



September 2020 Sample Issue
See inside for a selection of articles from *BSBI News* no. 145 and details of how to join the BSBI. Members receive three print copies of *BSBI News* each year as part of the package of membership benefits.



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Cover: a rare form of *Epipactis*, likely to be *E. helleborine* (Broad-leaved Helleborine), lacking chlorophyll in the leaves, Montgomeryshire (v.c.47), 5 June 2020. Graham Griffiths (see Wales roundup, p.62).

Back cover: *Hieracium sabaudum* f. *bladonii* on a railway bridge at Gomshall, Surrey (v.c.17), August 2018. Mike Shaw. From *Hawkweeds of South-east England* (see Reviews, p.76).

Contributions for the next issue of *BSBI News* (no.146) should be sent to the Editor, John Norton (john.norton@bsbi.org) by 25 November 2020.

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BSBI caters for all botanical tastes and skill levels, from absolute beginners to national experts. Our contributors include some of the top botanists in Britain and Ireland.

BEGINNER'S CORNER

What field guide should I buy?

ANDREW BRANSON

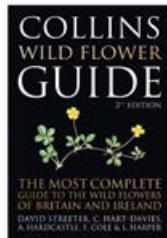
I was rummaging through some boxes of books at an auction house recently and came upon a hoard of botanical books, some leatherbound, others, as they say, in their original dust wrappers. There were 'guides' dating back to the 18th century, illustrated with wonderful engravings, nestled in amongst modern floras and field guides. Why would anyone want so many books? Yes, they were wonderful to look at and hold but the truth is that most people who enjoy plants in the wild refer to a limited hierarchy of works, both to confirm their identifications and also to learn more about the context of their

discoveries. Today apparently bewildering choices are available to choose from. The latest editions of which most people are aware are those around for some time, the latest editions are in taxonomy, new guides include those from the fourth edition of the *British Isles*, published

The way our field guides have changed in the 20th century, with plates on one side and maps, on the other, are many more plants covered in the 500 species, but Collins species and Stace's taxa. Trying to do this in a number of publishers. An obvious only common species plants, such as grasses, it is important to

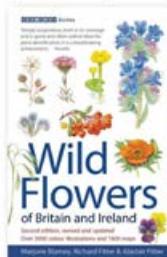
field guides is to compare and contrast the plant in front of us with the text, illustrations and keys in a guide. If the range of species covered is limited, often because of lack of space, then there is the danger of trying to 'fit' the plant to the available information and coming up with the wrong identification. This can be a real problem for those who run recording schemes. But, if the book is more comprehensive, the guide can become too heavy to carry, thus defeating its prime purpose of taking the book to the plant (*Collins Wild Flower Guide* is about 1.2kg!). These

Collins Wild Flower Guide (2nd edition, 2016) by David Stretter is far more comprehensive, giving



equal weight to all the groups, but comes in at 704 pages. It also has an effective mix of keys and descriptions. However, the artwork is again uneven, although unlike *The Wild Flower Key*, most species are illustrated in full.

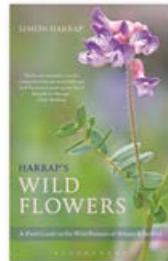
Wild Flowers of Britain and Ireland (2nd edition, 2013) by Marjorie Blamey, Richard Fitter and



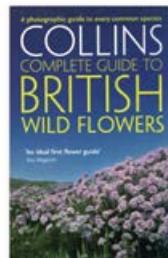
Alistair Fitter, like the Collins guide, covers all the groups, and even has thumbnail-sized distribution maps. The descriptions are rather brief and the use

'tricks' can be heavy to carry around in the field that have a reasonably comprehensive approach.

Harrap's Wild Flowers by Simon Harrap, first published in 2013, has a clear layout and includes a map (based on the BSBI database), short description and photographs of each of the 930 or so species it includes. The presentation means that despite its 417 pages it does not cover the grasses, sedges and ferns. The 2,000 photos have been carefully selected and complement other guides. There are no keys.



Collins Complete Guide to British Wild Flowers by Paul Sterry (2006), from his Collins series, manages to



Residual myths in molecular systematics

RICHARD BATEMAN

Ophrys apifera (Bee Orchid). John Norton

Thirty years have elapsed since DNA studies began to replace herbarium-based studies of morphology for generating higher classifications of plants. Rapid technological progress has allowed a greater than exponential increase in the volume of DNA-based molecular-genetic data available to plant systematists. Molecular data now dominate plant classification at all taxonomic ranks above the species level, and are now also increasingly applied to circumscribing species. There are inevitable downstream consequences for nomenclature, forcing (or, more accurately, encouraging) us to familiarise ourselves with a modest number of new formal names (most are simply new combinations rather than new epithets) as taxa are steadily revised to take account of relationships newly recognised through genetic studies.

Despite the long period of time that we have had at our disposal to become familiar with the impacts of molecular studies on taxonomy, and thus ultimately on field botany, several myths regarding the many strengths and weaknesses of molecular approaches have proven remarkably persistent. I therefore hope that BSBI members will forgive me for making yet another attempt to raise awareness, and reduce innate prejudice, by systematically addressing some of the more persistent myths.

Myth 1: Plant names remained comfortably stable until DNA made its irritating presence felt

There is a lot to be said for stability, not least when putting a name to a plant. Familiarity is comforting, and learning a new name for an already familiar plant can therefore appear perverse. Indeed, in cases where the renaming has been based purely on legalistic criteria I would argue that renaming *is* perverse! However, where the new or altered name is a result of new scientific insights being gained from newly acquired data and/or from conceptual advances in the theory of classification, the case becomes much stronger. Giving too much weight to stability under such circumstances deprives us of the insights that reliably accompany genuine progress.

The very first professional lecture I ever gave was presented at the BSBI conference on Critical Group Taxonomy hosted by John Edmondson in Liverpool in September 1985 – a time when any erstwhile molecular revolutionaries had not yet broken cover and taxonomic practices had barely changed since the time of Linnaeus. I spoke on that most 'critical' of critical groups, the orchid genus *Dactylocteniza*. One of my 35 mm slides simply bore a list of approximately 20 synonyms that applied to just a single biologically valid subspecies, *D. incarnata* subsp. *cruenta* (the



INTRODUCING MY VICE-COUNTY

Middlesex (v.c. 21)

MARK SPENCER

Middlesex is now the most urban vice-county in Britain and Ireland. The vast majority of the county is covered by Greater London and only relatively small areas in the north and west remain semi-rural. Roughly speaking its boundaries are made of the rivers Lea to the east, the Thames to the south and the Colne and its distributaries to the west. The northern edge was largely marked by the southern boundary of modern-day Hertfordshire. By the start of the 16th century, much of the county was given over to providing fresh fruit, vegetables, dairy and meat produce for the growing city of London. In 1889 Middlesex lost its urbanised south east to the newly created County of London and in 1965, following the massive 20th century expansion of London, the County of London was abolished, and modern Greater London came into being. Much of Middlesex was engulfed by Greater London and the remaining fraction was passed to Surrey and is now known as Spelthorne Borough.

Common Mallow (*Malva sylvestris*), Mugwort (*Artemisia vulgaris*) and Hoary Mustard (*Hirshfeldia incana*) are common plants in many of Middlesex's highly anthropogenic habitats. Nevertheless, the increased rigour with which much of the city is purged of vegetation, these important plant species are probably not as abundant as they once were. (All photographs by Mark Spencer)

Not surprisingly, there is not a lot of ancient, semi-natural vegetation remaining. Much of the Thames and its surviving tributaries that drain through the county have been heavily modified. On the tidal parts of the Thames, nearly the whole of the river has been embanked with brick, stone, or concrete and in some areas planted with homogenous reedbed schemes. One of the few places where this has not occurred is at Syon Park where semi-natural riverside vegetation persists. As a consequence, regional losses of moisture-demanding plant species have been severe. Marsh Sow-thistle

A regular section is 'Introducing My Vice-county' where the BSBI plant recorders highlight the interesting plants and habitats of their local areas.

INTRODUCING MY VICE-COUNTY: Middlesex (v.c. 21)



London Rocket (*Sisymbrium irio*): the plant on the left is the paler yellow form found in various locations, including Islington; it may be a recent introduction. The plant on the right is typical of the canals of east London and the area surrounding the Tower of London, it is possible that these are descendants of those first noted in the 17th century.



Two recent and gradually increasing colonists from southern Europe, probably introduced via horticulture, are white ramping-fumitory (*Fumaria capreolata* subsp. *capreolata*) and Mediterranean Nettle (*Urtica membranacea*).

Feature articles cover a wide range of botanically-related topics.

The Botanical Society of Scotland's Urban Flora Project

BRIAN BALLINGER & JOHN GRACE

Many of us live in towns and are surrounded by plants, some planted and others that have made their own way there. However, people who take an interest in the botanical world often head for the hills, coastlines and wild land. An increasing awareness of the botanical heritage of cities and towns in Scotland led John Grace, five years ago, to propose a study of urban species and habitats – the Urban Flora Project (UFP). The aim was to involve a variety of people, professional and amateur, to record and study the botany of our towns.

This has become a major project of the Botanical Society of Scotland (BSS), ([www.botanical-society-scotland.org.uk/Urban Flora of Scotland](http://www.botanical-society-scotland.org.uk/Urban%20Flora%20of%20Scotland)). The project seeks to encourage the appreciation and conservation of our urban flora and to protect it from widespread destruction. Obviously urban sites will always require some management but this should be done sensitively. Public pressure sometimes leads to damage, with people failing to appreciate the beauty and value of wild flowers and plants in cities.

In our project we have sought to record plants growing within cities and towns of more than 1000 people, provided they are within the urban area and do not appear to have been deliberately planted. We also gather some basic abundance and habitat information. Data are entered on a special project area ('activity') of the database iRecord (Walker et al., 2019). As well as vascular plants, bryophytes, algae, lichens and fungi are included (Figure 1).

The BSS runs a summer programme of field visits and many of these have targeted urban locations, often in collaboration with other societies including the BSBI. Recorders also work independently and in informal groups. Sadly, Covid-19 has put a stop to our 2020 summer programme, but some records are still being made by individuals during their local walks.

As described by Walker et al. (2019), records submitted to iRecord go through a series of checks. Firstly, there is automatic checking of the expertise of the recorder and previous records of the species at a location and some records are flagged as in need of further verification. Some records have been verified on iRecord by approved verifiers (usually the appropriate Vice-county recorder). Most records



Figure 1. Locations of sites visited during the Urban Flora Project. Records have been contributed to the project by many individual recorders, via the iRecord online recording system provided by the UKCEH Biological Records Centre.

Betonica officinalis (Betony) in Scotland and climate change

DAVID TRUDGILL

This article explores possible reasons for an abrupt decrease, prior to the year 2000, in the abundance of *Betonica* (*Stachys*) *officinalis* (Betony), and of several other meadow species close to the border between England and Scotland. More

it is difficult to believe some populations would not have been discovered. Other possibilities include differences in land use between Scotland and the rest of Britain, but this also seems unlikely given the recent increase in Betony in very different parts of

A large colony of *Lysimachia europaea* (Chickweed-wintergreen) on Houndkirk Moor, Sheffield (v.c. 57)

KENNETH BALKOW

Lysimachia europaea (previously *Trientalis europaea*) (Chickweed-wintergreen) is an arctic-alpine species which is widely distributed in northern Europe. In Britain it is locally common in some parts of Scotland, with a smaller number of upland sites in northern England (Preston et al., 2002). The plant favours acid, peaty soils in open woodland and moorland, and the most southerly extant colony is on Houndkirk Moor, about 10 km south-west of Sheffield city centre. For many years it was believed that the plant was first discovered there in 1957 by local college teacher, Marjorie Shaw. However, a literature search by her namesake Margaret Shaw, prior to the publication of *A Flora of the Sheffield Area* (Shaw, 1988), showed that it had previously been noted in both 1881 and 1885 in reports of the Sheffield Naturalists Club (Shaw, 1973). The localities given were bogs at Ringinglow and Whirlow Bridge. It is possible that the plant was

then known at two different sites, but local opinion suggests that these were both indirect references to Houndkirk Moor.

Over the years the population of plants on the moor has been monitored by a number of local botanists, with site instructions passed down by word of mouth. On a featureless area of moor the most useful landmark was a set of iron railings (the remains of an old weather station), and searches were usually concentrated within a 40-metre radius of those. In most years only a handful of plants was seen, though notable exceptions were 50–60 reported by Charles Waite in 1973 (Shaw, 1973) and over 80 in 2001 by members of the Derbyshire Flora Group (Willmot & Moyes, 2015).

In 2016 I found my usual route to the railings was blocked by a newly-erected fence, so I entered the moor via a gate on Sheephill Road. After walking uphill a short distance I saw that the railings were only about 200 metres further on but this entailed walking through a stand of *Pteridium aquilinum* (Bracken). As I penetrated this I noticed *Lysimachia* leaves at my feet and these soon became so numerous that it was difficult to walk without stepping on them. Because the Bracken was dense and already well above waist height it was difficult to judge the size and extent of the colony, but clearly hundreds of plants were present, although rather few were in flower. For various reasons I did not return to the site until 2019, but crucially my visit was much earlier in the season (2 June) so the Bracken was only 20–30 cm high. I was able to estimate that the *Lysimachia* colony covered an area of at least 50 by 40 metres, and with many plants in flower it was a truly amazing sight considering that we had previously imagined that the species was barely hanging on in the area. I returned again on 30 May this year where I carried out some sample counts of flowers in ten

Lysimachia europaea (Chickweed-wintergreen),
Houndkirk Moor, Sheffield, 3 June 2019.
Kenneth Balkow



Other regular sections include news of sightings of alien plants; botanical notes from England, Wales, Scotland and Ireland; notices about BSBI projects, events and activities and book reviews edited by Clive Stace.

ADVENTIVES AND ALIENS

Adventives and Aliens News 21

COMPILED BY MATTHEW BERRY

Although 2020 has been an unusual and difficult year, in ways that were not favourable to the free-roaming field botanist, there have been a surprising number of very interesting records which merit relatively detailed treatment. Hence, and in spite of having a longer preamble prepared, I would prefer to raise straight on to the records themselves.

V.c. 9
Eryn
Bris
one
for S
Fran
plan
three

last year at Auchencairn, Kirkcudbrightshire, has been confirmed as *Ranunculus sardous* (Hairy Buttercup). There is a thriving population in an area of rotational pasture intermittently flooded by salt water during the highest tides. Now scarce in Scotland, its only previous county record was from 1860. On Mull a second site for *Scrophularia auriculata* (Water Figwort), was found by Tony Jeffree, in a wet ditch near Bunessan. By coincidence I found a second Westernness site for this species in June near Spean Bridge. It is

V.c. 9 (Dorset)

Verbascum creticum (L.) Cav. (Cretan Mullein). Swanage (SZ0323878045), 2/5/2020, D. Leadbetter: two plants on verge near 2 Sunnysdale, Durlston Road. The yellow (rarely white) corollas are c. 4.5 cm across with unequal lobes, the upper smaller and marked with reddish-purple basal spots. The filaments of

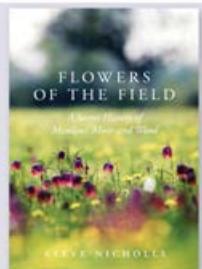
and *Melica nutans* (Mountain Melick). So I was delighted, while walking the dog in June, to come across a new population beside the River Arkaig, 12 km NW of Glen Roy. I counted more than 150 plants growing under bracken with an open canopy of birch and an abundance of *Melampyrum pratense* (Common Cow-wheat). It stood out from its commoner relative due to its much brighter yellow, short, open flowers. This is only the second known site this century for Westernness.

In January I reported that a new site for *Schoenus ferrugineus*

IRELAND

It has been a year unlike any other, and that means that many of the plans we reported in April's BSBI News have had to change. It was disappointing to cancel our field meetings and training workshops this year, but we didn't let that stop us! Irish botanists are an adaptable lot, so while I focused on developing remote training opportunities, our recorders focused on local projects and solo recording. For such a challenging year, we've had

REVIEWS



Flowers of the Field: A Secret History of Meadow, Moor and Wood
Steve Nicholls

Head of Zeus, London, 2019; pp. 487, c.250 colour plates; hbk, £30. ISBN 9781789540543

For the field botanist steeped in the appreciation of differences

reflecting nectar-guiding stripes) and snowflakes (10–15 million tons of summer snowflake were harvested in Bulgaria in 1969/70 for the Alzheimer alleviating drug galanthamine – virtually wiping out the wild population).

Grasslands, outlining the many types of grasslands, followed by accounts of particular species: buttercups (bulbous buttercups prefer dry soils and in remnant medieval ridge and furrow are found on the ridge tops), fritillaries, gentians (gentians die after flowering and their seeds don't persist in the soil, so early grazing/cutting removes the flowers before they have a chance to open, while late meadow cuts let the competing grasses grow too long, whereas a July cut followed by light autumn grazing

male and female plants, but they leave a gap of several years between producing male and female flowers to conserve energy).

A particularly useful 9-page appendix to the book exhibits Steve's in-depth professional knowledge of the history and technology of photographing wild flowers. Although his many ultra-close-ups of flowers and their inevitable gradation in sharpness have an artistic draw, I would have welcomed greater use of focus-stacking to overcome the inverse relationship of sharpness and depth of field; although laborious, it might have repaid the effort. Nevertheless, it's a beautiful book.
Ken Adams

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