Biology Curators Group Newsletter

Title: Tapping the Third Source

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sculpturing, bristles and hairs, showed that these supposedly high-flying bats took a fair proportion of terrestrial prey including a wingless weevil and a tube-dwelling spider. Fragments of the bark beetle Rhizophagus politus (Hell) constituted only the third Yorkshire record and the bat's capture of a small chafer must have been like catching a machinegun bullet between its teeth!

Studying the unbelievably catholic diets of foxes, the original gastronomic opportunists, provided hours of bizarre entertainment - reports on the contents of some 'urban' droppings being unpublishable even in this permissive era! Sand spangled droppings from coastal fox populations showed that winter storms and oil spills provided harvests of corpses on which to scavenge. Similarly spring and autumn migrants, enfeebled by their ordeals, fell easy prey, and the contents of choc-ice wrappers, fish and chip papers and scraps from picnic lunches left by holiday makers supplement the summer diet. Foxes in arable areas feast on rodents attracted to field-side root crop stores - dental remains showing that inexperienced debutante and geriatric rats were most frequently taken. Wefts of overhead cables around South Yorkshire power stations provide a constant 'rain' of mutilated bird strike victims, racing pigeons being the staple fare though whooper swans form a seasonal treat. Pennine foxes dine on red grouse and mountain hare whereas their urban counterparts in down town Doncaster make do on a diet of Kentucky fired chicken and used rubber goods!

Colin Howes
Doncaster

NB. No wonder this character isn't recognised by the Museums Association or even by Doncaster Museum - See Museums Year Book 1978 ? ?

TAPPING THE THIRD SOURCE

Whilst some museums have traditionally gathered information on the flora and fauna of their districts in a systematic way, it is only recently that this aspect of the biological curator's work has received a major stimulus following consultations with the Biological Records Centre. Fearfull of being sunk without trace beneath a plethora of records being sent to them, this body initiated discussions with the Museums Association and other interested parties directed at the establishment of Regional Biological Data Banks. Many of these banks have now been established and most though not all, are based on the natural history departments of museums so that many biological curators find that work on the data bank now adds to their

workload. Whilst few museum officers known to me sit around waiting for work to come their way, neither is it a common sight to see them pleading for additional duties to compound an already severe strain on available time resources. Nevertheless, as one charged with the upkeep of a data bank in addition to more traditional duties, I feel that the museum is the ideal location for a data bank, backed up by voucher collections. Hopefully in the future the old view - that the last people to know anything about local natural history are the guys doing natural history at the local museum - will become less true in the future.

In collecting data for the regional data bank, three main sources are available. Fieldwork taps an obvious source, and to my mind a vital one if the bank is to be aware of current conditions and trends. Many elements of the local scene are continually changing and these changes should where possible be monitored. Literature searches tap the second major source, the printed word. Again this data is essential in monitoring changes to the local scene. But what of the third source, namely the vast amount of material standing in museum collections? This remains a largely uptapped source, save that fraction of the collection which relates to the district wherein the museum is situated (assuming that the data is being used by that museum or by members of the public there). But at present there is no way, for instance, of knowing which museums in the country possess material from any given county. Whilst lists of collections in a given museum may be extant, these often give little or no indication of where the material in those collections comes from. In fact biological curators are often unaware of the provenance of the bulk of material in their collections and are consequently unable to assist the often distant fledgling data bank craving for the riches locked away therein.

What is the answer to this problem? On the one hand a mass of data; on the other a body of people eager to obtain that data. And in the middle is the biological curator.

Clearly few who read this newsletter have the time to list all of the specimens under their care, arranging them under county or vice county, let alone to send all of the records to the appropriate data bank. The bank requiring data from a know source must place their request and, unless reciprocal arrangements are made, should arrange to extract that data themselves. But until the banks know which museums hold material from their regions the process of using the records where they are likely to be most useful cannot begin. The biological curator has to attempt to publicize information on the provenance of his material in order that this third data source can be tapped.

Mindful of this problem, and aware that a great amount of

material in the Doncaster Museum collections hails from other parts of the country, I have made an attempt to assess the quantities of records from different parts of the British Isles based on specimens in these collections. For this purpose I selected at random 9 areas of the collections as follows:-

1) Donc. Mus. Herbarium (Cruciferae complete);
2) Verhees Oological Colln. (complete);
3) Mollusca Colln. (Helicidae Helix aspersa, Cepea hortensis, nemoralis)
4) Araneae (Tetragnatha - Linyphia incl.)
5) Macrolepidoptera, Waddington colln. (complete):
6) Brit. Coleoptera colln. (Carabidae - Cicindela - Loricera incl.);
7) Brady-Wyer colln. Brit. Microlepidoptera (Dichrorhampha - Epiblema incarnatana incl.);
8) Diptera colln. (Syrphidae, Eristalis tenax, Helophilus pendulus), (Sciomyzidae, Pherbellia-Trypetoptera incl.);
9) Hymenoptera colln. (Symphyta, Selandriinae compl.)

(NB. Classificatory systems acc. to most recent lists)

The total number of records included in the above sample was exactly 4000 (by remarkable quirk of fate, not by design). The unit used (i.e. record) consists of the specimen or series taken at one site on one date and referred to species, race, variety or aberration. Thus where a long series of butterflies or molluscs have the same data but have not been identified to race, variety or abberation, this counts as a single record. On the other hand if ten specimens have identical data but are referred to 10 different taxa (even if only abberrations), these count as 10 records. A series of bred specimens from one parent obviously constitutes one record.

The total population (i.e. total number of records in the Museum collections) has not been ascertained but a very rough estimation would be in the order of at least 40,000. Consequently, for the purposes of this article it is suggested that the sample represents about 10% of the total "population".

The procedure adopted here is only a very provisional one and it is hoped that more reliable ones can be designed. However the percentage representations of the counties etc. given below are probably approximately correct across the entire collections at Doncaster, although I suspect that the Welsh and Highland* components will prove to be rather low in the sample. The following list gives the percentage representation in the sample of the pre-Reorganisation counties of England and Scotland and the main regions of Ireland and Wales,

*In the sample the Highland percentage is 5.6%, the Lowland 1.6%, and the Welsh total (i.e. South plus North) is 6%.

arranged in order of diminishing frequency. It is inferred that these percentages should be very approximately correct for the whole collections at Doncaster. Thus there should be about 400 records from each of the following areas - Perthshire, Lancashire, S. Wales (South or R. Dovey), Suffolk and Wiltshire.

Yorkshire (mainly vc 62, 63, fewer 61) (50%)
N. Wales (North of R. Dovey) (mainly Merioneth & Caernarvon) (5%)
Nottinghamshire; Hampshire; (3%) (i.e. each 3 percent of total)
Derbyshire; Kent; Somerset, Devon & Cornwall (counted together); (2.5%)
Lincolnshire; Co. Durham; Inverness-shire; Eire; (2%)
Aberdeenshire; Surrey; (1.5%)
Perthshire; Lancashire; S. Wales; Suffolk; Wiltshire; (1%)
Cheshire; Norfolk; (0.8%)
Huntingdonshire; (0.7%)
Sussex; Dorset; Essex; Westmorland; Ross & Cromarty; Cumberland; Middlesex; Isle of Wight; (0.5%)
Argyll; Kirkcudbright; Oxon; Gloucs; Northants; Beds; (0.3%)
Wigtown; Dunfries; Orkney; Sutherland; Bute (Arran); Ulster; Cambs; Warwicks; (0.2%)
Renfrew; Herefords; Herts; (0.15%)
Shetland; Fife; Northumberland; I.o.M; Bucks; Worcs; London; (0.1%)
Ross; Moray; Westmorland; Monmouth; Essex; Channel Isles; (0.05%)
Angus; Lanark; Kinross; Leicester; Salop; Berkshire; (0.025%)

(NB Other counties known to be represented in the collections (i.e. Staffs.) did not occur in the sample and probably constitute less than 0.025%).

If all museums possessing natural history departments could produce lists of this type it would be possible to obtain some very rough assessment of the total amount of records locked away in the 'third source', for any given county. It took about 4 hours to gather the information given in this article, but as an operator of a biological data bank I would find it exceedingly valuable to have a similar list from other museums.

Can we start now to tap the third source?

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(Museum and Art Gallery, Doncaster)
