

## GEOLOGY IN PROVINCIAL MUSEUMS

by

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### Summary

The changes in status of geology in provincial museums over the past century are discussed, and an assessment is made of the role of the provincial museum in this science at the present day. The necessity for interest and support by the amateur geologist is emphasised.

The latter half of the last century may in many ways be regarded as a golden age of natural history, that loosely defined group of natural sciences of which geology is a fundamental part. The exciting discoveries of amateur and professional naturalists at home and abroad, the dramatic impact of Darwinism on established beliefs, and the influence of great popularisers like Thomas Henry Huxley and Frank Buckland all produced a greater popular interest in the natural sciences than has been evident before or perhaps since. It was during this period that most of our provincial natural history societies were formed, and many of these in their turn were responsible for the foundation of museums. The Literary and Philosophical Societies in towns and cities all over the country accumulated collections which were augmented by material of varied importance from all over the world.

Towards the end of the century Local Authorities began to take on more and more of the educational and cultural functions of the provincial societies. At this period the existing collections were usually handed over to the Corporation as the nucleus of a public Museum. Most of the societies sooner or later ceased to exist, or modified their functions and survived in more or less reduced circumstances.

At the beginning of this century, the increasing number of Universities and the accelerating pace of research continued the process of scientific specialization already begun. The non-scientist was no longer able to keep abreast of scientific discovery, and Museums began to lose some of their popular support. Very few new ones were founded, and those that were tended to be the creation of one devoted man rather than the product of popular enthusiasm. (A fine example in the East Midlands is the thriving Museum of Scunthorpe which was for many years entirely the work of the late Harold Dudley, F. G. S., who was recently awarded

the R. H. Worth Prize of the Geological Society of London.)

The twenties and thirties were for many museums a lean period. Inadequate staff on ludicrous salaries struggled to maintain impossibly large collections gathered from every corner of the earth. It was during this period that museums became known as "the Cinderella of Local Government", a description that is still painfully apposite in some cases. It is hardly surprising that amateur naturalists (including geologists) lost interest in their local museums. The important and valuable collections gathered by the pioneers were at best maintained, without being the subject of research, additions or up-to-date arrangement. Many were allowed to gather dust in cellars, where labels were lost, minerals damaged, and fossils allowed to decay unchecked. At worst, important collections were wantonly destroyed: in Yorkshire in recent years one has been used as road metal and another has been deposited on the Corporation tip.

These however are not typical. By strenuous efforts on the part of Curators, by the generosity of the Carnegie United Kingdom Trust, and by the support of enlightened Local Authorities, many museums are playing a more important part than ever before. Problems of space, equipment and staff are being resolved one by one, and more museums have properly organised education departments which work closely with schools. For the first time, after many years of struthionine blindness, the Government is beginning to appreciate that an adequate Museum service for the country is a matter of national as well as local importance. Through the recently established "Area Schemes", Museums within regions are beginning to co-operate in ways which have hitherto proved impossible.

All this is opportune. Television, increased leisure, improved mobility and better education are all factors which are leading to a renewed interest in the countryside. Educationists too are beginning to realise the narrowness of the existing syllabus, and to take field studies more seriously. It is up to museums to show that they can play a part in stimulating this new interest in the natural sciences as they have already done for archaeology and the arts.

The most frequent question asked of anyone in the museum profession is "What do you actually do?". The popular impression of the white-bearded curator gathering dust along with his collections is difficult to eradicate, but it could hardly be more inaccurate.

Geological material is fortunately proof against most destructive agents, but there are some exceptions to this rule. Mineral specimens and fossils which include iron pyrites in their composition are subject to the effects of "pyrites disease". The writer has seen a perfectly shaped pile of dust which was all that remained of a once fine Kimmeridgian ammonite. Pleistocene bones and teeth, too, are liable to fragment unless properly treated by modern techniques: for example, the author recalls being shown by an amateur geologist a portion of a mammoth tusk wrapped in brown paper, which entirely disintegrated when it was unwrapped. Most of the techniques of preservation currently in use have been developed in museums. Every geologist is well aware of the amount of work needed to make many fossils presentable, and in museums much time is spent with hammer and chisel, dentists' drill or vibrotol. The housing and arrangement of large collections is in itself an enormous task. Even if already properly stored in suitable cabinets with proper cataloguing and labelling, any collection requires regular revision to bring the classification and nomenclature up to date. Usually the existing system of cataloguing is inadequate and is in process of replacement. Card indexes are now standard, and new methods of information retrieval, such as punched cards, are being experimented with. No collection is final and complete, and many casual donations are made. The Curator must also take steps himself to fill in gaps in his collection, and probably combines this with research in the field and restudy of existing material. Most Curators now limit their attention to the area surrounding their Museum, but this is rarely adequate to provide answers to the many enquiries that come to them. The writer, in a midland Museum, has recently had to identify south coast fossils, Scottish sediments and igneous rocks from Vesuvius.

Directly and indirectly too, the Museum is concerned with education. As well as lecturing to children and adults and preparing material to loan to schools, the Curator must arrange cases in the galleries,

which will arouse interest in the casual visitor and provide information to the more serious one. The preparation of catalogues of the collections and of guides to the displays and the local geology is another important activity, which has often performed to be postponed in favour of more urgent work.

Of course, only the larger museums which have a qualified geologist on the staff are able at present to undertake much work of this kind, and many are unable to do more than maintain the existing collections. There are still a few museums more or less entirely run by local societies, which are doing their best under great difficulties. Many more small museums are, unaccountably, under the sole charge of librarians, who with a few exceptions have no qualifications and less enthusiasm for the important collections which are often to be found in their care. Many other small museums have only one or two professional staff, with no geological training, and the Curator will usually be aware of the shortcomings of his geological collection, but will be powerless to do much about it.

Whatever his local Museum is like, the amateur geologist should not hesitate to get in touch with the Curator to find out what services are available. Anyone seriously interested in fossils or minerals will usually be allowed to consult the reference collections which, although not on show in the galleries, are far the most important material in the museum. The staff may be able to help in identification or may know someone who can, and the library is likely to contain books and maps not easily obtained elsewhere. There may be an index of local exposures, a collection of photographs, or a bibliography of local geology available for consultation, and useful publications are sometimes on sale. The amateur collector of fossils and minerals can obtain advice on the maintenance and housing of his specimens.

He should, in return, be prepared to keep all his specimens fully labelled in case they should be eventually offered to a museum. Many collections which have been the result of a life-time's effort have been rendered useless by neglect of this simple precaution. In other ways too the amateur geologist may be able to assist the Curator. The latter is inevitably tied to his office much of the time, and may welcome information about temporary exposures, particularly if accompanied by photographs and representative specimens. Other donations too, especially if they fill gaps in existing collections or result from detailed local field work, are usually much appreciated.

The part to be played by the science of geology in our museums in the future is as much dependant on sustained interest from the amateur geologist as upon the activities of the professional within the walls.

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