



Museum of Comparative Zoology Destructive Sampling Policy

The Museum of Comparative Zoology follows the standards set by the MCZ Collection Management Policy. Full usage guidelines can be found at:
http://www.mcz.harvard.edu/collectionsoperations/coll_mgt_policy.html

The term “destructive sampling” applies to any procedure performed on an MCZ specimen that results in the permanent removal of material, including bone, claws, feathers, hair, muscle, scales, skin, teeth, or toe pad tissue. Removal of material may necessary for molecular analysis, preparation of specimens for SEM studies or chemical analyses. Invasive sampling may include methods that change or alter the state of the specimen, such as dissection and clearing-and-staining. Departments frequently affected by such requests shall develop specific guidelines pertaining to destructive and invasive sampling of the specimen preparations included in their collections. This museum-wide policy pertains only to destructive sampling.

Destructive sampling is a specialized use of scientific specimens and requires prior written approval of the Curators or Collection Managers of the departmental collection. All destructive sampling requests must be made in writing and should contain:

- Qualifications of the investigators
- Scientific merit of the proposed study
- Complete list of MCZ specimens requested
- Description of the methodology to be used, including previous experience and success of the researcher using such techniques
- Explanation of how results will be disseminated (e.g., peer-reviewed publication, inclusion of sequence data in online database)
- Demonstration that efforts have been made to collect new specimens or obtain samples from other museums

Decisions to grant destructive sampling will be considered on a case-by-case basis and are informed by:

- Rarity of the species in the wild (e.g., vulnerable, endangered, extinct)
- Rarity of the species in museum collections
- Representation of the species within MCZ collections
- Status as type specimen(s)
- Degree of destruction/invasiveness of the proposed methods
- Physical condition of the specimen(s)

Any remaining material (e.g., dissected parts, tissues), new preparations (e.g., SEM stubs, histological slides) or unused byproducts (e.g., DNA extractions, RNA extractions, PCR products) continue to be the property of the MCZ unless other provisions are specifically allowed in



writing by the Curators or Collection Managers in charge prior to destruction. Samples or subsamples of specimens taken from the MCZ may not be accessioned into any other institution's collection or used for any purpose other than indicated in the original loan request, and should always be referred to with their MCZ catalog numbers. Published sequences submitted to NCBI or other databases must be referenced to the MCZ specimen catalog number. Instructions for submission of MCZ catalog numbers to NCBI can be found on the MCZ website.

In cases involving the dissection of biological specimens, component parts shall be returned to the relevant collection in an appropriate container labeled with the MCZ catalog number. Data resulting from any destructive analysis (e.g., publications, NCBI GenBank/BioProject/BioSample numbers) shall be reported to the appropriate departmental collection so they can be linked in the museum database.

Any destructive sampling completed by departmental staff for the purposes of genetic analysis will be transferred to the MCZ Cryogenic Collection (MCZ-CRYO) for loan processing and post-loan monitoring. The MCZ-CRYO will complete the loan paperwork, facilitate legal and compliance issues, ship the samples, and complete any necessary follow-up communication with researchers. The MCZ-CRYO will monitor these genetic loans and officially close the loan when the loanee informs MCZ-CRYO of the completion of the work, returns unused material or byproducts, provides reprints (PDF copies), and gives written notice of all online sequence database submissions.