Sussex Botanical Recording Society (SBRS)

Notes for members on botanical recording in Sussex

2023

Sussex Botanical Recording Society

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Notes for recorders

Contents

1. Introduction

The aim of the SBRS is to study and record plants in the counties of East and West Sussex.

The purpose of these notes is to explain the basics of effective plant recording.

Please see the Recording page of our website for up-to-date information on recording and the submission of queries and records.

2. Recording

This link takes you to a presentation about recording for the SBRS. Please note that you need to read the 'Speaker's notes' beneath the slides to make sense of them.

2.1 Information required

In order to be of use a plant record requires at least four pieces of information:

- The identity of the species found
- The date on which it was found
- The location where it was found (including an Ordnance Survey (OS) grid reference)
- The status of the plant (see Section 10)

Further information like habitat or population size is always very valuable and should be provided whenever possible. A more detailed account of the information required is given in Section 3.

2.2 Types of records

Records can take two basic forms:

1. **A Survey:** All species within a defined area are recorded. The records should consist of a simple list of the commoner species present plus, for rarer species, more detailed information as described below. For this type of recording it is essential to provide a clear definition of the area recorded. This topic is covered in more detail in Section 4.
2. **An Individual Record**: Detailed information on specific occurrences of rare and interesting species.

2.3 Definition of rare or interesting species

One obvious question is "what constitutes a rare or interesting species?". This has no simple answer but an excellent starting point is the SBRS recording card (see section 5.2). These cards are a critical tool in our recording because they provide an easy way of noting down species in the field and also indicate which species are regarded as of particular interest in Sussex.

One side of this card carries a list of all the commoner plants to be found in Sussex. If you find a plant whose name is not printed on the card then it is rare in Sussex and we want full information about your find. Species which are rather less scarce but for which we still want extra information are marked on the card with a "+" sign after their names (for example *Viola palustris*).

If you have access to the internet on your phone and you suspect the plant you have found is very unusual, you can check the known distribution of the species on the BSBI website interactive map.

If a species has never been recorded in the county before, it must be verified by another person and submitted to the records officer as soon as possible. Ideally a 'voucher' specimen should be taken. In the past, this would be part of the plant (or a whole plant if

several were found) to be pressed and dried for keeping in a herbarium. These days, several digital photographs of the plant usually suffice.

More detailed information on commoner species is also of interest if there is something unusual about the record. For example, finding *Gymnadenia conopsea* (Fragrant orchid) on chalk downland is always a delight but is not unusual. However, finding it in a lowland meadow is unusual and we would like more detailed information.

If in doubt, always err on the side of providing the extra information.

2.4 How to submit records

The standard way to submit your records is using our Excel Recording Card (ERC – see section 5.2) as this makes it much easier for us to process.

For specific records of scarce species it is still best to send it in using the ERC, with extra details in the comments section or the accompanying email.

We are now also using *iRecord* for records submission. This is an online and app tool that allows you to submit records of any living taxa. It is free and run by the Biological Records Centre. The phone app has a survey function which is revealed by pressing and holding the 'add record' button.

We have created two Activities on the system for recording plants in Vice County 13 (West Sussex) and Vice County 14 (East Sussex). Once you have an account you can ask to join these activities by following the links below:

- https://irecord.org.uk/join/vc13-plants-2023
- https://irecord.org.uk/join/vc14-plants-2023

The Help section of *iRecord* has plenty of information about how to use the system, with links to many videos on YouTube.

For those unable to use the above methods, we are happy to receive records by any other means, including the submission of paper recording cards or similar. Please contact us for details.

It is important to submit rare, critical or unusual records as soon as possible to allow any necessary verification (see comments in section 3.2).

3. Rare & interesting species

3.1 Information required

The information we need for any records of rare plants or other interesting finds are:

- A 6 figure grid reference, e.g. TQ303231 (**this is absolutely critical**). If you have a GPS then, for the rarer plants, please give an 8 or 10 figure GPS grid reference. Note: if you have used a GPS it is useful to write (GPS) after the grid reference.
- The name of the location and a description – e.g. "SE of Crawley, edge of arable field just E of footpath". Please use names on the OS map not local names or, for a site in a town, give a street name (note - we still need the grid reference). Put the description in the comments section of the record.
- The status of the plants (see glossary for definition of status). This can be hard to define but it is important. The finder is usually best placed to decide this at the time.
- The habitat, e.g. chalk grassland, wet heath, abandoned arable field on sandy soil, etc.
- The size of the population – e.g. single plant; large clump; 3 large trees along 100m of woodland edge. The DAFOR metric may also be used to give an indication of abundance. (see Glossary)

- Photographs of the plant and its habitat are very useful. Some people make sketches of the location in their notebooks and these can be copied or photographed and sent in by email.
- Any other information you feel may be of interest, e.g. other species present.

For the commoner species the amount of detail we want varies, depending on the purpose of the recording. The type of information required will be defined for any specific recording projects and is best found on our website.

3.2 What to do if you find unusual or problem species

If you find rare or unusual species (e.g. a new county record) or plants from critical groups where identification can be difficult (e.g. Hawkweeds, Eyebrights, aquatic Ranunculus, narrow leaved Pondweeds, etc.) , **you should always have the identification confirmed by someone with the necessary expertise** (see section 6). Unfortunately, if you do not do this, we may not be able to accept your record.

People occasionally feel unhappy if their records are questioned but we ask you to accept this as part of our attempt to ensure that the information we gather is of the highest possible quality. We take the approach that it is better to ensure that the information we hold is correct, even if it means missing out a few correct records, than to allow erroneous information to enter our records as these can cause a lot of confusion at a later date.

If you find something you are not familiar with please check if it is rare. Start with the recording card - if its name is not written on the card it is unusual. Check in *The Flora of Sussex* for additional information.

Every year we receive records for "new" plants, not previously recorded in Sussex. Unfortunately some turn out to be incorrect identifications but others are correct - these are the exciting finds we all look forward to but to obtain the satisfaction of being certain you have found a new and interesting record you must get it confirmed.

With any unusual record, **it is vital that you act promptly** - things can change very rapidly so that a wonderful specimen found one day can become completely unidentifiable a week later because it has died down or been sprayed, eaten by animals, mown down etc..

4. Definition of a recording area

4.1 Types of recording area

One of the most common factors in reducing the value of the records we receive is that the area recorded is not properly defined. There are two ways of satisfactorily defining an area:

1. By using an ordnance survey grid square. Typical examples used in botanical recording are tetrads (2km squares) or monads (1km squares).

   Records for tetrads or 1km squares are very welcome but do be sure to start a new card if you stray across the boundary into a new square. It does not matter if you have only visited a small part of the area. A set of records for a monad or tetrad does not have to be comprehensive.
2. By defining the boundary of the recorded area. This can be done in several ways (some of which are very effective while others are not). The following section describes what is wanted.

4.2 Defining the boundary of a recording area

By far the best way of doing this is to draw it on a copy of part of an OS map showing the area concerned. Another way which is very good but which people may find unwieldy is by

using a set of grid references to define an outline around the recorded area. For example TQ216157 TQ216158 TQ222158 TQ224157 TQ224155 (this defines an area of Henfield Common). If the area runs across more than one tetrad (or monad if you prefer) it is essential that you complete a separate card for the part in each of the squares.

Sometimes people send cards defining the area in words but this is rarely effective and should not be used unless there really is no alternative. If you do decide to do this then some basic rules are:

- Only use features on an OS map (1:25000 if at all possible) to describe the boundary. Saying things like "…along N edge of Blogg's Wood as far as the dead oak tree and then S into wood" is no good.
- Only use names which are on the map. Saying something like "along N edge of Smith's field" is of no use if Smith's field is a local name which is not on the OS map. Give grid references of key points on the boundary of the recording area, especially if they do not correspond to any obvious feature on the OS map.
- Say which map (name and type) you used

4.3 Recording near the Vice County boundaries

Please note that Vice County (see Glossary) and Administrative boundaries may not coincide. If you are recording near a boundary please take additional care with your records, using precise grid references for any notable species.

5. Use of recording cards

5.1 What is a recording card

Recording cards are a vital part of botanical recording as they offer a quick way of recording a large number of species by crossing them off a printed list and help to decide if more detailed information is needed on a particular species (see 3.1 above). Our recording card can be downloaded here.

5.2 SBRS recording card

The front of the card has a number of boxes for entering information like the date, the name of the recorder(s), the area which has been surveyed and a space for entering detailed information on scarce species. The back of the card carries a list of the commoner species arranged in alphabetical order according to their scientific names. In order to fit the names onto the card, they are abbreviated in an unambiguous manner. For example, *Ruscus aculeatus* becomes Ruscu acu. Where there are a number of species in the same family, like the Viola species, the abbreviation for the family name is only given once. The five common Violets – *Viola arvensis, Viola hirta, Viola odorata, Viola reichenbachiana & Viola riviana* and the rather scarcer *Viola palustris* therefore appear on the card like this:

Violaarv	2206
hir	2210
odo	2214
pal+	2215
rei	2217
riv	2218

You will see that a code number is associated with each species. This code is used in our computerised records and is known as the BRC code after the Biological Records Centre who allocated them.

5.3 Filling in recording cards

When you use a recording card you should cross through the name of each species you see – for example if you recorded *Viola arvensis* and *Viola odorata* then the above section of the card should look like:

~~Violaarv~~	2206
hir	2210
~~odo~~	2214
pal+	2215
rei	2217
riv	2218

If you make an error and cross through the wrong species then simply mark each side of the crossed off section with 'X's – e.g.

X ~~Viola arv~~ 2206 X

As mentioned above some species (like *Viola palustris* in the above example) are marked with a "+". These are the ones for which we want more information written on the front of the card.

If you find a species which is not on our card we would like full details of your find written on the front of the card.

Recording cards should be used to record a specified area (see section 4) which may either be defined by location (e.g. a particular piece of land like a wood) or by a subdivision of the National Grid (like a monad or tetrad). If you are recording a location like a wood which occupies more than one tetrad you **must** complete a separate card for the parts in different squares. In the worst case this could mean using 4 cards – rather a chore but if you do not do this your records for that location will be less valuable. It is desirable to do the same at the monad level if you can, as recording nationally is moving towards monad recording rather than the historically common tetrad.

Please do not put records for different sites, or for visits to the same site on dates which are more than a few days apart, on the same card. Do a separate card for each site or visit.

5.4 Submitting the recording card data

The ERC was developed for transcribing records from the paper recording cards into Excel spreadsheets. This method still works well. The ERC contains several spreadsheets besides the record entry sheet. These can be selected using the tabs at the bottom of the screen. For more information on how to do this, see the link to the online presentation.

The recording card data can be added to your *iRecord* account (see 2.4 and the presentation) or a copy submitted by post (contact us through the website for details).

6. Identifying plants

6.1 Background

The ability to identify a range of species accurately is an enjoyable part of effective botanical recording and only comes with experience. However, for most species, it can be done very effectively by using the appropriate books and having a careful and methodical approach.

If you aren't able to identify something, the best way to get help is to take several photographs of the plant. Include the whole plant in its habitat, the base of the plant, its stem leaves (both sides of the leaf) and flowers (including the underneath of the flower).

Photos of fruit are useful (and necessary for some species). These can then be posted on our Facebook page where many experienced botanists will offer help.

If you are using *iRecord* you can add the record with a tentative guess at its identity along with the photographs and the verifier should be able to assist when they review the record.

6.2 How to make accurate identifications

By far the most reliable approach is to use the keys in the most up-to-date version of one of the standard floras. (See recommended books on the website and below.) If you have not used keys before they may look daunting at first but are quite straightforward once you get used to them. One of the best ways of learning is to come along to one of our field meetings and ask to be shown. You will see how they are used and also how even the most experienced of our members use keys to confirm their identifications.

Social media has many useful opportunities for learning and getting help with identification. On Twitter, *@BSBIBotany* and *@wildflowerhour* are very useful, with many keen Twitter botanists answering queries from posts using the *#wildflowerhourID* hashtag. On Facebook there is an SBRS group and a few other groups of interest, such as *British & Irish Grasses, British & Irish Grasses, Rushes, Sedges* and *Wild Flowers of Britain and Ireland*. Botanical Keys and How to Use Them focuses on using keys from various resources.

It is best to identify plants *in situ* but, for species which are relatively common, it can be very helpful to take a sample away and study it at leisure in order to learn the key features. If you can at least identify the family to which the plant belongs then, before taking a sample, it is worth checking in the field guide to ensure that the sample includes the parts of the plant needed for definitive identification. For example, for some species, you may need things like ripe seeds, or leaves from the base of the plant, or you may need to note features like the shape of a tree which can only be done in situ.

6.3 Identifying scarce, difficult or unusual species

IMPORTANT: You must **never** dig plants up, take samples from scarce plants or remove specimens of any species if to do so would have a significant impact on the population of the plant at that site. Remember that some species are protected by law and it is illegal to pick or damage these species.

The BSBI recorders and other SBRS committee members are always willing to assist in identifying species which are either scarce or which present some difficulties in identification. If you are a member of the BSBI you can also submit specimens to the BSBI referees for the relevant plant group.

For plants which are normally submerged, e.g. Potamogeton species, the best approach is to dry gently but thoroughly in tissues or kitchen paper as soon as you can after collection. Do not press them flat and, above all, do not keep them in water or send samples which are wet – they inevitably arrive as a totally unidentifiable rotting mess.

Addresses, phone numbers and email addresses are given regularly in the SBRS newsletters and are found in the members area of the website.. Please include your phone number, address or email address with your enquiry. If you want a sample returned to you or require a written reply please say so and include a stamped addressed envelope.

7. Plant names

7.1 Scientific names

One feature of the SBRS is the almost exclusive use of scientific names rather than English names for plants. This can be off-putting at first but it is done for a very important reason

(see below). In practice it does not take long before you become familiar with these names. Aim to learn a few at a time, starting perhaps with a group which you find especially interesting. If you keep your own notes on plants you find (a practice to be strongly recommended) then it is a good idea to start using both the English and the scientific name in those notes.

7.2 The problem with English names

We use scientific names for a very good reason - they are unambiguous and force us to be specific. Many English names can refer to several species – perhaps the classic example is “Bluebell” which generally refers to *Hyacinthoides non-scripta* but can also refer to the “Harebell” (*Campanula rotundifolia*). Another problem is that the use of English names makes it easy to refer to things like Oak, Figwort, Fumitory which could mean one of several species. Use of the scientific name (like *Quercus robur* for an Oak) forces you to be specific. Finally, some groups of plants, like the aquatic buttercups, do not have adequate, widely accepted English names.

Unfortunately, because of the problem with ambiguity, we do not generally accept records submitted using only English names.

However, please do not think that English names are of no importance or interest. They are of great interest and importance as a link between plants and the wider world and should be used and preserved. It is simply that they are not good for the specific purpose of accurate plant recording.

8. Resources

8.1 Societies and organisations

Learning from others is one of the greatest resources and a key reason for joining organisations such as the SBRS. While the SBRS runs seasonal field meetings, other organisations run both field meetings and courses on specific areas of botany. Links to such organisations can be found on our website but we encourage members to join the Botanical Society of Britain and Ireland (BSBI) with which we are affiliated. Members enjoy many benefits, including access to expert ‘referees’ who will identify difficult plants, attendance at meetings and discounts on purchases from Summerfield Books.

8.2 Hand lenses & microscopes

There is one absolutely essential piece of equipment for any botanist – a good quality hand lens with a magnification of around 10x. Well worth considering are dual hand lenses, with a x8 to x10 lens at one end and a x15 to x20 lens at the other.

For some of the more difficult species a low power microscope (x20 to x40) is very useful because of the higher magnification and the fact that you can have both hands free to dissect out the parts of the plant needed for definitive identification. These can often be picked up very reasonably secondhand.

8.3 Aquatic species - grapnels

For aquatic species a grapnel is a vital piece of equipment for pulling samples out of ditches, ponds etc.. They can be obtained from fishing shops or made at home using stiff wire (e.g. from a metal coat hanger), a large bolt and some strong cord. It should be reasonably heavy - ditches can get so choked that it is hard to make a lightweight grapnel sink below the surface.

8.4 Useful Books

Listed below are a selection of useful books. The list is not intended to be exhaustive, there are many excellent botanical books which are not mentioned here.

General floras

"New Flora of the British Isles" (fourth edition) by Clive Stace (2019). The most up to date flora for identifying plants in the UK. It covers all native plants together with the vast majority of alien introductions. This book is essential for any serious botanist in the UK but isn't comprehensively illustrated.

Field Guides

"*Collins Wild Flower Guide"* (second edition) by David Streeter (the SBRS President) is illustrated and covers the same range of families as Stace.

"The Wild Flower Key" by Francis Rose, published by Frederick Warne, (1982). Contains good illustrations and a number of useful identification tips. It is also small enough to take easily into the field.

"*The Vegetative Key to the British Flora"* by John Poland & Eric Clement. 2nd edition (2020) BSBI. A very useful book, whether plants are in flower or not. A different approach to conventional guides.

"Britain's Ferns: a field guide to the clubhouses, quillworts, horsetails and ferns of Great Britain and Ireland." Merryweather, J. (2020). Princeton University Press.

"*Britain's Orchids: a field guide to the orchids of Great Britain and Ireland.*" Cole & Waller (2020). Princeton University Press.

"Colour Identification Guide to the Grasses, Sedges, Rushes and Ferns of the British Isles and North-western Europe", by Francis Rose, published by Viking. A very good guide to these groups which many people find difficult, containing good illustrations and a number of keys. Its main drawback is the high price and size (large format).

"*Wild Flowers of Britain and Ireland*", by Marjorie Blamey, Richard Fitter and Alastair Fitter, published by A & C Black Publishers Ltd. , 2003. A modern colour guide with excellent illustrations covering all groups, including many grasses, sedges and ferns.

Identification of difficult species or specific groups

"Plant Crib 1998" by T.C.G.Rich & A.C.Jermy, published by the Botanical Society of the British Isles, 1998 (ISBN 0 901158 28 3). An excellent book giving many hints and extra features which can be used to assist in accurately identifying species with which botanists have difficulties or where identification errors are common.

BSBI handbooks, published by the Botanical Society of the British Isles. The BSBI has published a series of handbooks covering specific groups of plants. They include more detailed species descriptions, keys and illustrations as well as providing background information. The current list can be found here.

"Grasses" by C.E.Hubbard, 3rd edition, 1984 - still an excellent book with illustrations and a mass of detailed information on a large number of native and introduced grasses.

Local Floras

"The Flora of Sussex" by SBRS (Pisces Publications 2018). This is the jewel in the Society's crown and essential for all Sussex botanists. It covers the history, ecology and conservation of plants, followed by an entry for every species recorded in Sussex that includes its distribution, history and current status.

“The Stoneworts of Sussex” by Frances Abraham (SBRS 2020). An account of this difficult group in Sussex.

“Sussex Plant Atlas” by P.C.Hall, published by Borough of Brighton, Booth Museum of Natural History, 1980, (ISBN 0 9502372 6 4). It may be obtainable from second hand book dealers specialising in natural history and the SBRS occasionally receives unwanted copies which are sold to members. It gives distribution maps of species in East and West Sussex and short descriptions for the scarcer species. *OUT OF PRINT*

“Sussex Plant Atlas supplement” by Mary Briggs, published by Borough of Brighton, Booth Museum of Natural History, 1990, (ISBN 0 948723 14 9). A supplement to the Sussex Plant Atlas giving updated information on a number of species based on records gathered by the SBRS in the period 1979 to 1988. *OUT OF PRINT*

“Flora of Ashdown Forest” by Tim Rich et al, published by the Sussex Botanical Recording Society, 1996, (ISBN 0 9522987 1 6). An account of the results of a very detailed, standardised survey of Ashdown Forest by members of the SBRS. The distribution of species is mapped at a resolution of 1km and written accounts are given for all species. *OUT OF PRINT* (Can be downloaded as a pdf here.)

"The Sussex Rare Plant Register of Scarce & Threatened Vascular Plants, Charophytes, Bryophytes and Lichens", Editor: Mary Briggs, published by Sussex Wildlife Trust on behalf of the Sussex Botanical Recording Society and the Sussex Biodiversity Record Centre, 2001, (ISBN 1 898388 16 4). An account of all Red Data Book, Nationally Scarce and Locally Scarce plants in the counties of East and West Sussex. Includes information on all localities for these species. *OUT OF PRINT* (Can be downloaded as a pdf here.)

Glossary

10km square: See Hectad

BSBI: Botanical Society of the British Isles

Critical groups: Groups of plants where differences between the species are small or subtle and which require careful attention and usually significant experience to correctly identify. Examples include *Taraxacum, Hieracium, Rubus* and *Euphrasia*.

Vice counties: For the purpose of recording plants and a number of other wildlife groups, Great Britain is divided into areas known as vice counties. These were defined in the middle of the 19th Century and correspond to the whole or parts of the administrative counties as they were at that time. They have remained deliberately unchanged despite many changes in the administrative county boundaries in order to allow comparison of current and historic records. As a result the vice county boundaries are often quite different from the modern administrative boundaries. Sussex is divided into the two vice counties of East and West Sussex. All vice counties are numbered; West Sussex is VC13 and East Sussex is VC14.

Hectad: A 10km x 10km area aligned with the National Ordnance Survey Grid and used to identify a 10km square for recording purposes. Also known as a 10km square. Specific hectads are defined by a grid reference such as TQ10, SU92, etc.

Tetrad: Areas measuring 2km x 2km aligned with the National Grid 10km squares. Tetrads are widely used as the basis for recording the geographical distribution of plants. The 25 tetrads within a 10km square are each identified by a letter so that each one can be easily identified. The system of lettering which is now accepted as standard is known as the DINTY system and is given on the front of the SBRS recording card. For example the tetrad whose SW corner is located at grid reference TQ14-26- is referred to as TQ12N. However, be warned that some older floras (like the Sussex Plant Atlas) used a variety of different systems so always look in the introduction of a flora to check which system has been used.

Monad: A 1km x 1km area aligned with the National Ordnance Survey grid. Each hectad is divided into 100 such units which are specified using a four figure grid reference. e.g. TQ3315, SU8204, etc.

SBRS: Sussex Botanical Recording Society

DAFOR: A system to indicate abundance of a species in a particular area. D= Dominant A=Abundant F=Frequent O=Occasional R=Rare.

Status: This is the term used to indicate the origin of a plant.

Please note that we also need this for the commoner species whose names are on our recording cards if their status is different from what is normally expected. For example *Anthyllis vulneraria* is usually native and if you find some in a typical habitat on chalk downland you do not need to note the status. However finding some scattered plants on a reseeded road bank would imply it was an impurity in the seed mixture in the seed mixture and should be recorded as casual or established by writing C or E beside the crossed off name on the card, or noting it in the comments section.

The following terms are used, which are often abbreviated to letters:

N = Native – Plants naturally occurring in the area. Note that some native plants may also occur as alien introductions. One example in Sussex is *Myosotis sylvatica* (Wood Forget-me-not). This does occur very occasionally as a native in Sussex in old woodlands but the vast majority of our records occur along road banks, tracks, near houses etc. and the majority of these have almost certainly originated from plants grown in gardens.

P = Planted – Plants growing where they were planted

U = Unknown - use only when you really cannot decide what the status is. However please do put it down to indicate that there really is a problem in deciding on the status and it isn't that you simply forgot to include the status.

A = Alien – Plants which do not naturally occur in the area and have been introduced by the activities of man or animals. Aliens can be subdivided into the following groups. This designation should only be used if you find an alien but you are unable to decide if the appropriate status should be one of those listed below (i.e. C, E or S).

C = Casual – plants which have arrived accidentally but have only a transient existence (usually a couple of years at most)

E = Established – plants which have arrived accidentally but which are now growing and reproducing naturally. A classic example, which becomes established far too easily, is *Fallopia japonica* (Japanese Knotweed).

S = Surviving – plants which have arrived accidentally and which have survived for several years but which are showing no signs of spreading or increasing in numbers.