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Watsonian vice-county numbers are given for each specimen in addition to a modern county name, so satisfying both camps. Other expected categories in the catalogue are collector, date and accession number. The catalogue is clearly produced and easy to read. However, there seems to be an error on page 23 where two specimens of *R. chrysoxylon* (syn. *R. mercicus* var. *chrysoxylon*) are misplaced under *R. mercicus* in the alphabetic list. This has been taken into account in the index and both pages are referred to but, in addition, a cross-reference at both catalogue entries would have been useful.

The analysis of the dates of collection of *Rubus* specimens at Liverpool Museum will reflect that found in herbaria across the country, the study of this group of flowering plants peaking in the late Victorian era. For many herbaria this publication will be useful for comparison of specimen data with those at Liverpool. However, unless the nomenclature of the collection to be compared has been updated then direct comparison will be impossible. Access would be needed to other publications, such as those already mentioned, to cope with the many synonyms and nomenclature changes found in this group of plants. It could be interesting, if not already done, to find out if the species are still extant where their original locations still exist.

Museums need to communicate information on the collections in their care both to fellow workers and the general public. This can be done successfully by exhibitions but natural history reference collections present special problems. Specimens often occur in great quantity and are physically fragile. Published catalogues can adequately fulfil this communication role and offer the advantage of greater permanence over exhibitions but their appearance is rare. This is why Liverpool Museum is to be congratulated on the production of a complete catalogue of the over 2,000 bramble specimens in their care.

Patricia Francis, Bolton Museum and Art Gallery

LEICESTERSHIRE DRAGONFLIES. Steve Grover and Helen Ikin. 1994. 64pp. Paperbound. ISBN 0850223598. £6.50. Leicestershire Museums, Arts and Records Service.

In recent years dragonflies have become relatively popular insects and this increasing interest in the group has

led to the publication of accounts of the dragonflies of several counties. Leicestershire, the latest county to receive such treatment, has twenty-two certainly recorded dragonfly species (about half the number on the British list) together with the largest current county membership of the British Dragonfly Society. The aim of the book is to further stimulate interest in the dragonflies of the county, primarily by facilitating their identification (adults only) and showing from where within Leicestershire they have been recorded. The text is 'user friendly' with technical terminology fully explained and employed sparingly.

Short introductory sections outline the life histories of dragonflies, include a chart showing the period in the year when the commoner species may be seen on the wing, and briefly discuss conservation and the recording of Odonata. The major part of the book deals with the sixteen species known to breed in the county. Each of these is given a two-page spread that includes a distribution map of 1km squares in which the species has been recorded (the number of 1km squares is used to calculate a 'rarity score'), the total number of records, habitats depicted symbolically in order of frequency, a verbal account of status and distribution, identification features and flight period. Identification is aided by the provision of annotated colour illustrations which, although lacking artistic refinement, are admirably clear and emphasise the characteristics of each species. Interesting features include graphs showing the increase in recent years of the numbers of records of the Emperor and Migrant Hawker dragonflies, and a pie diagram of the numbers of five species visiting gardens. The six Leicestershire species for which breeding has not been confirmed are treated in less detail but two pages of ink drawings should ensure their identification. A simple but adequate identification key is provided to all twenty-two species.

There is much information in this book, but the scant reference to particular Leicestershire localities is disappointing. More details about the richer sites, with species lists, would have been informative and given a lead to novice observers on where to look. Admittedly, this information could be extracted from the distribution maps, but only after laboriously matching dots with places on the ground.

An erratum sheet inserted by the publishers lists thirteen errors. Unfortunately, there are several others, principally inconsistencies in type-setting which give the book a rather untidy appearance. Also, throughout the book, all species' authorities appear in parentheses irrespective of whether or not the species remains in its original genus. These shortcomings, however, hardly detract from the usability of the book, and it should certainly achieve the authors' aim of encouraging others to take a closer look at the Odonata of Leicestershire.

R.A. Askew

***Insect Collection News* - a review of some articles.**

For those of you who do not know about this Newsletter, it is edited by Ron McGinley at the Department of Entomology at the National Museum of Natural History, Smithsonian Institution, Washington, D.C.20560, USA. He can also be contacted on e-mail: mnhen011@sivm.si.edu

1 - New Technology And Museums

One excellent article was originally published in the *Bulletin of Entomological Research* (83: 471-474, 1993) by Scott E Miller. It discusses the role of new information technology in entomology, but is of relevant interest to anyone involved in managing databases of collections, research or biological recording data. It is a fact that there are now one and a half million computers connected to the international network system called INTERNET. This is estimated to include about fifteen million users in over fifty countries. User levels have been doubling annually.

The article discusses many issues that are already being mentioned in the UK. I have recently been involved in several discussions concerning the availability of biological recording data. These discussions have often revolved around charging for data access and copyright of data. This article takes a very different view. I will quote a few interesting passages.

"The vast amount of information becoming available at low cost on the Internet is also changing the economics and politics of information management. It is no longer viable to hoard information and try to sell it, because most or all of the information is available somewhere else at no charge. In recent years, some institutions have

protected their specimen data-bases from public access in the hope of selling the data. But many are now abandoning this strategy because: (1) It has proven impossible to recover the real cost of creating and maintaining the data-base in this way — you can sell some data, but not enough; (2) Other institutions are committed to making their data available as widely as possible at no cost; and (3) There is great potential for conflict of interest, especially related to government grants and subsidies.”

The last point relates to pressure groups in the USA wanting to make all data collected using public money, publicly available! Of course we already have some legislation relating to Local Authorities in the UK which provides for open access to data.

The author discusses how all of this can be funded if you cannot recoup costs by selling data. He suggests that many areas will have to be subsidised. The ideas now developing as a result of the Rio Summit may provide funding to get more taxonomic and other environmental research information onto the Internet (via UK Systematics Forum?). He also suggests that selling the expertise to interpret the data is likely to be more lucrative.

There are problems though. Questions of control of intellectual and property rights remain. However, the advantages are so enormous that they must outweigh any problems.

OK, so where does this leave the local museum ‘curator’? How can this be relevant to her/him?

The cost of the equipment has been a factor limiting access in the past, but this article quotes the cost of a self-sufficient solar-powered satellite communications system with a computer, available in the US for seven thousand dollars. This would enable you to operate remotely in almost any part of the world. In Britain the revolution is poised to take off as those awful cable companies are digging up roads and gardens laying fibre-optic cables. At first they offer cable TV; the ability to receive so many channels that you can never decide what to watch! However, they will soon be offering fibre-optic telephone services which will revolutionise computer communications across the UK. The costs of these links will soon be easily within the reach of all but the very smallest or remote museums.

This technology gives a user access

to data all over the world and the ability to send messages at rates far cheaper than conventional faxes or post. Have you got a small library budget? What if you could get on-line access to an identification guide for British fauna and flora? Not only that, but when a taxonomic revision took place, instead of waiting for the Ray Society or Royal Entomological Society to find funds to reprint the whole book; instantly it has been updated! This has major implications for publishers. For example, how many copies of all the natural sciences collections research publications would have been sold if the whole data-base were all available on Internet?? Much easier to update too!

All science fiction? At the meeting in the Netherlands we saw a CD-ROM identification guide to European birds that contains pictures of birds, eggs, maps of distribution, sonograms (seen at the same time as you hear their calls) and text. It costs under a hundred pounds! It did not seem to be anywhere near as detailed as the Birds of the Western Palearctic, but it makes you think. I have also just received a brochure for something called CABIKEY. This is a computer key system, so far available to identify adult beetles (I suspect to family, although amazingly it does not specify!) with keys to Mosquito genera, European thrips and termite genera planned. The CD-ROM of the National Gallery collections has sold 40,000 copies worldwide (priced at about £30). Now if these were all available on the Internet!!! Just where will it all end?

2 - Legal Restrictions On Collecting Fresh Material - USA

There are a number of articles in the same issue of the Newsletter concerning the implications for field collecting of the improvements in national and international wildlife law. The Lacey Act is the USA equivalent of the Wildlife & Countryside Act, but seems to be far more wide-reaching. Whether you like the idea of having to have a permit to collect anywhere or not it seems that every day brings this situation closer. The USA laws now clearly state that anything collected abroad must be collected with legal permits from the host country. If not, the collector is not only breaking the law in that country, but in the US too! Judging by the extensive correspondence on

this matter (on e-mail) which has been printed in this Newsletter, the subject is rather a hot one at present in the US. Implications for taxonomists collecting abroad are immense. We do not currently have a law in the UK that is as strict, although most Museums’ collecting policies have a statement that they will never knowingly acquire specimens collected illegally, no matter where the laws applied. Of course if you loaned specimens of doubtful legality to someone in the USA!?! I will stop before this gets too silly!

Steve Garland, *Natural History Section, Bolton Museum & Art Gallery*

PUBLICATIONS

Manual of Natural History Curatorship - was published on 18 October 1994 and a review will be published in the next but one *Biology Curator*. Published by HMSO the book, which contain contributions from several well known members of BCG, is available at a discounted price of £40 (postage and packing free) to both individual and institutional members of the Museums Association. Contact Museums association, Book List Sales, 42 Clerkenwell Close, London, EC1R 0PA.

The Systematic collections at Michigan State University by A.C. Carmichael and J.H. Beaman - is an article in *The Association of Systematics Collections Newsletter* Vol 22(5) for October 1994. also reported in this issue is the approval by the state legislature of \$30.9 million for the construction of a new North Carolina State Museum of Natural Sciences. The new museum will offer visitors more than three times the current exhibition space, more than five times the current classroom space, a 250-seat auditorium, an enlarged Discovery Room, a Naturalist Centre and universal accessibility. The new facility will accommodate major travelling exhibits and house the state’s irreplaceable zoological collections.

Guidelines for institutional Policies and Planning in Natural History Collections - has also been produced by the ASC. This book reviews current (American) practice and suggests important elements to include in policy documents for institutions that house biological, anthropological and geological collections. Approx. 120pp. Price \$29 including overseas postage from ASC, 730 11th