration, enabling us to record appropriate demographic characteristics at the point of entry to the scheme.

NPMS Website and App

While ongoing maintenance and monitoring of the NPMS website has continued, the site has also undergone several significant updates throughout 2022. New infrastructure and a "Verification messages" page have been created for registered volunteers. This has updated how the data verification process is communicated to surveyors, who can now clearly view feedback and queries from expert verifiers. We hope that this new information will support surveyors in their plant ID, providing more confidence and learning opportunities. There have also been important updates to the privacy policy provided on the website.

A large piece of work has also been updating and reconfiguring the web site from the Drupal 8 to the Drupal 9 content management system, to maintain and improve the functionality of the site. Following this system update, the site also needed a design update and refresh. Designers are currently working to improve site navigation and rejuvenate our resource pages, including a new look training page. This work will also create a central place for accessing training materials and simplifying booking on to our popular webinars and events. We are excited to reveal the new look website in spring 2023!

Steve Dixon Creative

Website and App

More volunteers are choosing to use our in-field NPMS App, available for both Apple and Android. This enables volunteers to enter their survey data directly in the field, at the point of recording. This can even be used when offline, as the data is sent later when a phone signal is regained.

Reviewing NPMS square availability

Following a thorough review of scheme participation and accessibility in 2022, including square availability and barriers facing new volunteers, the NPMS has undergone a radical release of previously allocated but inactive squares at the start of 2023. This involved the release of ~850 NPMS survey squares nationwide; these are now ready for uptake by new or existing enthusiastic volunteers looking for available sites near them. We hope this square release will encourage a larger number of active volunteers to engage with the scheme, to contribute valuable data on species abundance and diversity.

©Louise Marsh

Thanks!

Thank you to all the stakeholders who have supported the NPMS in recent years and have organised or attended workshops across the UK, including: National Trust, Natural England, Ministry of Defence, Chilterns AONB, Yorkshire Dales National Park, South West Scotland Environment Information Centre and Cairngorms National Park. Also, all the AONBs, National Parks and Record Centres who have promoted the scheme. An enormous thank you for the great effort by all our dedicated volunteer surveyors who make the scheme and this important research possible.

National Plant Monitoring Scheme

To discuss the scheme, how data are used or volunteer involvement, please contact support@npms.org.uk

Full list of NPMS publications:
www.npms.org.uk/content/conservation-and-research

www.npms.org.uk

07711 922098

Facebook: https://www.facebook.com/National-Plant-Monitoring-Scheme

Twitter: @theNPMS

Instagram: @the_npms

NPMS App available to download for Apple: https://apple.co/2HTySPJ
and Android: http://bit.ly/2VkOdRf

Design: evansgraphic.co.uk

National Plant Monitoring Scheme (2023). *NPMS Annual Report 2022*, NPMS Partnership, Salisbury.

The National Plant Monitoring Scheme (NPMS) is organized and funded by the UK Centre for Ecology and Hydrology, Botanical Society of Britain and Ireland, Plantlife, the Joint Nature Conservation Committee, and The Department of Agriculture, Environment and Rural Affairs for Northern Ireland. The NPMS is indebted to all volunteers who contribute data to the scheme.

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