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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 leather bound, 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 discoveries. Today, apparently, we have to choose from titles which most people around for some time: the latest editions in floristry, now that none of the old guides include the British Isles, published.

The was one of the phenomena of 20th century, with plates on one side with maps. On the other, there are many more plants covering the 500 species, but the species and Stace taxa. Trying to a resulted in a number that common species, such as grasses it is important to consider one of the new guides by David Street, is far more comprehensive, giving equal weight to all the groups, but comes in at 701 pages. It also has a choice of keys and descriptions. However, the arrangement is again, although unlike The Wild Flowers, most species are illustrated in full.

Wild Flowers of Britain and Ireland (2nd edition, 2015) by Marjorie Blayney, Richard Fitter and Collins Country Guide to British Wild Flowers by Paul Screevy (2006), from the Collins series, manages to cope with 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 (2nd edition, 2010) by David Street is far more comprehensive, giving that have a reasonably comprehensive approach that have a reasonable coverage of the plant. This provides a comprehensive approach to the flora, allowing for the identification of each of the 450 or so species it includes. The presentation means that its 417 pages it does not cover the grasses, sedges and forbs. The 2000 plates have been carefully selected and complement the other guides. There are no keys.

Residual myths in molecular systematics

RICHARD BATEMAN

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 from the species level, and are now increasingly applied to circumscribing species. There are inevitable downstream consequences for nomenclature, forcing, 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 molecular 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 undue prejudice, by systematically addressing some of the more persistent myths.

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

There is a lot said to be stable, at 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 logical 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 enthusiasm for 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 Dactylorhiza. 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. incarnata...
Middx. 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-natural. 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 turn of the 19th century, much of the county was given over to providing fresh fruit, vegetables, dairy and meat produce for the growing city of London. In 1888 Middx. 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 Middx. was engulfed by Greater London and the remaining fraction was passed to Surrey and is now known as Spelthorne Borough.

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 Snow-white

A regular section is ‘Introducing My Vice-county’ where the BSBI plant recorders highlight the interesting plants and habitats of their local areas.
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 need to travel to 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). 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. Recorderists also work independently and in informal groups. Sadly, Covid-19 has put a stop to our 2020 summer programmes, 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 then are reviewed by experts and we provide relevant references.

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 ORCEH 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 officinalis (Betony), and of several other meadow species close to the border between England and Scotland. More recently there has been a recovery in its distribution to include some sites in northern England.

Betonica officinalis (Betony) is a species which is widely distributed in northern Europe. In Britain it is locally common in parts of Scotland, with a smaller number of isolated sites in northern England (Perston et al. 2016). 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 1936 by local college teacher, Margaret Shaw. However, a literature search by her namesake Margaret Shaw, prior to the publication of A Flora of the Sheffield Area (Shaw 1938), showed that it had previously been noted in both 1931 and 1895 in reports of the Sheffield Naturalists Club (Shaw 1933). The localities given were bog 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 these. In most years only a handful of plants was seen, though notable exceptions were 50–60 in 1973-74 reported by Charles Waine in 1973 (Shaw 1973) and over 80 in 2001 by members of the Derbyshire Flora Group (Willmot & Meyers, 2015).

In 2016 I crossed a usual route to the railings was blocked by a newly-erected fence, so I entered the moor via a gate on Sheepfold Road. After walking uphill a short distance I saw that the railings were about 200 metres further on but this entailed walking through a stand of Persicaria amplexicaulis (Bolton). As I penetrated this I noticed Betonica 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 Betonica 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
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.

RECOMMENDED READING

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

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