

ADIT

Choosing Biological Recording Software Some Things To Consider

General

1. Why are you looking for a recording program?
 - a. To keep a simple record of the species that have been seen.
 - b. So that records can be sent to someone else.
 - c. So that reports can be produced.
 - d. So that maps can be produced.
 - e. So that graphs can be produced.
 - f. To help with analysis of the data to produce real information.
 - g. To help in the production of documents and publications.
 - h. All of the above and more.
2. Individuals recording for themselves may have different requirements from those recording on behalf of an organisation. Some possible considerations follow, though there is often some overlap between the two:
 - a. Recording mainly as an individual
 - Individuals have a relatively free choice. Their existing hardware (and associated operating system) may be a limiting factor, but most home computers running Microsoft Windows (directly, or in the case of a MAC under emulation), will run most of the programs currently available. If in doubt, ask the software producer or publisher.
 - Individuals may need to share data with other recorders, or send data to be collated centrally by a 'parent' organisation.
 - Most individual recorders are not paid for their recording activities, and have a limited budget for associated computer software. Wildlife recording software is generally cheap, so we do not need to look so much at price, but rather, value for money.
 - b. Recording mainly on behalf of an organisation
 - Organisations need to consider how the software can be deployed efficiently, and fully integrated with existing or proposed systems (computer or paper-based). Does the program need to output data to a main GIS (Geographical Information System)? Can it use maps produced by the GIS? Can data be transferred efficiently from remote workers and collated centrally? Does it need to be able to load an existing data set?
 - Organisations typically require multiuser access to the data being recorded and manipulated. Some of the programs on offer are single user only, and others have limited multiuser access.
 - Organisations often require the software to access multiple data sets, to support work on several concurrent projects.
 - Organisations with multiple sites may need to pre-configure the software prior to deployment. This significantly reduces installation and training times, and support costs.
3. If you make the 'wrong' decision now (or your needs change), how easy will it be to transfer to

something else?

- a. How is the data stored?
- b. Can the data be accessed by third party tools?
- c. Does the software offer comprehensive export facilities for data and all those base maps you spent hours designing?
- d. Will the supplier help you make such a move?

Recording

1. Species lists

- a. In the early days of computer-based recording, much time (and no little vented spleen) was wasted on discussion of species lists, and their publication.
- b. Greater user involvement in list production, and easy availability (particularly over the web), have reduced the problem to one of insignificance. Yes, you can still find people prepared to argue about what should, and should not be, included in various lists, but most effort now goes (at last I hear you cry) into the task of recording.
- c. Typically, the software on the market comes with a comprehensive list (or lists) of species covering many areas of recording (the system on my desk has 30 or so lists, encompassing about 160,000 species).
- d. What happens if you want to record items not included in the supplied species database?
 - Can you add your own items to existing lists?
 - Can you amend errors or omissions?
 - Can you add your own complete lists?
 - Will the supplier obtain a suitable list or lists for you?
 - Can other users send you a list they have built?

2. Basic data entry

- a. Is data entry straightforward and efficient?
- b. Can fields be automatically replicated for subsequent records?
- c. Are there rapid search methods for selecting species from long lists?
- d. Can you set up the system to support minimal entry?
- e. Can fields be automatically replicated for subsequent records?
- f. Are there flexible entries for dates (e.g. year only) and counts (DAFOR, DOMIN, Presence/Absence, etc)? Can you define counts for specific types of records? Can you record a count of zero or absence?

3. Position (geographical location)

- a. Position has grown in importance, and it is now common to specify a grid reference for recorded items.
 - Can you define a default grid reference for a site?
 - Can you enter grid references in multiple formats (e.g. Ordnance Survey, Latitude and Longitude, UTM)?
 - Can you just click on a map to automatically enter a grid reference?
 - Can you use a GPS to enter grid references?

4. User fields

- a. All programs will provide core fields for species, location, count, etc, but often you will want to add your own fields.
 - Does the software understand the concept of user-defined fields, and how many does it allow you to use?
 - Can you have different fields for different types of species, (e.g. for birds you might want to record information about gender, nesting and migration, but for some plants, altitude and aspect)?
 - Having defined the fields, can you use them for data selection, and are they fully supported by the reporting system?
 - If the field is very important to the recording process, how do you make sure that it is completed during input?

5. Special records

- a. From time to time, you will come across something unusual, and want to add extensive notes, and possible supporting documents and pictures. Does the program let you do this?
 - b. Some records may be of a sensitive nature (badger sets, bats, rare plants), and you may want to restrict access to them. How does the program handle this?
6. Bulk input
- a. Sometimes you will want to record a simple count for a large number of species all at one site (record card style). Does the program let you set up record cards, and simplify the task of entering a large number of counts in one go?

Reporting

1. Data selection – can you select data in a flexible and comprehensive manner?
 - a. Once you have more than a few records, you will want to select which records to display (report, plot, graph, export, etc). Typically you will want to select records for a particular site (or sites), by date ranges, by recorder, by species (or species group), or via one or more user defined fields.
2. Report formats
 - a. Most systems will have a number of built-in reports, but you should be able to create your own reports. Is there a report generator, and will you be able to use it?
3. External reporting tools
 - a. Can the underlying data be accessed by external reporting tools (e.g. Crystal Reports, Microsoft Query, Excel, Access)?

Mapping

1. General
 - a. There has been a considerable growth of interest in mapping, and it is now considered a prerequisite for recording software. The mapping can be provided directly by the program, or via a third party link.
2. What type of mapping is supported?
 - a. Raster.
 - Raster maps are pictures (bitmaps, jpegs, gifs, aerial views, etc), that have a known location in the real world. Typically the user enters the grid references of a bounding rectangle, and the program can calculate any position on the picture.
 - Modern flatbed scanners, and available map images (largely from web based mapping services), have popularised the use of raster maps.
 - Copyright. Many available images will be copyright, and you need to be careful to ensure that your use of the map, does not infringe the copyright.
 - Raster maps are useful for ‘quick and dirty’ mapping of small areas. They do not display or print well when resized, and often contain too much clutter for serious applications.
 - b. Vector.
 - Vector maps are made up of points, lines and shapes that represent items in the real world that have a known location.
 - The maps are drawn at run time, and can be easily resized without loss of quality.
 - Many vector maps include small raster items (e.g. symbols).
 - Commercially available vector maps are generally expensive (particularly in the UK), but there is a fairly large and growing collection in the public domain. These have often resulted from many hours of painstaking work by a dedicated individual.
 - c. Both.
 - Obviously enough, if the software supports both methods, you can get up

and running quickly with a simple raster map, and then develop or obtain a set of more sophisticated vector maps.

- d. External.
 - Some recording programs have an integrated link to an external mapping program (such as DMAP or AditMap), or can output records directly to a GIS.
- e. All.
 - You might be really lucky, and find all of the above methods in just one package.
3. Where will you be recording?
 - a. Geography.
 - England, Wales, Scotland, Northern Ireland?
 - Ireland (Via extended British Grid, or Irish Grid, or both?)
 - Further afield?
 - b. What sort of grid system will you be working with?
 - Ordnance Survey (at various levels)
 - DINTY
 - Quadrant
 - Latitude and Longitude
 - UTM
 - Relative position
 - User defined
 - c. Over what sort of scale range (how big is the area to be covered)?
 - Can you plot on a UK wide basis?
 - Can you plot records from your garden?
4. Plotting methods
 - a. Is there a useful range of symbols and colours?
 - b. Can you define colours and sizes for record plotting?
 - c. Is pre-post date plotting supported?
 - d. Can you label the map interactively at runtime?
 - e. Is grid centre plotting supported for distribution mapping?
 - f. Can you add a grid, and zoom the map?
 - g. Can you drill down from on-screen symbols to underlying data (record card)?
5. Map building
 - a. Does the software include a module to help you build and manipulate base maps?
 - b. Can you import maps from other applications (E.g. Mapinfo, Arcview, DMAP)?

Graphing

1. General
 - a. Like maps, graphs can provide very useful graphical representations of numeric data, particularly changes in populations or levels of biodiversity.
2. What sort of graphs are included?
 - a. Does the program allow you to display a number of useful graph types (Bar, Line, Area, etc.).
3. Is there support for statistical analysis?

Importing - what sort of importing is supported?

1. Data from other recorders
 - a. Using the same software?
 - b. Using another recording package?
2. Data
 - a. From external databases?
 - b. From spreadsheets?

3. Species lists
 - a. From external databases?
 - b. From spreadsheets?
 - c. From XML files?

Exporting – what sort of exporting is supported?

1. Sharing data with other recorders
 - a. Using the same software?
 - b. Using another recording package?
2. Data
 - a. Simple file exports (comma delimited, tab delimited)?
 - b. Cut and Paste via the clipboard?
3. Scheduling exports
 - a. If data is to be sent to a central database, can you schedule regular exports?

Help System

1. Is there a standard help system?
2. Are there 'wizards' or 'druids' to get you started?
3. Can the users add their own notes?
4. Is technical support available by phone (at a premium rate)?
5. Are regular program updates available, and at what cost?
6. Given that all computer programs contain bugs, what response will you get to reporting a bug?
7. What response are you likely to get to requests for program changes and suggestions for improvements?

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