County Rare Plant Register Guidelines – an update (2017)

Introduction (from Lockton, Whild and Pearman, (updated by Ellis and Pearman, May 2005)

This guidance is for BSBI vice-county recorders and others who may wish to prepare County Rare Plant Registers (CRPRs). It contains recommendations on a standard approach and suggestions about what to include; we have also reviewed some of the existing publications.

The term 'County Rare Plant Register' is used here for publications that include only plants. 'Local Red Data Book' is perhaps more appropriate for those publications which attempt to cover the full range of species present in a county. Different standards are often applied to the various taxa, particularly for animals.

History

The first British Red Data Book was written by Franklyn Perring & Lynne Farrell in 1977. It was optimistically entitled British Red Data Book 1: vascular plants, but it was ten years before the next one (insects) was to be produced. Since then RDBs have been published for birds, other invertebrates, stoneworts, lichens, bryophytes and the third edition of vascular plants has been published. In future, vegetation communities are also to be added to the list. The categories used vary between the taxa and are not really comparable.

In about 1990 Dr Perring suggested that all BSBI vice-county recorders should produce lists of locally rare species. He suggested a number of criteria, which have been refined several times. Since then other criteria have been proposed, notably by Cameron Crook in BSBI News in 1997, and by Lockton, Whild and Pearman in 2001 (the first edition of these guidelines).

The need for standardisation

If CRPRs are to have a useful role in conservation and scientific research, it really is valuable if they all conform to the same set of criteria. Planning Departments in local authorities are unlikely to give much credence to conservation designations that are simply awarded by personal preference; consultants and conservationists will find it much easier to work with criteria that are the same wherever they are working; and of course a national picture can only be built up if all the local statuses are comparable. The BSBI has plans to compile lists of the species that are considered rare in each vice-county: we need the support of the VC recorders to achieve this.

Geographical area

There has been some debate about the most appropriate geographical area to include. Depending on the perceived readership, it might seem appropriate to cover administrative counties, Natural Areas, or other geographic units as appropriate. Unfortunately, there is no obvious unit of area that can be applied consistently across the whole of the British Isles without having some drawbacks. It is important, however, that one standard unit should be chosen and, for several reasons, the vice-county seems the most sensible.

The vice-counties are already defined throughout the British Isles and are unchanging in their boundaries; There are recorders or recording groups for each vice-county;

There is an element of consistency in the size and nature of a vice-county.

This third point might raise some eyebrows, as the largest vice-counties are nearly ten times the size of the smallest, but in practice they do tend to relate to some sort of coherent unit – more so, for example, than the administrative areas covered by the various sorts of local authorities.

Where a vice-county is a particularly awkward unit from the political point of view, or where a list of rare species is being drawn up for another unit of area – a Natural Area, perhaps – the information should first be organised by vice-county and then re-organised for the chosen area.

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Aim: to make CRPRs as **easy as possible to produce and update**, with a **minimum data standard** that can be combined into **standardised** regional/ national data set (with the option to display on GIS). Also to retain some freedom to allow authors to create a version to suit their requirements.

What taxa to include

Taxa with international/ national/ regional status (defined beyond the vice-county)
Internationally Rare (including taxa which are Endemic, Near Endemic, and those for which we have International Responsibility) [8, 11]
Nationally Rare/ Scarce (occurring in 15 or fewer or 16-100 hectads in Great Britain)[8,]
National (Great Britain or Ireland) Red List (threatened categories – CR, EN, VU,) [8, 11]
National Red List other categories – NT, EX, EW, DD? [8, 11]
Protected Species – European[4] and National[10, 13, 15]
Country Red List (Wales[19], England[5], Scotland when available)
Species of Principal Importance for biodiversity [7, 16, 18]
Locally Rare/ Scarce species (the most interesting part of the RPR because determined locally)
Locally Rare: 1-3 Sites (in a vice-county)
Locally Scarce: 4-10 Sites (in a vice-county).
No recent records (potentially Locally Extinct)
OPTIONAL: further local categories e.g. declining species, uncommon, axiophytes of interest *at the recorder's discretion* – these may form additional sections/ appendices and if they are lengthy, may not be printed.

Notes on counting local sites

Wells sites (moveable 1km squares) are theoretically ideal. However, in the interest of practicality, many recorders use grid squares (monads or tetrads as available) as a more straightforward measure, with some use of judgement. For example, several 1km squares may be counted as one site if it is a cohesive site under a single management regime, while one 1km square could be split into two sites if it is known to be under two different ownership or managements.
The cut-off date for records that will be counted may be chosen by the recorder. In well-recorded counties the year 2000 may be appropriate, whereas other counties may feel 1987 or a rolling date is better. N.B. some records from before the cut-off date may be included in the RPR if they are particularly informative.

Which species to include in each category?

All native[2] species – but only locations where they are believed to be native (e.g. not planted/ introduced populations of for example *Centaurea cyanus*). However, if the status of a population is in doubt it should probably be included (with comments) in case more information becomes available.
Archaeophytes as "honorary" natives.
Where sufficient records exist – at the recorder's discretion:
- Infraspecific taxa including subspecies and varieties where these are recorded, and where they qualify on their own account or under the parent taxon.
- Hybrids – where they are sufficiently well-recorded – but only according to the criteria listed in Cheffings and Farrell[8]– hybrids between native parents, not short-lived annuals, not single occurrences of a long-lived individual. Hybrids that reproduce vegetatively, producing long-lived colonies, may be included, but not those regularly present as part of a hybrid swarm between similar parents.
- Apomictic taxa (*Hieracium/ Rubus/ Euphrasia/ Taraxacum*)– where they have been recorded sufficiently

Format

The minimum format for a County Rare Plant Register is a spreadsheet, which is primarily used as an electronic version. Ideally this would stick to a strict format including the columns as outlined on page 2. If the two spreadsheets (sites and taxa) are combined, this can be easily imported into GIS or other software, and is most easily used. It can be sorted, filtered and searched.

There is then an option to produce a secondary printable (pdf) version. The pdf version may be generated automatically from the spreadsheet (for help contact Bob Ellis/ Polly Spencer-Vellacott). Possibly the pdf version is preferred on the website for interested botanists but the spreadsheet for partners including NRW, Natural England, etc.

Ideally the spreadsheet would include one row for each Site, which may summarise a number of records, or be the latest record (note if the latest record does not hold many details it may be preferable to include grid reference/ comment/ quantify/ from an older recent record). However, many recorders may choose to include selected additional records in order to give a fuller picture of the population or history at a site. There may be a fuller version including all recent records – or limited numbers of records may be included at each site, but here the count of rows will not be the same as the count of sites, which makes this more complex. In many cases there will be some records which are older than the cut-off date for defining rare/ scarce categories, which are still useful and should be included.

The printable version may include further optional items such as pictures (photographs or maps), but may not hold full details especially for taxa which are not locally scarce. These may be summarised using text or using a distribution map.

A print run is desirable because many people will be interested in a hard copy, but not essential especially for updates.

Confidentiality

We recommend that the spreadsheet version includes full details including recorder, detailed locations etc. If preferred, this can have restricted distribution (only to trusted conservation partners). BUT in this case we recommend a printable/ pdf version with limited details, for public availability.

Distribution

We would like to see as a minimum distribution:

A checklist of taxa with local status (Locally Rare - LR, Locally Scarce - LS, Not Locally Scarce - NLS, Locally Extinct -LE) uploaded to the DDB and sent to your local biological records centre (where possible).

A printable version (pdf) uploaded to the BSBI website (and other sites e.g. local sites if you choose).

The spreadsheet version distributed to your statutory nature conservation body (NRW/ SNH/ Natural England/ NPWS/ DOE) and your local biological records centre (as a minimum).

Licensing

We recommend that CRPRs are published using a Creative Commons BY license. This means that anyone can use the document/ data etc, but should acknowledge the author. This can be done by putting in a statement like the one below – you can copy this if you wish and edit the beginning text but not the name of the license/ link:

Tips and hints

Note: depending upon your recording system you may wish to do this following your own method. This section is not part of the guidelines, but may be helpful!). If a large proportion of records in your county are not on the DDB this may be more complex than it appears here.

Compile a taxon list. Andy Amphlett has created a spreadsheet which helps a great deal with this process, **providing** the majority of recent data for your county is on the DDb. A link is available on the DDB message board http://bsbidb.org.uk/forum/viewtopic.php?f=1&t=155. This gives you links to download a multi-sheet Excel workbook and a document with comprehensive instructions. This will (in an automated way) provide you with suggested taxa matching the various Rare Plant Register guidelines. You will have to review this, and add species included for national (not local) reasons.

Once you have a taxon list you can download all the records for these taxa (within your county and since your chosen start date) from the DDB – or extract them from your own database if you think it is better than the DDB. However, our recommendation would be that you send a copy of your records to the DDB, and then download them all in one go. You can ask Tom Humphrey to upload your taxon list to the DDB as a checklist, which makes this step much easier.

If your list is not yet uploaded as a checklist, you can also paste a whole string of taxon names into a query. This can be done by copying a list of names from a spreadsheet, from a table in word processing software or from text format. There does not appear to be any practical limit to the number of names you can paste into a single query; certainly hundreds of names will work ok. The DDb will match synonyms, and will give a warning if any names cannot be matched.

Used in this way, the DDb will not recognise hybrid names in the format Hyacinthoides non-scripta x hispanica = H. x massartiana. This name would need to be shortened to Hyacinthoides non-scripta x hispanica. This can be done manually before copying and pasting a list of names, or in Excel you can use the 'Data > text to columns' function, splitting the text string at the '=' sign. This does leave a trailing space after the species name, but the DDb ignores this. The DDb occasionally fails to recognise what seem to be valid names (when pasting a list of names). In such cases, remove that name from the copied list, and add manually into a new taxon row in the query.

It seems almost unavoidable to go through your records taxon by taxon, to reduce the number of duplicate, older records for each site. However, you can make it much easier if you use Excel's Sort function effectively. For example, you might want to sort by Taxon, hectad, tetrad, monad, and date. In most cases you will only want to retain one line for each monad, but you may wish to retain some information from other records. If you are very technically minded (or have a handy friend) you may be able to at least partially automate this process.

You may wish to add accounts for some taxa in your county. This could include notes on earliest or old records, sites that have been lost, or anything else. These are best added in the Taxa spreadsheet. These may be combined with national accounts for species that may be available from the BSBI.

Formatting a pdf version can be carried out in Access – in Wales Polly Spencer-Vellacott can help with this, and may be able to advise at least briefly for others.

If you wish to add maps (to replace lengthy data tables) or photographs this is fine. However, the cost of printing is much lower in black and white (but for online versions you can use as much colour as you like).

You may wish to include various extras at the beginning or end of your Register, including: county maps, acknowledgements, introduction, summary tables, summary of species not recorded in recent years, gazetteer of sites, list of recorders, references, abbreviations, etc., etc.,

Note for the future: we hope in future to make the task easier by including more tools within the BSBI Distribution Database. Please contact your Country Officer for information about this.

Content - What information to include

This is a suggested data format and suggested columns to include. Note that if you follow the same format it facilitates combining registers for regional/ national datasets.

	Column	Field name	Data format	More details
		Spreadsheet One: One row for every site (or for every grid reference if there are not too many for a table)		
Essential	A	Taxon	Preferred name as in DDb[1]	Preferred to match DDB/ search.
	B	Year	Four digit year	Preferred for sorting purposes – only most recent year included
	C	Grid Ref	XXnnnn or XXnnnnnn no spaces or punctuation	6 or 8 fig preferred, (monad/ tetrad if best available, hectads best avoided)
	D	Location	Name of location	
Desirable	E	Recorder	Recorder(s) name(s)	
	F	Protection	If site is protected, "SSSI", "SAC", "ASSI" or "NHA"	In GB, SSSI preferred because all SACs and NNRs are also SSSIs[1,3,6,17,20]. ASSI in Northern Ireland[14], NHA or SAC in ROI[11]
	G	Site name	If site is protected, name of protected site	
	H	Quantity	Number or estimated number or descriptive quantity if available	
Optional	I	Date	Full date of record if available	
	J	2Grid Ref	Additional grid reference(s) or modifiers e.g. +, description of linear populations	(this is included to prevent the use of grid references like XXnnnnnn+, indicating more detailed GRs available, in column C, which prevent them from being recognised correctly)
	K	Comment	Brief comments including population details/ habitat and history	
	L	VC	Vice County Number	Will enable the dataset to be combined
		Spreadsheet Two (may be combined automatically to save having to enter/ copy information): One row for every taxon		
VC details specific)	A	Taxon	Preferred name as in DDB	(required to match to first sheet)
	B	Local Rarity	LR, LS, NLS, NRR	According to number of Sites in vice-county. Locally Rare, Locally Scarce, Not Locally Scarce, No Recent Records
	C	County Account	Brief account (i.e. on status/ history/ distribution in county)	Especially useful for species with no recent records where no entry in part 1. May be provided for all, some or no taxa
	D	VC	Vice County Number	Will enable the dataset to be combined
Can be added automatically	E	Common name	Preferred vernacular (English) Name	
	F	2Common name	Vernacular name in second language e.g. Welsh[21]/ Gaelic	
	G	International Status	Endemic, Near Endemic, International Responsibility[8,]	
	H	Nat Rarity	National Rarity: NR, NS[8, 11]	Nationally Rare, Nationally Scarce
	I	Nat Red List	National Red List status (excluding LC): CR, EN, VU, NT, DD, EX, EW	GB Red List[8] or Irish Red List[11]. Critically Endangered, Endangered, Vulnerable, Near Threatened, Data Deficient, Extinct, Extinct in the Wild
	J	2Red List	Country Red List status (excluding LC): CR, EN, VU, NT, DD, EX, EW	Welsh[19]/ English[5,]/ Scottish Red List as available (abbreviations as above)
	K	Priority	S41, S42[7], NIPS[16], SBL[18]	

References and data sources

All areas

1. BSBI Distribution Database bsbidb.org As well as records, the DDb contains a lot of information on taxa, many bounded areas (protected areas), and checklists e.g. Red Data Lists, and Species of Principal Importance from the NERC Act. If the checklist you need is not on the DDb it may well be possible to add it. For more information contact your country officer or Tom Humphrey.
2. Vice County Census Catalogue – for information on county status (native/ archaeophyte/ alien) http://www.botanicalkeys.co.uk/flora/vccc/index.html BUT this is not currently up-to-date.
3. Protected sites (European): Special Areas of Conservation (SACs) – available mainly via GB or country websites.
4. Protected species (European): Habitats Directive (1992) Annexe 2, 4 and 5. Available in taxon designation spreadsheet from www.bsbi.org/resources or JNCC

England

5. Stroh, P.A. *et al.* (2014). *A Vascular Plant Red List for England.* BSBI. Available printed or online (pdf and xls). www.bsbi.org/england
6. Protected sites – Sites of Special Scientific Interest (SSSIs) https://designatedsites.naturalengland.org.uk/

England and Wales

7. Natural Environment and Rural Communities Act (2006): Species of Principal Importance – Section 41 (England) and Section 42 (Wales).

GB

8. Cheffings, C.M. and Farrell, L. (2005). The Vascular Plant Red Data List for Great Britain. Available online or printed. However, updates are available and spreadsheets (available from BSBI and JNCC) have more up-to-date information. www.bsbi.org/resources
9. Protected sites - Sites of Special Scientific Interest (SSSIs), Special Areas of Conservation (SACs). http://magic.defra.gov.uk/
10. Protected Species – Schedule 8 of the Wildlife and Countryside Act, 1981. Available in taxon designation spreadsheet from www.bsbi.org/resources or JNCC

Ireland

11. Wyse Jackson, M., FitzPatrick, Ú., Cole, E., Jebb, M., McFerran, D., Sheehy Skeffington, M. & Wright, M. (2016) Ireland Red List No. 10: Vascular Plants. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs, Dublin, Ireland. https://www.npws.ie/sites/default/files/publications/pdf/RL10%20VascularPlants.pdf
12. Protected sites: Special Areas of Conservation (SACs), Natural Heritage Areas (NHAs) http://www.npws.ie/protected-sites
13. Protected species: Wildlife Act, 1976 & Wildlife (Amendment) Act, 2000; Flora (Protection) Order, 1999 [SI 94/1999] http://www.npws.ie/sites/default/files/general/Listed_species_checklist_Dec12.pdf

Northern Ireland

14. Protected areas: Areas of Special Scientific Interest (ASSIs) https://www.doeni.gov.uk/topics/land-and-landscapes/areas-special-scientific-interest
15. Protected species: Wildlife (NI) Order, 1985 (as amended by the Wildlife and Natural Environment Act, 2011) – Schedule 8
16. Northern Ireland Priority Species see www.nienvironment.gov.uk/biodiversity/sap_uk.htm

Scotland

No country red data list available in 2017.

17. Protected Areas – Sites of Special Scientific Interest (SSSIs) - http://gateway.snh.gov.uk/sitelink/index.jsp
18. Scottish Biodiversity List http://www.gov.scot/Topics/Environment/Wildlife-Habitats/16118/Biodiversitylist/SBL

Wales

19. Dines, T.D. (2008). *A Vascular Plant Red Data List for Wales*. Plantlife. Available printed or online (pdf and xls). www.bsbi.org/wales
20. Protected areas: Sites of Special Scientific Interest (SSSIs), Special Areas of Conservation (SACs) downloads from http://lle.wales.gov.uk/
21. Bebb-Jones, E. *et al.* (2003). *Cyfres Enwau Creaduriaid a Phanhigion: 2 Planhigion Blodeuol, Conwydd a Rhedyn*. (Names of animals and plants: Flowering plants, conifers and ferns). Cymdeithas Edward Llwyd. Available printed. Excel spreadsheet available via Welsh Officer.