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Biology Curators Group Newsletter

Title: The General Public as a Source of Biological Records - The North East Experience

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Source: Davis, P. (1979). The General Public as a Source of Biological Records - The North East

Experience. Biology Curators Group Newsletter, Vol 2 No 3, 111 - 116.

URL: http://www.natsca.org/article/1698

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of the stock of local Medical Botanist, A.R.S. Proctor, the fittings of whose shop were acquired by the Museum after his death in 1971.

Sue Patrick Derby Museum

THE GENERAL PUBLIC AS A SOURCE OF BIOLOGICAL RECORDS - THE NORTH EAST EXPERIENCE

Unfortunately the majority of biologists working in museums do not have sufficient time or opportunity to spend on field recording, the luxury of days spent in the field now being largely the perogative of STEP (formerly JCP) assistants - indeed a useful means of distinguishing permanent and temporary staff in an examination of skin pigment in September. However, the boom in 'leisure' and ready access to the countryside has resulted in many more people making contact with the natural environment and discovering their local wildlife. One would imagine that here is an extremely useful source of information if only it can be tapped in a way which will yield meanginful results. Natural History curators in north east England meet on a regular basis as the 'Natural History Panel ' of Museums North (the N.E. equivalent of Federations) and have tried to obtain biological records from the general public in the form of three regional surveys (amphibia, squirrels and the hedgehog) carried out since 1975. The following notes are a brief examination of the ways in which the surveys were conducted, the problems encountered and the value of the results.

First choose your animal...

The choice of subject is arguably the most difficult decision to be taken, and a number of criteria need to be met:-

- 1. Is the animal large enough to be seen, or if small is it conspicuous?
- 2. Is the species relatively common?
- 3. Is the animal comparatively easy to recognise?

In other words there is little point in asking a non-biologist to look out for a species there is little chance of seeing or which he cannot identify.

- 4. Has the animal got 'public appeal'? (a cuddly, furry animal is much more likely to solicit a response)
- 5. Is there an interest angle? (An absolute essential for publicity)

6. Is there a valid scientific/conservation/educational objective which will be realised by studying the distribution of the species?

It is probably impossible to find one species or group of animals which fit all the requirements. Amphibia were chosen as our first survey because of interest created by a film about them shown on a regional natural history programme. Opportunism can be important! Also, our knowledge of distribution was scant, not only of the animals but also of the available breeding sites. Amphibia are perhaps not cuddly, but they are interesting and to some even appealing. Identification, however, was to be a major problem.

The distribution of red and grey squirrels was particularly interesting in the region as subjective evidence suggested a continued northward spread of greys in Durham. This also provided an angle for the media - conflict (?) - resulting in good publicity. Both species are reasonably abundant, though with a patchy distribution, and can be readily distinguished. The hedgehog variation was chosen to gain basic distribution data. It has proved to be a popular choice because it is a widely distributed, appealing animal.

Then reach your public...

Obtaining the information required needs concentrated planning and not a little spoon-feeding. We are attempting to get accurate information from people who are not scientists and this has to be kept in mind throughout the exercise. We need to:

- 1. Generate public interest
- 2. Sustain that interest over a period of time
- 3. Make explicitly clear the nature of the information required
- 4. Ensure that records can be verified

In each of the surveys conducted in the north-east the main means of achieving these aims has been to produce an A4 handout. This states the reasons for the survey, a guide to identification (if necessary), and a tear-off slip listing the information required which can be returned to a museum in the area. The handout needs to be as attractive as possible to catch attention, and illustrations are an obvious aid here. The academic hat needs to be put aside too - a heading 'North east Museums Amphibia Distribution Survey' does not roll off the tongue as easily as 'Spot the Frog', the title eventually chosen. Having produced a handout

* copies of these are available from Sunderland Museum

this can then be made available through the usual channels to the public - museums, libraries, leisure centres, etc., and be used to contact the media as a press release. Publicity is the key to success in a survey of this kind, and press, radio and television are fortunately always eager for natural history 'stories'. Our experience is that a television slot is (not surprisingly) the most productive - indeed a 'squirrel hot-line' is an essential the day following a broadcast and telephonists should be forewarned. Making a productive start can usually be guaranteed, but sustaining interest is more difficult. Assessing the information received at a later date can usually produce something of interest to return to the media with - an under-recorded area or the occurrence of species in unusual habitats (the toad in the pantry, the voyeur hedgehog found in the ladies room in the local hospital) for example.

The hedgehog survey has an additional facet. The handout (shown) followed the same pattern as before, but also acted as a carrot to hedgehog spotters. who would be rewarded with a 'hedgehog wallchart' if they forwarded at least two records. The wallchart was prepared jointly by the panel and was illustrated by a notable local wildlife artist - the cost of handouts (5000) and wallcharts (2000) was £200, the money being found from Tyne and Wear Museums Education budget and grant aided by the Area Service. In this instance the wallcharts were also used to gain publicity for the survey. The impact of the wallchart has been particularly significant in the five weeks the survey has been in operation a total of 600+ records have been received. It was suspected that a crop of spurious records would arrive from unscrupulous hedgehog wallchart seeking youngsters but this has not proved to be the case. In fact the majority of records are extremely well documented, often with a dossier on 'their hedgehog' and accompanied by Instamatic 'hedgehog at dusk' or the popular 'blurred hedgehog with hand' colour prints. When producing a wallchart postage costs must also be taken into account, and it is estimated that each record costs museums approximately 8 pence. This could be considered prohibitive, but undoubtedly it is an aid to success, provides good publicity for museums generally and plays a valuable educational role.

Assessing the results...

In each instance one member of the panel has taken responsibility for collating and interpreting the information received - indeed it could not be done in any other way. A number of points are immediately evident when working through the records. Identification at even the most basic level is a real problem for the majority of the general public, and most do not know how to give a grid reference. This means a good deal of time needs to be spent verifying records and adding grid references for (often obscurely named) sites. In addition, historical records are frequently given even though it is explained that only current information is required. Irrelevant information is often provided.



The hedgehog or urchin Erinaceus europaeus, is the largest insectivore (insect eater) found in Great Britain, owing up to a foot in length. It is unmistakeable due to its spines, which are modified hairs providing a very effective defence against predators. An attractive wallchart* teiling you more about the hedgehog - its diet, breeding biology, behaviour and folklore has been prepared by Tyne and Wear County Council Museums. All you have to do to win a wallchart is to send in to your nearest Museum (listed below) information about where a hedgehog has been seen. Records of dead hedgehogs (they are often killed by cars) do count - and the more records sent in the better. The information received will help the natural history curators in Museums in North-East England to plot the distribution of this interesting animal in our area.

Hedgehog Survey	Hedgehog Survey
I saw a hedgehog at (place)	I saw a hedgehog at (place)
Grid Reference	Grid Reference
Dead or Alive?	Dead or Alive?
ate seen	Date seen
Time seen	Time seen
Name of Recorder	Name of Recorder
	Address

I do/do not want a wallchart.

Please detach this portion of the sheet and send your information to one of the following Museums:

Preston Hall Museum, Yarm Road, Stockton-on-Tees The Gray Museum, Clarence Road, Hartiepool The Dorman Museum, Linthorpe Road, Middlesbrough The Hancock Museum, Barras Bridge, Newcastle Sunderland Museum, Borough Road, Sunderland

^{*} Only a limited number of wallcharts are being printed, but they will be fowarded to recorders as long as stocks last.

The Amphibian survey, although resulting in a total of 417 sightings from 334 sites (Pettigrew 1977), was perhaps the least successful. The problem of identification of newt species was perhaps inevitable, but I remain to be convinced that the public can distinguish between frog and toad - even with a comprehensive handout! The majority of records were from garden ponds - perhaps one of the less threatened wetlands. However, for all the records were a mixed bag, we did learn of some important breeding sites of which we were unaware, and paid follow up visits to those of particular significance or which were under threat, and we have added to our knowledge of species distribution. Add to that the publicity gained for wetland conservation and the survey must be considered worthwhile.

The squirrel survey resulted in fewer records - 235 from 152 contributors - yet the standard of information received was higher. A high percentage of recorders contributed a grid reference, accurate locality and habitat details and descriptions of their sighting. It would seem that this survey appealed more to the amateur naturalist rather than the public generally, a high proportion coming from County Trust or Field Club members. A number of very suspect records for grey squirrel, well outside the expected range - were received, and most of these (after consultation with the recorder) were eventually discounted. It is extremely important to obtain the recorders name and address, and this is an essential feature of the 'tear-off' slip accompanying the handout.

Unlike the amphibia, there was comparative squirrel distribution data for the north east of England from comprehensive searches undertaken by staff of the Ministry of Agriculture in 1946, 1957, 1962 and 1971. Our results (Davis P 1979) indicate a continued spread of the grey squirrel in the south of the region.

At this stage it is difficult to comment on the scientific value of the hedgehog survey, but it is already evident that we will have a considerable amount of data to analyse. Undoubtedly it has aroused public interest and acted as a public relations exercise for the member museums. The number of records from schools and schoolchildren indicate that the educational potential of the survey is also being realised.

Involving the general public in biological recording could perhaps be considered a dangerous practise, giving erroneous results and being too time consuming for the people co-ordinating the survey. Undoubtedly the latter is true - a good deal of effort is required to make the survey a success, but I feel that provided the target species is the right one, and the survey is conducted in a responsible way, the general public do have a role to play. One obvious critiscism is that time would be better spent by museum biologists in recording threatened species or sites rather than the more general surveys which can be aimed at the public. All I can say in defence of biologists (and geologists) in the N.E. is that we do both - I believe rather well!

References

Davis P S (1979) The results of a squirrel distribution survey in North East England 1977/78. Vasculum, Oct. 1979 (in press)

Pettigrew, TH (1977) Spot the Frog. Vasculum V61, No. 4, p. 90-91

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