



# Botanical Society of Britain & Ireland

## BSBI Exhibition Meeting 2019: Abstracts

### **1. The Wild Flower Society**

**Nicola Dixon**

The Wild Flower Society is a national botanical society for amateur botanists. Our field meetings programme takes members across the country to see and identify plants in a wide range of habitats. Members are encouraged to keep a field botanist's record book to help develop their skills for which they receive individual support from experienced botanists. The society particularly welcomes beginner and young botanists for which we provide specific resources and support. Each year we hold a popular photographic competition which always makes a fantastic display at our AGM. The society produces a quarterly magazine to keep members informed of society activities, alongside interesting articles and identification tips.

[www.thewildflowersociety.com](http://www.thewildflowersociety.com)

### **2. How a BSBI training grant boosted a budding botanist's confidence**

**Meg Cathcart-James**

I am a recipient of a 2019 BSBI Training Grant, which I invested in my botanical future by attending four 1-day FSC courses on the identification of common UK plant families. My poster shows what I did, but most importantly what I gained from this training that I couldn't have benefited from without the BSBI.

[www.bsbipublicity.blogspot.com/2019/11/bsbi-training-grants-helping-botanists](http://www.bsbipublicity.blogspot.com/2019/11/bsbi-training-grants-helping-botanists)

### **3. Anglesey Flora Group**

**Robbie Blackhall-Miles**

The Anglesey Flora Group (AFG) is charged with recording the flora of one of the most diverse Vice Counties in the UK. Anglesey, VC 52, may not be so big but with a huge range of geology, a variety of microclimates, a long history of human colonisation, and a massive

range of habitat types, it makes for very interesting botanical challenges and discoveries. This display will feature the botanical history of the island of Anglesey (and its myriad off shore islands), the work of the AFG, some of the special and unique species of the VC.  
[www.bsbi.org/anglesey](http://www.bsbi.org/anglesey)

It is intended to also help to promote the group's new Twitter account @AngleseyFlora

#### **4. Plant Alert, a new tool for the submission of records of potentially invasive ornamental garden plants**

**Katharina Dehnen-Schmutz, Tom Humphrey, Kevin Walker**

The BSBI in collaboration with Coventry University has launched a new survey to record potentially invasive ornamental plants in gardens. In contrast to the usual BSBI recording, PlantAlert is a survey of horticultural taxa proliferating in gardens. The aim is to identify potentially invasive alien plants before they become a problem in the wider environment. We are asking gardeners across Britain and Ireland to report taxa that are growing out of control in garden situations - plants that might later escape into the countryside. We hope that results from this long-term project can help guide efforts to contain future problem aliens.

Records from the project will appear in the BSBI Database, but the data will be clearly marked and won't be included on distribution maps, unless they are accessed through the results page of PlantAlert. BSBI members are encouraged to submit records and help promoting the use of the webpage [www.plantalert.org](http://www.plantalert.org)

#### **5. Grassland plants of British & Irish lowlands: a new BSBI publication**

**Peter Stroh, Kevin Walker et al.**

The composition of lowland grasslands in Britain and Ireland has changed radically in the last 80 years. Following a foreword by George Peterken and an introduction describing the history and types of lowland grassland and the reasons for change, the main focus of this book concerns those plants currently considered to be of greatest conservation concern, assembling in one place everything you could ever need to know about over 100 of our most threatened species, from Orchids to Lady's-mantles, Maiden Pink to Meadow Thistle, Pasqueflower to Pennyroyal.

Each meticulously researched species account provides valuable information about identification, including similar-looking plants with which it may be confused, typical habitat, biogeography, a comprehensive ecology section, known and potential threats, and management requirements. Accounts are illustrated with a colour photo of the species, its typical habitat, and an up-to-date distribution map.

The information contained in these accounts is essential reading for both amateur and professional ecologists alike, and will be especially useful to land managers and others who are responsible for the care and conservation of our wild flora.

[www.bsbi.org/grassland-plants-of-the-british-and-irish-lowlands](http://www.bsbi.org/grassland-plants-of-the-british-and-irish-lowlands)

## **6. BSBI Atlas 2020**

**Kevin Walker**

The main aim of this major project is to provide up to date distribution maps for all native and non-native vascular plants that occur in the wild in Britain and Ireland, so we can improve our understanding of how our flora has changed taking into account recording behaviour, human pressures and environmental drivers. Details of the survey methodology are given. Since the beginning of the survey in 2000, over 1,000 volunteers have collected an amazing 20 million records. This progress is charted and the geographical coverage is compared favourably with that for Atlas 2000 in a map of Great Britain & Ireland.

The outputs are outlined, including an updated and enhanced online atlas, summary reports for England, Scotland, Wales and Ireland, a fully verified dataset for use in research, conservation, policy-making and education and a popular book (tbc) on the British and Irish flora based on the results of the survey. [www.bsbi.org/atlas-2020](http://www.bsbi.org/atlas-2020)

## **7. National Plant Monitoring Scheme**

**Kevin Walker**

This poster sets out the aims, method, results and outputs of the National Plant Monitoring Scheme, a collaboration project between the BSBI, CEH, JNCC & Plantlife. The increasing take-up of plots over the past four years is illustrated and the locations of plots from where data has been submitted mapped. One of the key outputs is an experimental statistic to provide trends in abundance for individual habitats and indicator species; graphs are presented to illustrate this for two such species. [www.bsbi.org/npms](http://www.bsbi.org/npms)

## **8. The BSBI photographic competition 2019: the winners**

**Jim McIntosh & Natalie Harmsworth**

80 photographs entered into the 2019 competition will be on display on a loop in the Lecture Theatre. There were two categories: Native Plants and Alien Plants. The winners, following a vote at the 2019 Scottish Botanists' Conference, were Heather Kelly (three-time winner!) and Boots Hackman. All the entries can be viewed on the BSBI Flickr account.

<https://www.flickr.com/photos/145477544@N05/albums>

To find out more and to take part in the 2020 competition, check out: <https://bsbi.org/bsbi-photographic-competition>

## **9. What the BSBI can do for you: helping you as you learn more about wild plants**

**Louise Marsh**

Find out how the Botanical Society of Britain & Ireland (BSBI) can support you, even if you are not a BSBI member: there are many useful ID resources free to download from our website, and there are some great plant-related activities to get involved with, such as field meetings and training workshops across Britain and Ireland, recording for Atlas 2020 or some midwinter plant-hunting with the New Year Plant Hunt. [www.bsbi.org/get-involved](http://www.bsbi.org/get-involved)

But there's even more on offer if you join BSBI! Our members have exclusive access to a network of 100+ expert plant referees to help with ID of tricky plants; they benefit from some great money-saving offers on botany books; our membership newsletter *BSBI News* is popular with botanists at all skill levels; and there are many opportunities to develop or gain new skills, either for fun or to improve job prospects.

<https://bsbipublicity.blogspot.com/2019/11/second-best-time-to-join-bsbi.html>

## **10. BSBI New Year Plant Hunt: how many wild or naturalised species can you find in bloom in three hours over the New Year holiday? Louise Marsh**

BSBI's New Year Plant Hunt started in 2012 as a bit of midwinter fun but it has become an important citizen science project, helping us build up a clearer picture of how wild flowers across Britain and Ireland are responding to changes in autumn and winter weather patterns. Go out plant-hunting with friends, family, on your own or with fellow botanists, see what you can find in flower and then submit your records via our easy-to-use online form. Your finds will show up within seconds on our interactive map.

Last year, almost 1500 plant hunters were out recording from Cornwall to Orkney, from Norfolk to County Kerry! Join us 1-4 January 2020 and let's find out what's in bloom across Britain and Ireland. More info here: [www.bsbi.org/new-year-plant-hunt](http://www.bsbi.org/new-year-plant-hunt)

## **11. BSBI Grants Programme 2020**

**Louise Marsh**

BSBI offers a range of grants to help you learn more about wild plants. BSBI Training Grants are available to beginner and improver botanists looking to take a short plant ID course: [www.bsbi.org/training-courses](http://www.bsbi.org/training-courses).

BSBI Plant Study Grants support botany/ plant science students undertaking botanical projects, such as: <https://bsbipublicity.blogspot.com/2019/10/bsbi-plant-study-grant-funds-sedge.html>

BSBI Science & Research Grants help fund research that advances our understanding of the British & Irish flora. Applications for all three grants open on 1st January each year and you will be able to download an application form here: [www.bsbi.org/grants](http://www.bsbi.org/grants).

You don't have to be a BSBI member to apply, but BSBI members are favoured if there is competition for grants.

## **12. BSBI Field Meetings 2020**

**Jonathan Shanklin**

Every year, BSBI offers a selection of field and indoor meetings across Britain and Ireland. Some are General meetings suitable for everyone, beginner or expert; some are focused on Training, or Recording for distribution-focused projects; some are aimed at the more experienced botanist (these are marked 'Specialist') and in 2020 we are also offering several meetings aimed at Beginners.

Most of our non-residential day meetings are free to attend and you don't need to be a BSBI member to attend, although if there are more applicants than spaces available, we reserve the right to prioritise our members.

Our 2020 programme of field meetings is due to go live on the BSBI website on 26<sup>th</sup> November. You can also find out about botany meetings in your area by checking our [Local Botany](#) page.

### **13. New orchid field guide**

**Sean Cole, Mike Waller**

We are pleased to present publicly for the first time, details of the new Wildguides "Britain's Orchids", due for publication in April 2020. Co-author Sean Cole will be on hand to talk about the book and anything orchid-related, and will be showing exclusive pre-publication content at the Exhibition Meeting.

### **14. The secret sex life of anthropomorphic orchids**

**Leif Bersweden**

You're probably familiar with Man, Lady, Monkey and Military Orchids - they're the ones with petals that look like little people. These orchids are promiscuous plants: whenever they grow together they can't keep their hands off one another and they hybridize, giving rise to a suite of intermediate orchid offspring. We looked at little bits of DNA called microsatellites (if you aren't sure what these are I can explain!) which were used to see whether DNA is moving between different orchid species in French hybrid populations - and at Hartslock in Oxfordshire! We also studied the effects of this genetic mix-and-match on the shape of the people-like petals. This work will inform conservation management at important sites (like Hartslock) both here in the UK and across mainland Europe.

<https://www.youtube.com/channel/UCJRD5c5-rYc5Bs6t4j9USYg>

### **15. More than weeds: changing our perception of urban flora**

**Sophie Leguil**

My initiative called "More than weeds", launching in November 2019, is aimed at changing our perception of plants growing on walls, pavement and tree pits. Inspired by projects in other countries, I am hoping to encourage the recording of urban flora through walks, social media, exhibitions and the publication of an identification guide. I would also like local authorities to embrace their urban nature and learn how to live with plants.

[www.morethanweeds.co.uk](http://www.morethanweeds.co.uk)

### **16. Plants acting as a host ecosystem**

**Ellen Goddard, Jonathan Millett, Kevin Walker, Aaron Ellison, Paul Wood**

Studying entire ecosystems is costly, labour intensive and often involves years of work. Pitcher plants' carnivorous function can be a passive relationship, due to a liquid inside the pitcher that hosts a multitude of different organisms that work together to degrade prey into a form where nutrients can be utilised by them and the plant itself. All of these organisms

interact and survive in a way that mirrors larger ecosystems, therefore, making them a great model system to look at ecosystem function.

The purple pitcher plant has been introduced from North America into Northern Europe (including the UK and Ireland); this presents a unique opportunity to study how the pitcher plant inquiline ecosystem has changed/adapted to being introduced into a new setting with potentially different microorganisms present in the surrounding environment.

### **17. Are plants fortune tellers?**

**Ciara Dwyer**

How different species can coexist in the same habitat is one of the fundamental questions in biodiversity research - why does one species not dominate a system? There is growing evidence that fine-scale soil moisture gradients are important in controlling the abundance and distribution of species within a habitat. The extent to which this impacts plant communities, however, is still unknown. We measured how species rich communities in coastal wetlands (dune slacks) are structured along small-scale hydrological gradients. By studying dune slacks which differed in the degree of within-slack hydrological niche variation, we are able to determine the impact of niche variability on species diversity.

### **18. Ancient woodland restoration in the Chilterns, with reference to woodland ground flora**

**Marcus Militello**

An overview of an MSc Biological Recording dissertation. The study presents an insight into the effects on woodland ground flora following conifer removal on a plantation on ancient woodland site (PAWS) in the Chilterns. 4 different habitat types are compared; ancient semi-natural woodland, PAWS restored in 1995, PAWS restored in 2016/17 and an area which is still PAWS.

### **19. Environmental distribution analysis of *Juniperus communis* L., *Salix herbacea* L. & *Salix phylicifolia* L. populations in north England**

**Carrie Hedges**

Montane scrub (dwarf trees of the alpine zone) is the rarest and most threatened woodland habitat in the UK and has almost entirely disappeared from Britain owing to historic intensive grazing pressure. Through field survey, climate analysis, and assessment of plant functional traits, my research will enhance our understanding of the dynamics of the British montane scrub habitat and the potential effect of predicted climate warming on mountain flora. The first chapter of this thesis aims to identify important abiotic variables for the distribution of four extant montane scrub species in the under-studied North England area. This study will increase knowledge by identifying species' range of environmental tolerances, relative distributions in environmental space, and specifying local habitat variability. Results of this analysis inform site selection for detailed field assessment. This poster will summarise the findings of the environmental distribution analysis.

## **20. BSBI in Wales 2019**

**Barbara Brown**

Wales Atlas 2020 progress and Summer Welsh Flora highlights

[www.bsbi.org/wales](http://www.bsbi.org/wales)

## **21. Investigating the Attitudes of Young People towards Plants**

**Will Simpson**

Nature connectedness is of direct importance to human welfare and can help to motivate pro-environmental behaviour in a future threatened by global environmental crises. A greater understanding of how young people connect with nature is needed following concern over a weakening or loss of this connection. This study asks to what extent is the variability in the attitudes of young people towards plants influenced by age and gender. 583 young people aged between 8 and 20 from schools around Reading and London were tested on their attitudes towards plants. Mean plant love was found to drop (starting from the age of 12 and continuing to the age of 14) before gradually being regained throughout early adulthood. No significant difference was found between ages however. Female participants reported significantly ( $p = <0.01$ ) higher plant love than males.

## **22. Investigation into the morphological differences between the involucre and achenes of *Senecio* and *Jacobaea***

**Kevin Widdowson**

Taking its cue from the relevant species accounts in The New Flora of the British Isles 4th Edition by Prof Clive Stace, the study investigates: achene size and sculpturing, the shape of the involucre, phyllary count, and takes a very initial look at the ratio between phyllaries and ligulate florets. It is a prelude to a larger piece of work beginning in 2020.

## **23. Conserving Degree Level Botany**

**John Warren, Jonathan Mitchley**

The decline in botany and plant biology degrees is well documented. The decline in content of plant based material within biology degrees has been rather overlooked, but is potentially even more important in terms of the future of our society. We have carried out an online survey of the explicit plant content of a random sample of biology degrees from old Russell Group Universities, Plate-Glass-Universities and Post 1992-Universities.

The picture that emerges is stark, with more than a quarter of biology degrees appearing to have no plant content at all. We discuss the implications of this and what can be done to improve the situation.

## **24. Spittlebug survey**

**Alan Stewart**

The bacterium *Xylella fastidiosa* has been responsible for widespread mortality of olive trees in southern Italy and many other trees in the Mediterranean region. There is a real concern that importation of live plants from this region could introduce the disease into Britain, posing a major threat to a wide range of both cultivated and native plants. The disease is

spread by spittlebugs (froghoppers) because they feed on the fluid contents of plant xylem vessels. Such insects are common and widespread in Britain.

To be best prepared if the disease were ever to arrive in Britain, we urgently need to know where the spittlebugs occur and what their food plant preferences are. We are hoping that BSBI members can help by recording their sightings of spittle (in May and June) and especially what plant species they are feeding on, via [www.Spittlebugsurvey.co.uk](http://www.Spittlebugsurvey.co.uk)

[www.bsbipublicity.blogspot.com/2019/06/xylella-understanding-more-about](http://www.bsbipublicity.blogspot.com/2019/06/xylella-understanding-more-about)

## **25. IAPI (Institute of Plant Illustrators)**

**Jim Egginton**

This is the major institution that provides illustrations of plants in the UK.

[www.iapi.org.uk](http://www.iapi.org.uk)

## **26. An experience of nature for the visually impaired**

**Falgunee Sarker**

## **27. Identify Mountain Flowers of Britain and Ireland**

**Alan Walker**

A guide for people who explore the moors and mountains of this botanical area: hillwalkers, mountain leaders, naturalists... The design is for free download over the internet, to save for use in the field on a smartphone or tablet, or on a home computer. The book can also be printed for modest cost at a high-street laser-colour print service.

[www.alanwalker.com](http://www.alanwalker.com)

## **28. Problems identifying Sticky Storksbill**

**Peter Leonard**

The literature understates the difficulty in separating Sticky Storksbill from the coastal form of Common Storksbill found at Landguard, Suffolk. This exhibit will show, using photographs, that the mericarp features used to distinguish between these two species are not clear cut. I ask the question, why is identification so hard at Landguard and does this problem occur at other sites in the UK?

A blogpost on this topic can be found at my blog 'Violets and others':

<https://cambridgewildflowers.blogspot.com/2019/08/erodium-lebelii-vs-erodium-cicutarium.html>

## **29. North-West Rare Plant Initiative**

**Josh Styles**

An exhibit on the North-West Rare Plant Initiative (NWRPI) and some of the work that we've done since beginning in August 2017.

[www.nwrpi.weebly.com](http://www.nwrpi.weebly.com)



### **30. Herbarium News**

**Fred Rumsey, John Hunnux**

An update on the collections and activities at BM (the herbarium at the Natural History Museum).

### **31. *Stegnogrammitis jamesonii*: an overlooked neotropical disjunct fern discovered in Ireland**

**Fred Rumsey, Rory Hodd**

A report of the discovery of *Stegnogrammitis jamesonii* (Hook.) Labiak (Polypodiaceae subfamily Grammitoideae) in Ireland. Widely disjunct from its known neo-tropical range, its status as an overlooked native is considered and regarded as likely.

### **32. Yes it is *Lemna gibba*, even if it is flat**

**Richard Lansdown, Fred Rumsey, Helena Crouch**

Duckweeds are difficult and many mis-identifications are still being made. We provide some guidance on the key distinguishing characters and highlight the common errors. The main problem species are illustrated. Of these, forms we believe to be *L. gibba*, but which are consistently flat, are the chief culprits. Molecular work to support the re-evaluation of these and to aid in distinguishing other alien taxa are urgently required.

### **33. Typhaaargh!**

**Richard Lansdown, Fred Rumsey**

A total of 40 *Typha* species are currently recognised worldwide (Plants of the World Online <http://www.plantsoftheworldonline.org>) of which 25 are mainly found or endemic to western Asia and may be considered western Asian ephemerals (taxa which may disappear on close scrutiny). Seven credible species and six hybrid combinations are reported to occur in Europe, with an increasing number of new country records, some involving aliens. Four species and one hybrid *Typha* have been recorded in Britain and Ireland: a key is provided to the European species and observations made as to diagnostic characters and the identification of the hybrid *T. × glauca*.

### **34. British hybrids in the genus *Schoenoplectus***

**Richard Lansdown, Fred Rumsey**

Work was carried out at the Natural History Museum & RBG Kew under the Natural England Species Recovery Programme between 2015 and 2018 to investigate the genetic identity of *Schoenoplectus* populations in areas previously supporting *S. triqueter*. This work was designed to complement ongoing work by Peter Nicholson maintaining remaining English populations of *S. triqueter* on the River Tamar. The main results of this work were:

Populations of *S. tabernaemontani* × *S. triqueter* hybrids persist on the River Tamar, River Arun and on the Medway.

A population of *S. lacustris* × *S. triqueter* survives on the Thames.

Some plants on the River Arun may represent triple hybrids but further work is needed.

Extensive populations of a *S. lacustris* × *S. tabernaemontani* hybrid occur along large areas of the South Forty-Foot Drain near Spalding in Lincolnshire. This hybrid has never been conclusively demonstrated to exist before and we are in the process of describing and publishing it.

### **35. Charophytes of Britain and Ireland**

**Joanna Wilbraham**

Charophytes, also known as stoneworts, are a group of large, multicellular green algae that live in freshwater and brackish habitats. Charophytes play a significant role in aquatic ecosystems as early colonisers and habitat providers for a variety of organisms. Charophytes are included in the remit of the Botanical Society of Britain & Ireland, although they are often overlooked and considered difficult to identify: <https://bsbi.org/charophytes>

The Natural History Museum (BM) holds a collection of >15,000 specimens of charophytes, among which there are approximately 5,000 from Britain and Ireland. The majority of specimens were collected between c.1890 and c.1920 (during the hey-day of amateur botanical collecting and botanical clubs), although there are significant earlier records and many later specimens of different species. The collection includes herbarium sheet, fluid-preserved, microscope slides and oospore material. It is a comprehensive collection, including all the species and varieties that have been collected in Britain and Ireland.

These herbarium sheets have now been fully databased and are available online via the museum's data portal: <https://data.nhm.ac.uk>.

For each specimen details of the identification, collector, date and mapped locality are provided. Many of these specimens have images associated with them, such as a photograph of the herbarium sheet or Electron Microscope images of the oospores.

### **36. New plant records from Cambridgeshire**

**Alan Leslie**

Herbarium specimens representing some unusual plants which may be unfamiliar to many recorders, highlighting some interesting trends in new records from Cambridgeshire, as well as some challenging material as far as interpretation and identification is concerned – these are particularly relevant as I am about to publish a new Flora for the county.

### **37. Vegetative ID quiz**

**John Poland**

An opportunity for botanists of all abilities to test their knowledge on plants not in flower and learn about some of the diagnostic vegetative characters which makes ID without flowers so easy!

Find out more about the Vegetative Key to the British & Irish Flora: <https://bsbi.org/vegkey>

Read an interview with "Veg Key" co-author John Poland:

<https://bsbipublicity.blogspot.com/2019/09/2nd-edition-vegetative-key-to-british.html>

### **38. Spare seed and wild plants**

**Brian Laney**

Display of spare specimens of plants and seeds which are surplus to my requirements and which fellow botanists are welcome to have free of charge. They comprise both common and rarer UK wild plant species that I have grown over the years in my back and front garden in Northamptonshire.

### **39. BSBI Plant ID table**

Bring along any specimens you find difficult to identify – live or pressed - and challenge some of the best botanists in the country!

### **40. Botanical cards**

**Linda Pitkin**

A selection of greetings cards (blank inside) and postcards, from a set of six paintings "British Native Aquatic and Waterside Plants", which was awarded a gold medal in the 2019 RHS London Botanical Art Show. The cards and postcards will be available to purchase and the artist has offered to make a donation to BSBI after the meeting.

[www.lindapitkin.net](http://www.lindapitkin.net)

### **41. Summerfield Books**

Pop-up bookshop with a wide selection of generalist or specialist literature, including rare and second-hand books, many with reduced prices for BSBI members. A range of hand-lenses will also be available for sale.

[www.summerfieldbooks.com/](http://www.summerfieldbooks.com/)