

CURATING OF COLLECTIONS

Every taxonomist has to take the responsibility of curating collections. This requires a great deal of expertise, knowledge and clear understanding of the function of different collections.

Preparation of Material

There are certain materials which are ready for study as soon as collected from the field e.g., bird and mammal skins. There are certain insects which should never be placed in alcohol or any other liquid preservative whereas others are useless when dried. Certain invertebrates are to be preserved in alcohol or formalin before their study. Microscope slide mounts or slides of parts of organs may have to be prepared for the smaller forms. Most insects are pinned, and the wings are spread if they are taxonomically important as in butterflies, moths and some grasshoppers.

Housing

Research collections should be housed in fireproof and dustproof buildings. Most museums keep their collections in air-conditioned buildings. Rapid changes in temperature and humidity are harmful to museum cases and specimens. Storage cases should be built to be insect-proof. Photographs and films should be stored in air-conditioned rooms.

Cataloging

The method of cataloging depends on the group of animals. All the specimens including vertebrates collected at a given locality or district or by one expedition are entered in the catalog together. This greatly facilitates in knowing the distributional data and the preparation of faunistic analyses. Cataloging is usually done after the specimens have been identified, at least up to the genus level. In groups where the collections consist of large numbers of specimens, it is customary to catalog the specimens by lots. Each lot consists of a set of specimens from a given locality or region. It is also important to note whether a lot was received as a gift or by purchase or exchange. The names of the collector and donor are always given.

When museums and their collections were small, curators had maintained card-files which provided all sorts of information such as collecting station, name of the collector etc. A properly organized and well-curated collection is a reference catalog that permits rapid information retrieval. Now the card methods have been replaced by *electronic data processing* and numerous methods of computer cataloging have been described in the journal *Curator* e.g., Sarasan and Neuner (1983). However, the preparation and

maintenance of computer record should never be at the cost of work on systematic collections.

Arrangement of the Collection

The collection should be arranged in the same sequence as some generally adopted classification. The sequence of orders and families is usually standardized in many classes of animals. The contents of trays and cases should be clearly indicated on the outside which could serve as a check list. Where specimens are of large and unequal size, they have to be stored separately.

Curating of Types

The names of species are based on type specimens. Many descriptions of classical authors are equally applicable to several related species. Types are usually deposited in large collections in public or private institutions which have come to be recognized as standard repositories of types. While conducting an authoritative revision of a given genus, a specialist should be able to see all the existing types. If many of them are in a single institution, the specialist should travel there and obtain scattered types. Modern curators are quite liberal in lending type specimens to qualified specialists.

It is recommended that the type collections should be arranged alphabetically according to the given specific name. A type collection is a reference collection rather than a classification. Type specimens assume such an important role in the taxonomy of lesser-known groups that many workers believe that no individual should retain a type in his private collection after the study has been completed.

Exchange of Material

The selecting of material for exchanges and keeping its record is time consuming, so the exchanges are not as popular as they used to be. Among private collectors this practice is common. A specialist doing a monograph on a certain genus or family can always borrow material from other institutions and return it after completing his work. Exchanges are not desirable in groups where series of unlimited size can be obtained and where the concerned areas are not easily accessible. Exchanges are sometimes necessary to build up complete identification collections. Many specialists give away excess specimens as open exchanges not expecting any return.

Improperly preserved or inadequately labeled specimens should be eliminated by the curator. The most efficient method for the elimination of useless material is to ask specialists to pull out such specimens while scrutinizing the material during a revision.

Loans

Modern curators are very generous in lending specimens to qualified experts. This is due to the fact that systematic collections are the general property of science and not of a specific institution or curator. Every loan, however, involves loss of time and effort, and the borrower should refund the lender for his efforts. Research grants now include an item so as to cover the costs of postage, selecting the specimens, recording the loan, and getting the material packed for shipment. The modern curator, being essentially a research worker, must delegate these tasks to hired clerical help.

A request for the loan of specimens should be as specific as possible, including a statement of the reason for the request and some indication of the length of time for which the material is needed. The beginner may be unable to borrow certain material except through a loan to his or her institution or to the beginner's major professor. If the borrower is unable to complete the studies in the designated time, the person or institution that made the loan should be informed. The lender should never be placed in the embarrassing position of having to write and ask about the status of the study. If a specialist has agreed to identify a collection provided he or she receives certain specimens, the specialist should make sure that the terms of the agreement are well understood and should return to the lender a list of the specimens which he or she has retained. All types and unique specimens must be returned to the lender in such cases.