

Collection Forum



SPNHC

*Society for the Preservation
of Natural History Collections*

**Spring 1996
Volume 12
Number 1**

CATEGORIES OF SPECIMENS: A COLLECTION MANAGEMENT TOOL

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Abstract.—The Canadian Museum of Nature has defined five Categories of Specimens to be used as an aid in collection management. Levels reflect object value based on scientific, cultural, and monetary considerations and thus clarify the museum's intellectual and monetary investment in collections. Categories have multiple applications in collection management: as indicators of value they can assist in controlling specimen use; in conjunction with risk assessment they can guide allocation of limited resources.

INTRODUCTION

Museums the world over are learning the hard way that resources are finite; both money and staff continue to be severely limited by current economic conditions (Emery, 1993). As a result, the demands of collection management are being questioned by a new level of audit and accountancy (Doughty, 1993). Museums must, therefore, develop systems to prioritize curatorial functions to guide the allocation of resources (Danks, 1991; Howie, 1992; SPNHC, 1994). Categories of Specimens, used in concert with risk assessment (Waller, 1994), can provide an effective method to balance collection care priorities.

BACKGROUND

The idea of categorizing specimens is already accepted in principle: Type specimens are recognized as the most valuable specimens in a natural science museum's collection (Horie, 1993), a library provides specialized storage for rare books, and in fact the concept can be adopted for any type of collection. Levels of specimen or object value can be compared by considering factors such as Type or Voucher status, monetary, cultural and historic value, and the investment of time and scientific knowledge represented by properly prepared and identified specimens (Montero and Diéguez, 1993; SPNHC, 1994). For collection management purposes each category can be assigned an acceptable minimum level of care based on institutional values and can be associated with appropriate levels of authority for decisions regarding specimen use (Cato and Williams, 1993). Categories can thus codify the intellectual and monetary investment in specimens and hence facilitate collection management decisions.

Several value standards are already used in museums. The Netherlands Ministry of Welfare, Health and Cultural Affairs (1992a, b) established the *Delta Plan for the Preservation of Cultural Heritage* following a dismal report from the national General Audit Office on the state of their 17 national museums which concluded that "if nothing was done, before very long large numbers of works of art, monuments and documents would be irreparably damaged, or would even disappear altogether." The plan includes: an inventory and assessment of the collections and backlogs; assignment of value levels; and development of a work plan for registration and conservation. The Entomology Department of the United States National Museum implemented the *Smithsonian Curation Standards and Profiling System* (McGinley, 1989, 1993) which quantifies collections according to levels

Table 1. "Categories of Specimens" as applied to the natural science collection at the Canadian Museum of Nature, outlining category descriptors and permitted uses.

<p>Category 1: Primary Types, Extinct Recent species Description: The most valuable and irreplaceable specimens, must be preserved for posterity. Destructive testing/sampling: Strictly regulated and rarely permitted. Loans: Strictly regulated, short term. Public Programming uses: Strictly regulated and rarely permitted: display only.</p>
<p>Category 2: Secondary Types, Historic Specimens, Rare or Endangered Recent species, High Market Value (>\$10,000) Description: Specimens of great significance. Destructive testing/sampling: Regulated. Loans: Strictly regulated, normally short term. Public Programming uses: Strictly regulated: display, travelling exhibit.</p>
<p>Category 3: Vouchers, Moderate Market Value (\$1,000–10,000) Description: Specimens representing significant additions to the body of knowledge (e.g., specific specimens cited in publication.) Destructive testing/sampling: Permitted with review. Loans: Normal procedures. Public Programming uses: Permitted: display, travelling exhibit.</p>
<p>Category 4: Identified specimens, Low Market Value (<\$1,000) Description: Prepared and identified; may be duplicates; represent an investment in care and knowledge; accessioned and catalogued. Destructive testing/sampling: Permitted. Loans: Normal procedures. Public Programming uses: Permitted: display, travelling exhibit, hands on.</p>
<p>Category 5: Working Material Description: All material entering the museum (e.g., field collections, unsorted acquisitions, research material, etc.) prior to evaluation for assignment to a higher category or for deaccession; not catalogued. Destructive testing/sampling: Must be identified and catalogued to ensure preservation of data. Loans: At discretion of collector and/or CMN staff. Public Programming uses: Permitted: display, travelling exhibit, hands on.</p>

of curation and provides a collection manager with a numeric "Collection Health Index."

DEVELOPMENT AND IMPLEMENTATION OF CATEGORIES OF SPECIMENS

The Canadian Museum of Nature (CMN) is a natural science museum holding broad collections in the areas of botany, zoology and earth sciences. The Collections Management Framework of the CMN tabled in 1994 proposed the establishment of a series of Categories of Specimens, applicable to all parts of the collection to "define the Permanent Collection while allowing researchers greater freedom to use Working Material before selected specimens are added to the Permanent Collection." Accordingly, a committee comprised of staff from Collection and Research Divisions was charged with the formulation of a system of categories defining the value of specimens within the CMN collection and recommending the authorities responsible for proper use of each category. The resulting draft document was approved in principle by the Collection Advisory Committee of the Museum for a one year trial and is currently being implemented.

Based on levels of scientific, historic, and cultural value, specimens may be assigned to categories as outlined in Table 1. This provides a gradation of value

from primary types through to the bulk field samples from which specimens for the collection might be selected. Assignment to a category is flexible and may be re-evaluated as a result of changes in specimen value. A specimen may have historic value to a museum, community, or field of science, and even natural science museums may hold objects of cultural significance such as gifts to government. As a secondary criterion, specimens may be assigned to Categories 2, 3 or 4 on the basis of their market value. This will apply only to selected objects that clearly have a commercial value to collectors on the open market, most commonly minerals and fossils. Use of monetary value in categorizing specimens is a recognition of the specimen as a corporate asset and that items representing significant investment must receive the appropriate care.

Category 1 is comprised of those unique objects in a collection which have the highest scientific, cultural, and historic importance. The Canadian Museum of Nature includes in Category 1 primary type specimens, and specimens of extinct Recent species. Access and use are most strictly regulated, as these are the specimens a museum is entrusted to preserve for posterity (IAPT, 1983; IUBS, 1985; Dunn and Mandarino, 1988; Bill C-12 Statutes of Canada 1990). These specimens are segregated to provide optimal security and specialized storage.

Category 2 includes secondary Types (e.g., Paratypes), historic specimens, specimens of Recent species which are rare or endangered, and specimens of high market value. Although of high scientific, cultural, or monetary value, these specimens do not share the irreplaceable quality of Category 1 material. Specimens in Category 2 may be segregated along with Category 1 material to provide optimal security and specialized storage.

Category 3 encompasses an interpretation of Voucher which has been broadened from the classical definition (Lee *et al.*, 1982) as a published citation of specific specimens. Unpublished range extensions or reductions, or specimens which have undergone extensive testing are examples of objects which, by virtue of their unique contribution to our body of knowledge, may be assigned to this category (SPNHC, 1994).

Category 4 represents the bulk of a museum reference collection. These are the identified and documented specimens used for comparative research, exhibition and, possibly, exchange.

Category 5 includes all material entering the museum (e.g., field collections, unsorted acquisitions, research material, etc.) prior to evaluation for assignment to a higher category or for deaccession. This category has been established to reduce regulation on research and educational use of specimens. Collaboration between scientists and institutions is often required to make full and efficient use of the large amount of material which can be collected on today's increasingly expensive expeditions. Specimens that are vouchers of research will be reviewed by the Collections Development Committee for assignment to a higher category to ensure the appropriate level of care.

The number of categories and the appropriate assignment of values may be interpreted in practice to arrive at a system of as few as three levels, combining "Types" (CMN's Categories 1 and 2), a "Reference Collection" (CMN Categories 3 and 4) and a bulk or backlog category (CMN Category 5). For the administration of collection care resources (e.g., physical storage) the CMN collection is considered to be composed of these three levels. For decisions regarding

access and use of the collection (e.g., requests for loans), all five categories are considered. Assessment of specimen category is made at the time of request for use and considers current value, as in reality the expenditure of resources required to assign static values to an entire collection is both impractical and wasteful.

At the CMN attempts were made to differentiate a "Permanent Collection" (Category 1 to 4) from "Working Material" (Category 5), but it was recognized that individual specimen values describe a continuum from primary types, the only specimens which must be, to the best of our ability, permanent holdings, to the almost transitory material used in some research projects. All specimens except primary types must be acknowledged to have a "working life" within which they might be consumed, rendering the phrase "Permanent Collection" virtually moot.

Categories of Specimens can be used in conjunction with risk assessment (Waller, 1994) to direct the allocation of resources for collection care, and those specimens judged most valuable must receive the highest possible standard of care. Assessment of risks to specimens involves calculation of the probability and extent of impact of various agents of deterioration to project a probable loss in value over time (Michalski, 1990; Waller, 1994). While we must recognize that deterioration is ongoing, and that we currently have few methods to completely measure loss in value, we can apply available technology to mitigate risks and thereby reduce deterioration. In applying these principles at the CMN, risk assessment indicated that a large percentage of the Type specimens (Categories 1 and 2) were subject to an unacceptable level of risk under existing storage conditions. Although other non-optimal situations existed, and some continue to exist, resources in the form of both salary and operational dollars, were directed to provide proper storage conditions for the Type specimens. This shows how risk assessment and categories of specimens may be used in concert to make collection management decisions.

In addition, Categories of Specimens provide a clear framework on which to base decisions regarding specimen use. The responsibility of a museum to make specimens available for ongoing research and exhibition must be balanced with the need to preserve specimens for future use (Compte-Sart, 1993; SPNHC, 1994). At the CMN a clear hierarchy of authority related to the levels of risk associated with potential uses of each category is being developed and will be tested as the use of categories is implemented. Responsibility for assignment of category levels lies with the Collection Manager in each section of the CMN collection, with delegation to experienced collection staff. Depending on the category, requests for use of CMN specimens may require the approval of the collector or Collection Manager, the Collection Development Committee (CDC) or the Collection Advisory Committee (CAC). The CDC is an internal committee, comprising staff of CMN Collection, Research and Public Programming Divisions, which reviews requests for consumptive specimen use and all acquisitions. Priorities for collection development, either through acquisition or deaccession, may be weighted by consideration of specimen category. The CAC, composed of external advisors, a member of the CMN Board of Trustees, managers and staff of the Collection and Research Divisions, provides guidance at the policy level and reviews major decisions regarding the CMN collection. Requests for access to the collection are evaluated in context to provide specimens of a category appropriate to the user's

requirements. These controls are intended to ensure the preservation of the most important scientific or heritage material, while allowing freer use of lower "valued" specimens.

SUMMARY

It can be difficult for a museum manager to balance the multiplicity of demands posed by the collection which is "the museum's 'soul' and *raison d'être*" (Alberch, 1993). Categories of Specimens are not intended to reflect or require a physical separation of specimens within a collection, except those judged most valuable, but to provide consistent and logical levels of commitment to protect specimens. This facilitates collection managers in making rational recommendations regarding the care and use of material under their purview.

ACKNOWLEDGMENTS

The authors thank the members of the working committee Brian Coad, Albert Dugal, Peter Frank, Joel Grice, and Kieran Shepherd, and the Canadian Museum of Nature Collection Advisory Committee who reviewed the working document. We also thank Robert Waller, and Jean-Marc Gagnon for critically reading the manuscript, and Julianne Snider, E. Merritt and an anonymous reviewer for their constructive comments.

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