National Plant Monitoring Scheme

ISSUE 10 AUGUST/SEPTEMBER 2022

SUMMER NEWSLETTER 2022

WELCOME AND INTRODUCTION

RACHEL MURPHY

Welcome to the 2022 NPMS Summer newsletter! And what a season of note it has been… From the high winds and stormy weather buffeting our landscapes back in early spring, to the exceptional summer we are experiencing, with extreme temperatures and extended dry periods in the last two months; our habitats and indeed our survey plots have faced a series of extreme weather events this year. We have seen large areas suffering with wildfires, almost 3 times more than in the last year, and of course received stark drought warnings. Such conditions will inevitably be having a significant impact on our environment and wildlife, highlighting the importance of our monitoring schemes. The longer term impacts of these conditions remain to be seen, but your surveys and data collected each year are hugely valuable in helping us to monitor the health of our habitats and predict how the natural world around us may continue to respond to ongoing changes. Not only as a result of weather events and climate change, but other pressures such as nitrogen deposition, habitat management, invasive species, and pests and pathogens. Indeed, knowing how things will change requires us to understand changes which have already happened. If you have not yet had a chance to head out on your late summer survey this year, there is still time. Even if this is your first survey of the year.

We know that our volunteers have been busy out in the field this season and would like to thank those that have already submitted their data.

As ever, if you have any queries or concerns regarding your plots, the survey methods or how to enter data, please do not hesitate to get in touch with the NPMS team. We are happy to help.

support@npms.org.uk

THIS ISSUE

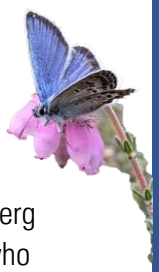
"Indicators" in plant conservation: What and why?

Dr Oli Pescott – UKCEH

NPMS volunteers will have regularly heard about "indicators" over the past few years, with several newsletter articles and updates on the scheme's contribution to the JNCC/Defra "Biodiversity Indicators". But what actually is an indicator, and what makes for an effective one?

Within ecology, the word "indicator" can be used to mean several different things. In plant ecology, it normally refers to that fact that particular species can tell us about aspects of the physical environment. For example, all native British species have been classified into categories along several important environmental axes:

- pH
- Fertility
- Moisture
- Light
- Salt tolerance



Readers may have heard these referred to as "Ellenberg indicator values", after the German plant ecologist who invented these scales as a way of quantifying plant preferences for certain locations.

More broadly, an "indicator" is some metric that tells us something useful about the state of the environment. For example, high freshwater invertebrate richness typically indicates good water quality. Particularly for biodiversity then, counts or average abundances of particular types of species are often used for environmental monitoring. This can be something like changes in the average fertility preference of the species at a site over time (with increases pointing to eutrophication of the environment), or approaches that seek to report on potentially less well-defined quantities, such as "site quality".

In the UK, site or habitat quality is often defined by reference to some conception of the "typical" semi-natural community expected for a site of a certain type, managed in a way known to be beneficial for the relevant species. A calcareous grassland for example would be expected to have particular species if in good "condition". Condition might be indicated by a variety of measures, including species frequency and abundance; features such as sward height or scrub amount might also be considered important indicators in this context.

Dry calcareous grassland, Knocking Hoe: Kevin Walker

Below, examples of dry calcareous grassland positive indicator species. Left to right: **Hoary plantain** *Plantago media,* **Tufted vetch** *Vicia cracca* and **Quaking grass** *Briza media.*

© Sarah Shuttleworth

© Sarah Shuttleworth

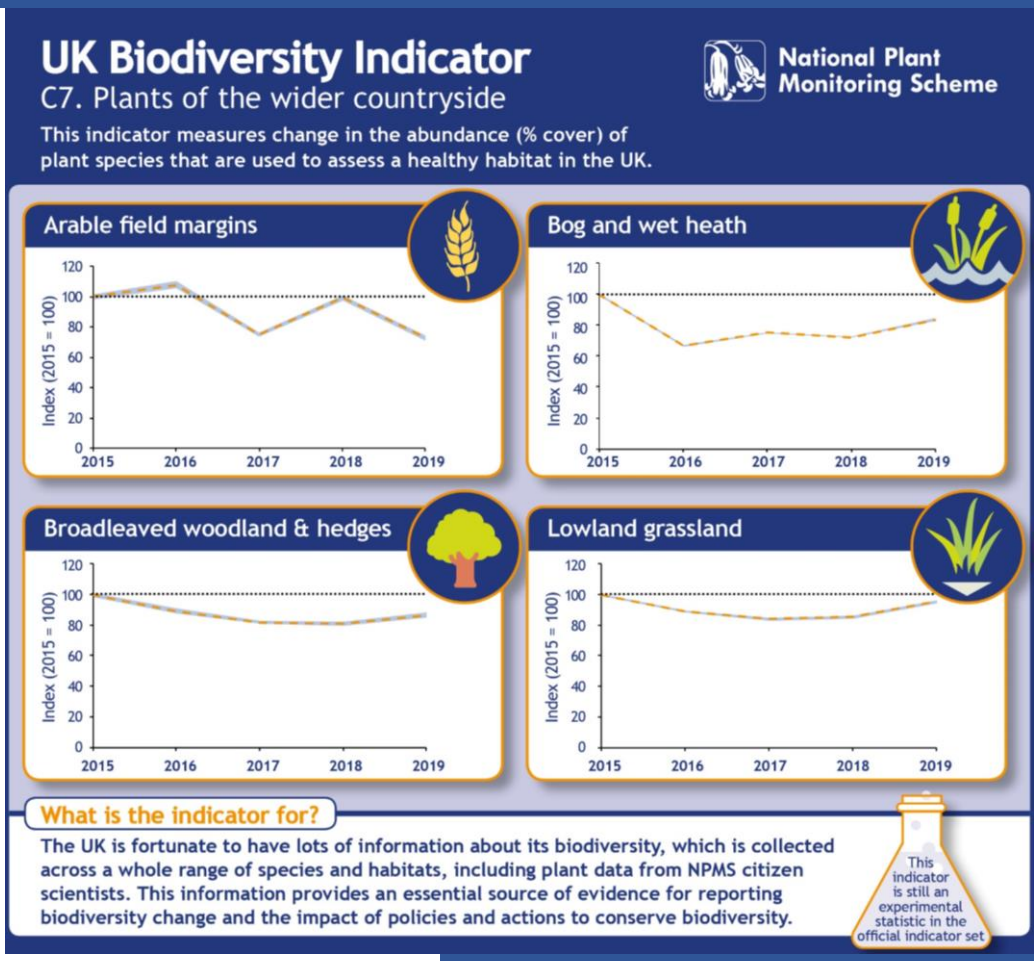
© Sarah Shuttleworth

As surveyors will know, the National Plant Monitoring Scheme was established with the primary aim of monitoring semi-natural habitat quality. This is a large part of the basis on which our habitat indicator species were selected: habitats were defined in terms of the UK National Vegetation Classification. The plant communities defined by this system are often used to frame the view of what is considered broadly "typical" for certain habitats. The NPMS positive habitat indicators were selected then as plants that are typically locally frequent and/or abundant in the plant communities used as a reference point for conservation within the UK.

But how do your records of these species then morph into an overall indicator trend, taken as indicative of changes in habitat quality?

The simple answer is that an estimate of the average (and its uncertainty) of the positive indicator species' abundances is taken in each year, and that this is the indicator trend presented within the JNCC/Defra Biodiversity Indicators. Of course, there are many technical details lying behind this simple statement, but ultimately, regardless of the data processing and statistical models used to get to this point, we are simply asserting that habitat quality or condition can be taken as increasing if more typical species are found at higher abundances by surveyors.

Whilst this is relatively uncontroversial, we are very much aware of the various assumptions underlying this approach, and its potential vulnerability under ongoing climatic change — why should we assume that all plant communities will continue to assemble in the same way in the future? Should we always be assessing "quality" against the historic benchmark of the National Vegetation Classification? There are no easy answers to these questions, but, we hope that NPMS surveyors, and their data, will keep us on our toes for many years to come. We very much welcome feedback on the elements of our current approach, as well as stories from surveyors already seeing the effects of environmental change on their plots. No doubt there will be many tweaks and amendments to our methods to consider in the future!



Your data really helps...

- Detect national and annual trends – species, groups of species
- Monitor non-natives, climate sensitive species etc.
- Monitor direct impacts of physical events e.g. severe weather, introduction of pests
- Investigate impacts of changes in land management
- Links with other species groups e.g. pollinators

Submitting your plot data each season is critical. You really are doing your bit!

For any advice on entering your data, contact **support@npms.org.uk**

THANK YOU!

Potentilla erecta: © Chris Harris, Plantlife

SPECIES SPOTLIGHT

Tormentil *Potentilla erecta*

Listed as a positive indicator in the following fine scale habitat types:

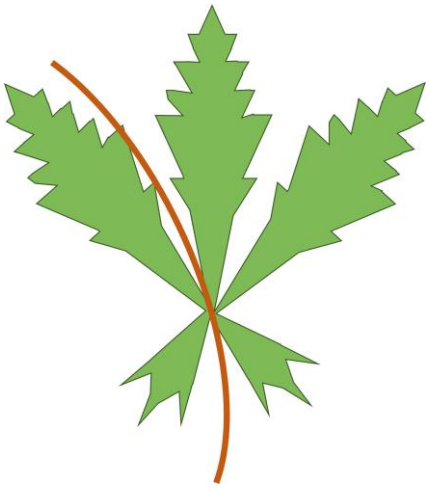
- ❖ Maritime cliff tops and slopes (MCT)
- ❖ Inland rocks and scree (IRS)
- ❖ Montane calcareous grassland (MCG)
- ❖ Base-rich fens, flushes, mires and springs (BFF)
- ❖ Blanket bog (BB)
- ❖ Wet heath (WH).

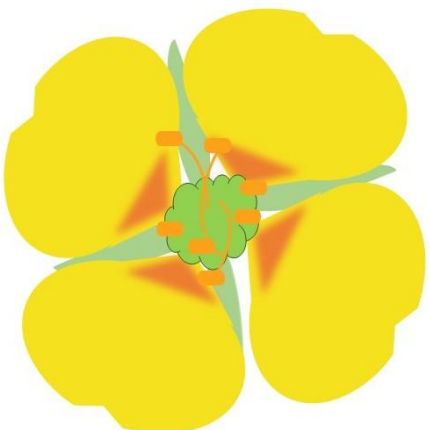
Tormentil is a species listed many times, within our indicator lists, and is therefore a good one to know how to identify. It is also a mid to late summer flowering species, so likely flowering at the time this newsletter goes to print.

Normally associated with acid soils, this species is often found on heathlands, acid grassland and woodland rides in more acidic woodlands, as well as the NPMS fine habitats it is listed within.

It tends to grow prostrate (creeping along the ground), especially in shorter sward situations, but can be scrambling amongst longer vegetation.

The leaves are comprised of 3 leaflets and two leaf-like stipules at the base, creating an overall palmately shaped leaf, but they are highly variable. The leaflets are sometimes unequal, but they are distinctly toothed. The leaves are unstalked, whereas **Creeping Cinquefoil** *Potentilla reptans* has long stalked leaves.



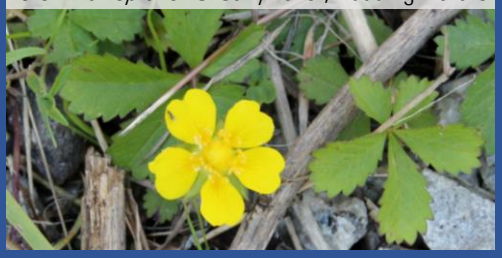


The flowers are a buttery yellow, comprised of four petals, and can seem buttercup-like from a distance, however buttercups (Ranunculaceae family) always have five petals. The petals are quite separate from each other, not overlapping and so you can see the green sepals in between.

Confusion species

Tormentil is very similar to **Creeping Cinquefoil** *Potentilla reptans,* but distinguishable from this by having only four petals instead of five. Creeping Cinquefoil also has leaves comprised of 5 leaflets, not trifoliate, but more truly palmately arranged.

Potentilla reptans: © Sally Luker, Budding Nature



Trailing Tormentil *Potentilla anglica* is incredibly similar to Tormentil and is often described as a halfway species between *P.reptans* and *P. erecta.* It has comparatively larger flowers (1.5 – 1.8 cm compared with 1 – 1.5cm) to Tormentil, sometimes some with five petals. Trailing Tormentil also has short stalked leaves (longer stalks at the base of the plant). It also has the same trifoliate leaflet arrangement as Tormentil but some are more palmate, like that of Creeping Cinquefoil.

Potentilla anglica © Oli Pescott

Sarah Shuttleworth, Plantlife

Training and guidance

We have continued our popular training webinar programme this season, having delivered 11 live webinar sessions and 1 Facebook Live event thus far, covering both habitat specific, as well as survey methodology themes. We're enjoying presenting to our live participants and are also seeing growing popularity of our NPMS YouTube channel. Here you can find recordings of all past webinars, along with additional guidance and support videos – added to regularly.

Still to come...

We still have a number of training events and webinars scheduled for the next 2 months (see below). Visit our Training Events and Training Webinars pages to view more information and to book.

Also, keep an eye out for further details of our new Winter mini-series, focusing on transferable field skills.

W/C 05/09/22 - Virtual Regional volunteer meets
Book asap to meet other volunteers near you!

15/09/22 - A closer look at dry heathland and the species within

21/09/22 - Dry Acid Grassland

04/10/22 - Intro to NPMS and survey methods for newcomers

05/09/22 - Data verifier training and introduction to iRecord, for experienced botanists

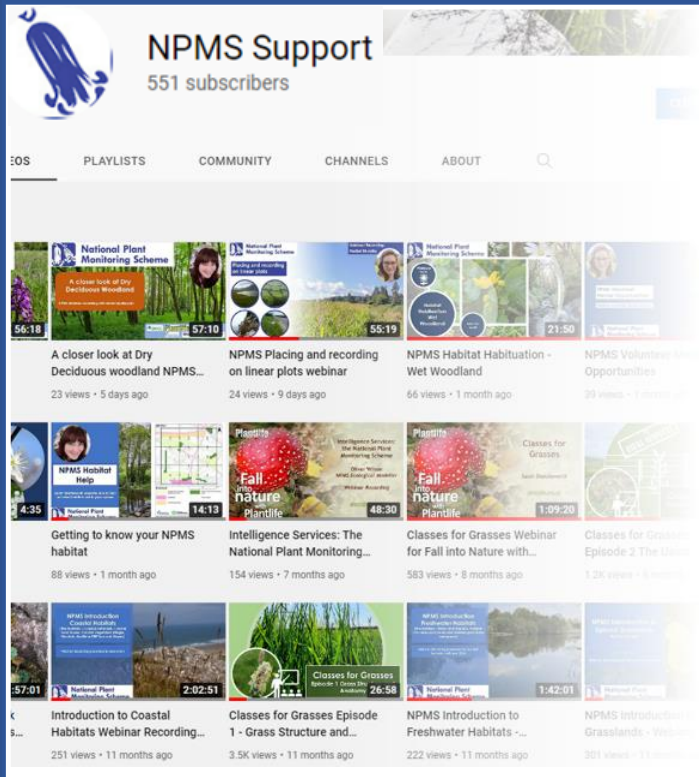
Frequently asked questions

What if I have missed the spring survey?
No problem. Just start with the late summer survey. No need to wait until next year.

The habitats shown on my map don't match what I'm seeing on the ground.
These maps were created for guidance using composite maps and estimates. They may be inaccurate in some areas, or the habitat has changed. Always assess habitat type on your visits.

If I start surveying at the wildflower level, can I move up to the indicator level later?
Absolutely! We often see our surveyors "moving up" a level as they gain in experience. We love to see it!

I'd like to survey with someone else. Is there anyone in my area?
Get in touch! We're more than happy to investigate and reach out to other surveyors in your area to find out if anyone is interested in buddying up.



YouTube

Currently, there are 43 training and guidance videos available on the NPMS YouTube channel within 9 playlists.

These include live webinar recordings and habitat specific identification, to plot setup and data entry.

More added regularly!
Why not subscribe to our YouTube channel to be alerted to the latest video resources and recordings?

Habitat Hotspot – Kevin Walker, BSBI

Heathlands

Shakespeare's 'blasted heaths' provide scenic backdrops to many British books and films – from Hardy's Wessex in *The Return of the Native,* to Mike Leigh's hilarious 1976 comedy *Nuts in May*. As well as their beauty, they are also rich in wildlife, although much diminished from when Hardy was writing in the nineteenth century. Heathlands are still widespread throughout Britain and Ireland, occurring from the Poole Basin in Dorset to the tops of the highest Scottish Mountains and from the dry Brecklands of East Anglia to the humid, oceanic climate of the Hebrides.

So what are the main types of heathland and what makes them so special? Historically they occupied areas of uncultivated ground typically with 'poor' acid sandy or peaty soil, with characteristic vegetation of heathers – **Heather** *Calluna vulgaris*, **Bell Heather** *Erica cinerea* and **Cross-leaved Heath** *E. tetralix*, gorse, and coarse grasses. Their lack of agricultural value meant that they were often classed as 'waste' land, with 'commoners rights' to graze animals or collect firewood and peat.

Although heathlands are relatively species-poor when compared to other habitats, many of the plants associated with them occur nowhere else. Most are able to withstand growing in acidic, often permanently saturated substrates with very low fertility. Some species such as **Sundews** *Drosera* spp. and **Bladderworts** *Utricularia* spp. cope with this by obtaining nutrients from trapped insects, whereas plants like **Louseworts** *Pedicularis* spp. steal them from other plants. In comparison, delicate plants like **Cranberry** *Vaccinium ocycoccos* simply root in moss, gathering nutrients from rainwater. Along with other countries along the Atlantic coastline of Europe, we hold internationally important areas of humid heaths. Here we provide a brief tour of heathlands in the British Isles starting at sea-level and ending on the summits of some of our highest mountains.

Maritime Heath is the most localised heathland type occurring on coastal slopes, cliff tops and sand dunes around the British coastlines but mainly on its northern and western fringes. These heaths are often more species-rich than their inland counterparts, as they provide habitat for both coastal, inland and even some upland species such as **Mountain Avens** *Dryas octopetala* on the north coast of Scotland. Some of the most scenic examples are on the southwest coasts of Cornwall and Wales, where the yellows and purples of **Western Gorse** *Ulex gallii* and heathers produce spectacular displays in the late summer.

Maritime Heath at Kynance Cove on the eastern side of Mount's Bay, Cornwall. Photo, Kevin Walker BSBI.

Mountain Avens *Dryas octopetala*, Trevor Dines

Western Gorse *Ulex gallii*, Andrew Gagg

Even more localised is **Chalk Heath** which occurs very locally where acidic sands and gravels overly chalk in southern Britain, as for example at Chirton Gorse on Salisbury Plain Military Training Area in Wiltshire.

Dry Heathland occurs throughout the lowlands of Britain and Ireland with major concentrations in Cornwall, Dorset, Hampshire, Surrey, Suffolk and Norfolk. These heathlands occur in some of the driest parts of the country and are usually dominated by **Heather** *Calluna vulgaris*, within a matrix of fine grasses, small herbs and lichens, although their precise composition varies dramatically from region to region. Often, they are associated with **Wet Heaths** and **Valley Mires** that occur where the soils are saturated for most of the year leading to the localised development of peat. These often form in valley bottoms or on slopes and support a very different flora, most notably with greater cover of **Cotton-grasses** *Eriophorum* spp., **Cross-leaved Heath** *Erica tetralix* and tussocky bog-mosses *Sphagnum* spp. In places such as the New Forest, some of these heathland complexes can be exceptionally rich with populations of rare species concentrated in valley fens, wet heaths and around natural ponds.

Lowland Dry Heath on Cavenham Heath in the Breckland region of East Anglia showing the typical mixture of **Heather** *Calluna vulgaris* amongst a matrix of shorter lawns of fine grasses, mosses and lichens. Photo, Kevin Walker BSBI.

As we leave the lowlands and start to gain altitude the composition of both **Wet Heathland** and **Dry Heathland** changes, with many more species associated northern Britain and Ireland. Over large parts of northern England and southern and eastern Scotland, large tracts of **Dry** and **Wet Heathlands**, collectively named 'moorlands', are drained and periodically burnt to create conditions that are ideal for Red Grouse. Unfortunately, this management removes many of the mosses, lichens and specialist heathland plants leaving an almost monoculture of **Heather** *Calluna vulgaris* with few other species. Thankfully, there are still large areas of both **Wet** and **Dry Heathland** that are not managed in this way, especially in northern and western Scotland These are much more species-rich with a deeper mat of bryophytes, on which delicate plants such as **Lesser Twayblade** *Neotinea cordata* grow beneath a canopy of low shrubs.

Lesser Twayblade *Neotinea cordata (right)* is a delicate orchid that grows almost exclusively on heathlands under the cover of **Heather** *Calluna vulagris*. Photo: Pete Stroh, BSBI.

Like their lowland counterparts these **Dry Heathlands** in the uplands often occur on shallow peats around rock outcrops, but elsewhere the high rainfall leads to the development of **Wet Heaths**. Where the ground is flatter and the supply of ground and/or surface water more constant, **Blanket Bogs** and **Raised Mires** tend to form. All these habitats share a similar compliment of species and so telling them apart can be difficult but there is a simple rule of thumb: if peat is more than 30 cm deep then you are standing on a **Blanket Bog** or a **Raised Mire**; if less then you are on **Dry** or **Wet Heath.** Telling these two apart is largely based on hydrology. If the ground is saturated, for example because there is surface ground water running down the slope, then it is **Wet Heath**.

Blanket bog: Coladoir Bog, Mull. Photo, Kevin Walker BSBI.

Heathlands cont.

Due to drainage, atmospheric pollution and over-grazing by sheep, many of our **Wet Heaths** and **Blanket Bogs** in the uplands have been severely degraded and are now dominated by coarse grasses and rushes such as **Purple Moor-grass** *Molinia cearulea*, **Heath Rush** *Juncus squarrosus*, and **Matgrass** *Nardus stricta*. Thankfully large areas are now being restored by reducing the number of sheep and blocking the drainage channels ('grips'), allowing these systems to naturally 're-wet' allowing the development of peat to recommence.

Degraded **Blanket Bog** near to the summit of Great Whernside, Nidderdale, Yorkshire. Islands of the original bog surface stand out against the surrounding sward of unpalatable grasses that have developed on the bare, eroded peat surface. These conditions were caused by atmospheric pollution, mainly from the burning of coal during the 19th and 20th centuries, combined with overgrazing by sheep. The flags mark the corners of an NPMS plot. Photo, Kevin Walker.

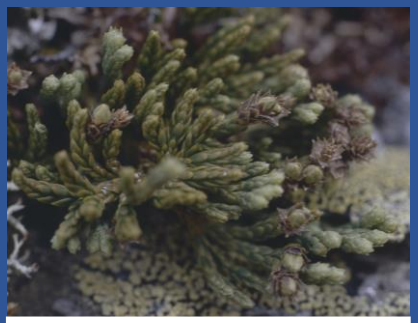
The peats on **Dry Heathland** in the uplands are usually shallow, free-draining and with a fair amount of mineral content. These heaths are usually associated with rock outcrops and extend to the tops of the highest mountains where they become progressively less dominated by **Heather** *Calluna vulgaris* and **Billberry** *Vaccinium myrtillus* and more by grasses, sedges, mosses, and lichens. These grass and sedge heaths can be extensive, especially on high, upland plateaus, such as in the Cairngorms, where they provide feeding and nesting areas for rare birds such as Ptarmigan and Dotterel.

How will heathlands fare in our changing climate given the record temperatures experienced this summer?

Dry Heathlands in the lowlands are well adapted to drought but may become increasingly susceptible to fire, especially where they have not been grazed due to fragmentation and urban spread. In the uplands we can expect to see much greater changes as many heathland specialists occur there at the southern limits of their global range. Although this process is likely to be slow, we are likely to see some species retreat to higher altitudes or disappear altogether where they have no higher ground to retreat to. At the same time, we can expect to see the spread of more southerly (warmth-loving) generalists into upland regions, or an expansion of populations already there. We are probably likely to witness these changes soonest on the highest peaks where reductions in the extent and longevity of snow cover is already leading to shifts in species composition (e.g. Britton *et al.*, 2009), similar to changes being experienced at even higher altitudes elsewhere in Europe.

Only by monitoring these changes through schemes such as the National Plant Monitoring Scheme will we able to track such changes and, ultimately, to make the necessary changes to hopefully reverse these trends.

Reference: Britton, A.J., Beale, C.M., Towers, W. & Hewison, R.L. 2009. Biodiversity gains and losses: Evidence for homogenisation of Scottish alpine vegetation. *Biological Conservation*, **142**: 1728–1739.



Alpine clubmoss, *Diphasiastrum alpinum. Image,* Andrew Gagg

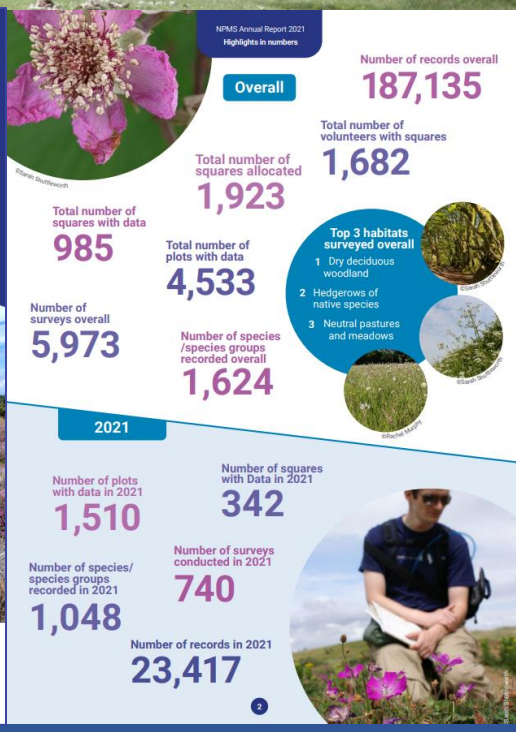
Fir clubmoss, *Huperzia selago.* Image, Michael Scott

Don't forget to tag us in your social media plant or plot photos! We'd love to share what you see with the whole NPMS community!
#NPMS @theNPMS

NEWS AND RESEARCH

NPMS Annual Report 2021

Earlier this year, we published the first NPMS Annual Report. This is available on the website **here**. We look forward to building on and releasing new editions at the start of each season, providing a summary of data from the scheme and highlights from the previous season, along with scheme and research updates.



Web Updates:

The NPMS website has undergone a number of updates in the last 6 months. A main piece of work has been updating and reconfiguring the site from Drupal 8 to Drupal 9 content management system, in order to maintain and improve the functionality of the site.

Drupal™ 9.0

Thank you for your patience while work was underway. The site looks just a little different on some of our event pages since the upgrade, but these will also be updated soon.

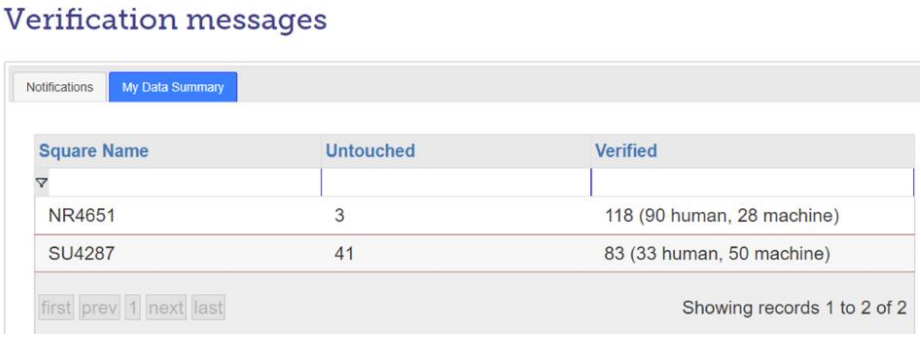
NPMS Equality, Diversity and Inclusivity (EDI)

An EDI review was carried out at the start of 2022 to inform the National Plant Monitoring Scheme of the current demographic of participants. Also to provide an opportunity to review inclusivity of the scheme and current barriers to participation that may be addressed. We received over 250 responses to the anonymous participant questionnaire. **Thank you** to all those that took the time to reply.

A report was produced to present the results from this survey, to gather information on and review volunteer engagement, demographic and additional support needs.

Verification notifications:

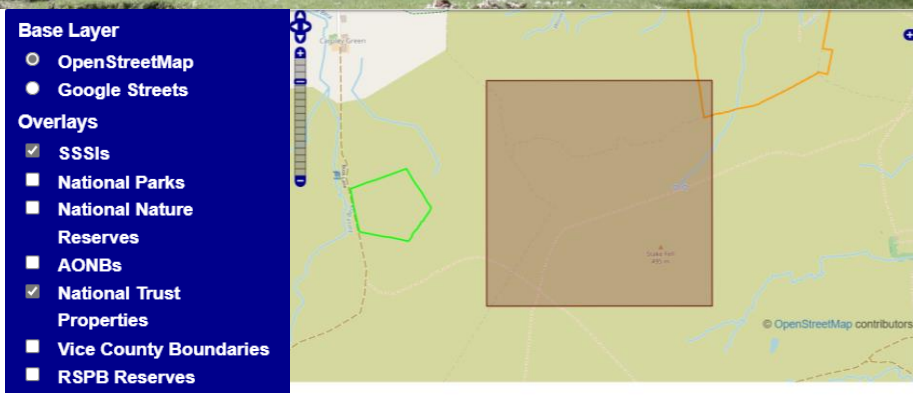
There have also been updates to how the Data Verification process is communicated to volunteers: At certain points, we seek feedback from regional experts, and so some records have also acquired ID comments and human verifications. However, up until now, we have not had the infrastructure in place to share this information clearly with NPMS volunteers. We have now remedied this: there is an additional option within the NPMS menu, where surveyors are now able to see Verification messages. Find out more about how to use and see these **here**. We hope that this new information will support surveyors in their plant ID, providing more confidence, and also learning opportunities.



NEWS AND RESEARCH

Web updates cont.

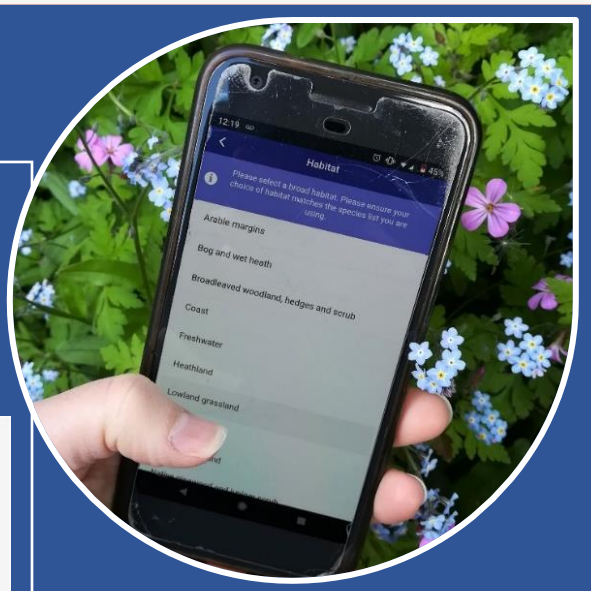
There has been further integration of more useful information about land use into the square maps available on the website (e.g. locations of SSSIs and National Nature Reserves).



There has of course been ongoing improvements and fixes to the website as flagged and required, such as speed-ups to the "My Visits" page, and the addition of photo uploads to aid ID in the NPMS App. Thank you as ever for your extremely helpful feedback and suggestions.

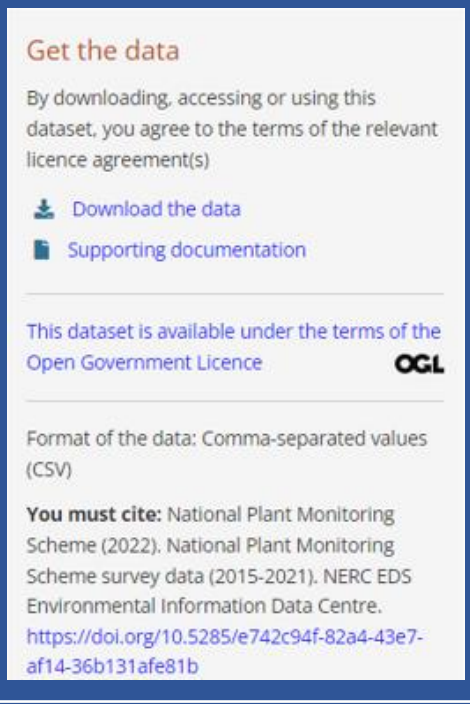
There have also been important updates to the privacy policy provided on the website

		% of square covered
Low Gill Moor Wetlands (ENG)	Site of Special Scientific Interest	< 1
North-west Yorkshire	Vice County	100
Yorkshire	Vice County	100
Yorkshire Dales National Park	National Park	100



UK CEH | Environmental Information Data Centre

The latest NPMS dataset (2015-2021) has been published on the Environmental Data Information Centre (EDIC)



NPMS data in press:

The NPMS has been discussed in a paper published in the Journal of Applied Ecology this year. It looks at how researchers might create national predictive maps of plant communities, and highlights the NPMS as a source of plant community data that aligns with the National Vegetation classification (below).

RESEARCH ARTICLE | Open Access

National-scale predictions of plant assemblages via community distribution models: Leveraging published data to guide future surveys

Liam Butler, Roy A. Sanderson

Volume 59, Issue 6
June 2022
Pages 1559-1571

GET INVOLVED

NPMS

Submit your data:

We ask surveyors to please submit your data for this season by the end of October to be included in the over winter analyses.
For any advice on entering your data, contact support@npms.org.uk.

Previous season's data – it's not too late!

If you still have historical data that have not yet been submitted, this can still be entered any time to contribute to the NPMS database and analyses. Just enter this data as normal, ensuring you enter the correct survey dates.

Do you want to help? Be a Mentor!

Volunteer mentors are a greatly valued part of our team, and there are several ways you can be involved. Full support is given. Get in touch to find out more, if you feel you can give some time.

Volunteer reps:

We know that a big part of the volunteer experience and our growing community feel comes from hearing from and responding to **you**.

We would like to bring together a group of volunteer representatives from a variety of backgrounds and experience levels within the scheme. If you would be interested in taking part and available for just a few virtual group meetings a year, please get in touch for more information.

Record verification:

Are you an experience mentor or botanist? Confident in your species ID?

We have a new desk-based data verification role coming up, for those that are excellent botanists and would like to volunteer to review species records that have been flagged by system checks as requiring review. This takes place on iRecord.

iRecord is a site for managing and sharing wildlife records – The goal of iRecord is to help bring together wildlife sightings from many sources, so that they can be checked and made available to support research and decision-making. It is operated by the **Biological Records Centre** (BRC) as part of the work of the **UK Centre for Ecology & Hydrology** (UKCEH) and as such the data submitted by NPMS volunteers, including any associated species images, flows through iRecord, where if required, they can be checked and verified.

There is a specific training opportunity for this on 4th October, see our **Training Events** for more info.

Further opportunities...

… and projects that may be of interest to NPMS volunteers:

Fall into Nature is back!
Plantlife's annual programme of events to entertain and share fascinating facts about plants and fungi starts on Monday 10 October.

Full details of the programme and booking will be publicised on the Plantlife website Events pages during September.

We'll be kicking off this season with a virtual trip through some of the world's most spectacular temperate rainforests. Later in the week we'll also be looking at temperate rainforests here in the UK and what we can do to revive them. A visual feast awaits!

Further opportunities...

… and projects that may be of interest to NPMS volunteers. Continued…

UK Pollinator Monitoring Scheme (PoMS)

There is still time to take part in the **FIT Count survey** (Flower-Insect Timed Counts) for PoMS this year.

This simple survey asks you to choose a patch of flowers and spend ten minutes counting the insects that visit the flowers, identifying them to broad groups such as "bumblebees" and "hoverflies" etc. It has been designed to gather data on the overall abundance of insects that visit flowers and may act as pollinators.

The survey runs till the end of September, and we'd love to add to the totals for the year. Full details and details of the FIT Count app are available here.

This year we've been featuring some of the FIT Count target flowers and their insect visitors in a series of **blogs on the PoMS website**. For example:

- Dandelions: https://ukpoms.org.uk/delightful-dandelions
- White Dead-nettle: https://ukpoms.org.uk/white-dead-nettles
- Hawthorns: https://ukpoms.org.uk/hurray-for-hawthorns

PoMS is pleased to be involved in The Big Buzz!, a **National Pollinator Conference** being organised by Cumbria Wildlife Trust. This promises to be a great way of exploring a wide range of pollinator-related topics, with speakers including Jeff Ollerton and Dave Goulson.

Book here for the conference, including a PoMS workshop, and related events.

Learn more about our wonderful wildflowers with the BSBI

If you've already devoured all the amazing NPMS online training resources and webinars and you're hungry for more, check out these options:

- Short plant ID videos and longer training webinars on the BSBI YouTube channel.
- Plant ID resources for both beginner and more experienced botanists.
- Botanical training courses running next year - from short courses to degree courses to Identiplant, the online ID course.
- Grants of up to £250 to help you take a course: grant applications go live here on 1st January so be ready to apply and don't forget to say on your application that you are a NPMS surveyor.

Plant hunting... in the middle of winter?

Don't let your ID skills go rusty over winter - you'll need them to be pin-sharp when you go to your NPMS square next spring! Why not "keep your eye in" by taking part in BSBI's New Year Plant Hunt to find out which of our wildflowers bloom in the middle of winter?

Lesser Celadine *Ficaria verna*, Andrew Gagg

Last year, Plant Hunters spotted more than 600 species flowering across Britain and Ireland.

More info here.

Don't forget to follow us on social media.

Stay in touch!

Follow us @the_npms and @theNPMS

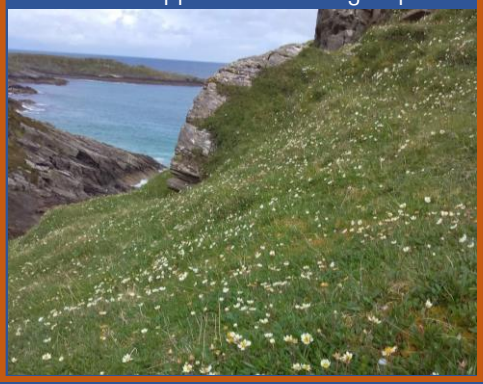
Field Diaries: Your pics

We love to receive your snaps from out in the field, whether to help with ID, or simply to share a fun find or moment of reflection. Here are just a few that have been shared so far this season.

Volunteer Kate Jeffreys takes a photo of her woodland plot ahead of conducting her survey. Not only does this help with relocating the site, but helps keep a record of change in the plot over time.

Image, Cath Shellswell.

Mountain Avens *Dryas octopetala*, captured by Catherine Downes at a cliff site in Sutherland. With help to ID from the NPMS support Facebook group.



All the colours! Stinking Iris *Iris foetidissimal* recorded by Elaine Spencer-White in her woodland plot.

A lagg fen stream around the perimeter of surveyor Anne Griffiths' raised bog plot in the Brecon Beacons. You can read all about Anne's glorious plots, that she has been surveying for 7 years with the NPMS, on our web site blog page **here.**

THANK YOU

The NPMS team would like to take the opportunity to thank the stakeholders who have supported the NPMS in recent years and have promoted the scheme.

Thanks also to Andrew van Breda, Biren Rathod and Karolis Kazlauskis for technical support.

Also a huge thank you for the effort by all our dedicated volunteer surveyors that make the programme possible and a lively community to be part of. We are so grateful for your enthusiasm and valuable contribution.

Thank you to all the contributors of the newsletter.

We are here to help. Send us an email or give us a bell.
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