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THOUGHTS ON THE LEICESTER BIOLOGICAL RECORDING MEETING
WHERE TO NEXT?

Graham Walley, Nottingham.

The Leicester meeting was a timely and useful revitalization of our biological recording world and Leicestershire Museums and the BCG deserve our thanks.

I found it a curious mixture of depression, deja vu and hope - but maybe that says more about me than the meeting. Having got together let's stick together and keep talking (and start doing).

The 1975 Woodstock meeting was meant to be the start of a regular forum and we have missed that. Maybe we can start again.

The meeting was fueled by a general concern about the state of nature conservation in the U.K. today and how we (the BRC's in our various guises) fitted in. Of course there is too much against nature conservation and too little for it - but our concern at our own effectiveness is legitimate.

Biological recording is important in nature conservation because it puts what we know about the U.K.'s plants and animals into some kind of context.

It identifies nationally and locally rare species and communities, it allows distributions to be drawn and monitored, it allows sites that support natural history to be described and all the component parts to be valued, either singly or together.

It is a complex task requiring great expertise.

Museums, County Conservation Trusts, the Nature Conservancy and the National BRC all have, use and need biological information and it seems to make sense to have an open transfer of data between everyone concerned for all kinds of reasons - from front-line conservation and development control to museum display and education.

The task is one that is parallel to that of museum documentation and is similar in size and perhaps complexity, and the successes and failures of that should make us pause and seek priorities in a step-by-step way. But perhaps we should not pause too long.

Part of the problem stems from the diversity of the recording centres and the different stages we are at and the different resources we have. Some counties have an actively recording Trust, other Trusts leave it to their museum-based records centre; other centres operate independently of both. Some areas have the NCC actively supporting their local BRC whilst they actively ignore them elsewhere. Some BRC's encourage participation in national recording schemes, others contribute nothing. All very varied.

If helping conservation is our ultimate aim then we need to separate out the various options and priorities for improving biological recording and the flow of biological data.

These are my priorities and the questions that occur to me and might be considered by the forum proposed at the Leicester meeting.

1)

The way biological information is used in nature conservation generally follows the sequence:

FIELD RECORDING > CATEGORIZATION > EVALUATION > DISSEMINATION

with the standard of STORAGE AND RETRIEVAL affecting all stages, and the National Recording Schemes providing species information for use at the CATEGORIZATION and EVALUATION stages.

DISSEMINATION covers everything from informing owners, planners and the NCC to the acquisition and management of sites, and to the use of information in education or adding 'ecological enhancement' to landscaping schemes.

A block at any of these stages could stop a site or species being protected.

If we are looking for a first priority and possibly searching for central funding then the removal of these blocks to the flow and use of biological information is the prime contender. It makes sense, for example to concentrate efforts to remove them wherever they are, and whoever owns them. It may make sense to get funds to complete field work in one under-recorded area, than to spend them on computerizing an already adequate manual records centre elsewhere.

But who will decide on the hold-ups and priority cases are? Obviously RSNC, NCC and BRC and the national societies are all involved. Could the proposed forum also contribute?

2)

The next priority is to make more general improvements in contacts and the transfer of data between record centres. Although standardized improvements would benefit both local and national bodies there could be differences between the two in how willingly they would or could implement them. This is a measure of both their flexibility and accountability, as well as their resources.

Improvements in the organization of biological data on the national scale is largely in the hands of the NCC, RSNC, BRC and BSBI and other national societies. I suspect they will be undertaken by each of them separately.

Each organization has their own problems of standardization within themselves.

They all have their own way and inertia - but perhaps some sensible advice from a body, with a larger overview might get a hearing. It would be a start.

The flow of data from the national to the local level is especially desirable from our point of view, but how do you persuade, for example, the NCC to take account of local needs? Why should they?, would it help them? or would it direct resources away from more important work. Or should not the NCC have the resources to keep Biological Recording world together as part of its national duties anyway? Or would that, in itself, be the kiss of death.?

As for the national recording schemes and the collection and interpretation of their biological data we basically need much more of it. We know too little of invertebrate rarity and we need our national knowledge of flowering and non-flowering plants to be regularly updated, and we need more cost-effective ways of collecting and disseminating this information.

Museums have a special responsibility here to support national recording schemes, contribute to them and, most importantly, maintain the collections of local material that support the local records. No one else will do this.

3)

FIRST STEPS: MANUAL STANDARDIZATION

3.1) site descriptions

Most BRC's use their own version based on the old BRC HABITAT card and the BRC Trust plant recording card. Could the new RSNC forms be the start of a new standard? The NCC uses different recording media according to the major habitat type, and the RSPB, BTO, NT all have their own schemes.

Perhaps more than an actual common recording sheet we need an agreed list of data fields that can be used, and a basic minimum of which should be used for any one purpose.

How do we describe habitats? Whose system? Which species lists do we use? Which measure of abundance?

3.2) site categorization

We start to make sense of the information in the description by categorizing it. What kind of grassland does this site contain, what kind of woodland?

Before we can add our local site information to the larger unit of the region or the country, or put them into the larger context we need to be sure we are talking about the same types of vegetation.

Will the National Vegetation Classification help here; will it provide a basic range of types of vegetation which your local sites will always be between? Will local categories have to be created? How do we go about this? Whose responsibility is it? Is this best done at the regional level?

3.3) site evaluation

How do we put an overall value on a site? Planners want that, and Trusts, so that key sites can be identified and priorities for avoidance or acquisition drawn up.

It is reasonably easy to set categories for the evaluation. Notts and Leics. independently have devised a four tier system: Regional/1st County, County, District, Parish/Local. Presumably others are doing the same.

Justifying the inclusion of a site into one of these is far more difficult to explain - even to oneself. Could it be justified to a public inquiry? Can it be done more systematically?

3.4) Single records.

How do we cope with single records, perhaps of a few species of many different groups collected on one or more sites? The Pink 80 column BRC card forms a standard, but does it still work?, are the data fields adequate?

3.5) Multiple records

The recording cards available for sites and grid references are many and varied. Do they all conform to the data fields needed in (3.4)? Can the species code numbers be made unique? How can they be improved for computerization? Whose responsibility is it to produce improved cards?

4)

SECOND STEPS: COMPUTERIZATION

Computerization has many inherent problems but it increasingly makes sense where standardization is being attempted. More importantly it gives us the chance to make the most of one punching in of information, it saves tedious repetition of typing tasks and once verified it retains its accuracy. When we are all trying to do too much with too few resources and we have to make the most of a limited workforce it begins to look indispensable.

Maybe the Leicester meeting has thrown up enough interest with enough parties starting on the path of computerization that we can get some agreed standards for information and hardware.

It clearly makes sense for me to receive a tape or disc from the National BRC with all the Notts records on it rather than a print-out that I have to then punch in to my local machine. It makes sense for the national BRC to receive all the Notts records from all groups in one batch if they can be sorted at Monkwood by machine, and then automatically distributed to the national recorders .

If we want to transfer data we need to make sure it is the same information, arranged and recorded in the same way and in a form that can be read by other users. We need common agreement on:

4.1) use of codes

Fixed length codes make sense in many ways but they need to be controlled. Within recording schemes numbered species are used but they are unique only within that scheme. We need a new series of codes if we are to cope with the many groups that are of interest to us in our local areas.

Recently published checklists by the RES and other national societies provide a good basis for code creation.

4.2) use of species names

Do we use original names on records or do we update them, where possible, and if so how do we link them?

4.3) standard records and serial files

Despite the fact that several centres already have established computerized systems using various processing packages they all can produce a basic serial file of records that could be made to contain basic biological information we need. Providing the position, type and length of fields are known this type of data is readily transferable if the media, tape or disc, can be physically read by the receiver.

(Even now this type of transfer could be attempted if all our records could be reduced to the basic "pink card" format). Once on the user's machine the serial file can be used as source data for any computer package.

4.4) hardware

The MDA can already read discs of various sizes and formats derived from several machines. Although several of us use different machines we could perhaps limit the spread of this in the future. As D.Mellor from Paisley said, 'give us the machines and we will standardize'. Could this be a role for central funding? Perhaps it could be investigated on a regional level.

4.5) routes

We need approved routes for data transfer. It is still far too woolly.

With a network of electronic transfer could the BRC act as a clearing house?

Do we need a stricter use of local records centres as the only route to the BRC? Should county national scheme contacts have to leave data with their local BRC's? Do all local BRC's deserve that consideration? Do we need accredited BRC's? with the BRC stamp of approval? Our varied circumstances will no doubt produce varied solutions.

4.6) concentrating resources

The main cost of biological recording is the field work, the identification of specimens, the punching in of the data, and storing the data electronically in an accessible form.

It would be madness not to make the most of any of the very labour-intensive operations

Do we go for the day-to-day use of small computers locally and centralize the expensive computer power and peripherals (such as fast or good-quality printers, micro-fiche producers, open-reel tape decks etc), on a regional or national basis? Or do we run independent larger machines locally?

In the museum world could we expect Area Service support for biological recording agency work in the same way that conservation and taxidermy work is supported?

Could a Trust or museum record centre get its data punched and stored and organized by a larger centre and have it enter the network that way? (Hopefully there will be a network)

4.7) centralized production of computer-aids

There are some tasks that should be done once, nationally and shared by the many, (and perhaps subscribed by the many)

a) literature searches/references

A continuing interest of FENSCORE that has so far eluded us is the indexing of biological records and references to collections that are present in many national and local publications and manuscripts.

The work of Bill Ely of Rotherham has shown what can be done - but it deserves to be done in the same way across the country and stored electronically to provide the maximum of access (it may even make money via PRESTEL). It need be done once only. Would computerization of the extensive card indexes held by the BM(NH) be a starting point?

b) checklists

Electronically stored and distributed checklists would be exceptionally useful, especially in the production of dictionary files that link names, synonyms, English names and codes. They lend themselves to being readily corrected, updated and changed into hard copy in various forms. (This could be a two-edged weapon of course - slow revisions make for stability)

c) dictionary files to facilitate input

This is an extension of the latter. Codes save storage and processor space and hence money, but their production is expensive and prone to error.

I'm working on an inputting aid that will accept any unique abbreviation of scientific names and commoner synonyms, english names etc and produce the correct four digit code to be used in the computer. This is exceptionally useful for adding data from original field records that are not in the controlled record card form, and would be useful elsewhere where codes are needed to be generated accurately. It is the type of operation that is expensive to produce yet need only be done once to be useful to many users.

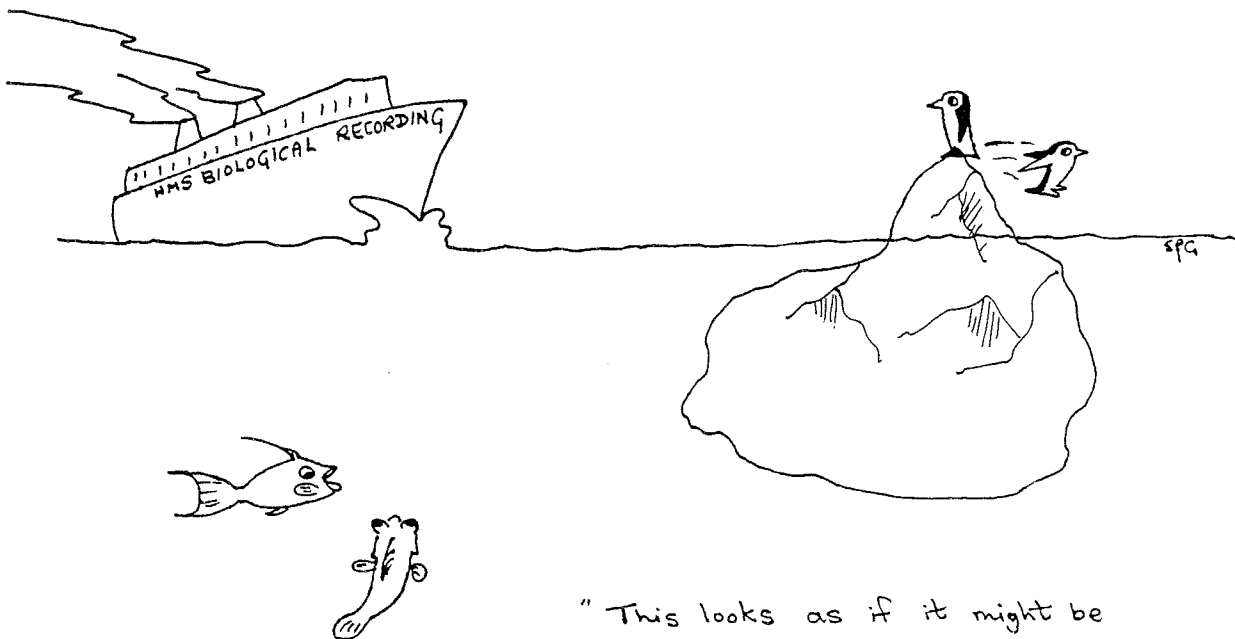
5)

CONCLUSION

Clearly there is much to be sorted out, especially in linking the recording techniques at the national and local levels, and the flow of data and where we fit in. The job is far too important to be held back by parochialism and lack of imagination. Nature conservation will be increasingly fought for by facts and figures and biological recording is part of that.

In the Midlands we are attempting to get some exchange of ideas and methods in the next few weeks. A meeting planned for November '84 will bring together the biological recording people of Derbyshire, Leicestershire, Lincolnshire, Nottinghamshire and Warwickshire. We will report back on.

Biological Recording organizations in the UK do need a forum of some kind to take ideas and discussion started at Leicester this year further. We need a "where do we go from here" group that draws from all the main parties of the biological recording world, a BRC equivalent of FENSCORE that keeps the same grass-roots contact. Whether we need the equivalent of the MDA remains to be seen.



" This looks as if it might be environmentally damaging! "
(inspired by a talk at Leicester)