

**Monte L. Bean Life Science Museum
Brigham Young University
Tissue Loan and Destructive Sampling Policy**

Tissue Loan and Destructive Sampling Requests

The Monte L. Bean Museum (MLBM) houses a collection of over 45,000 specimens (most are associated with voucher specimens) of tissue or DNA preserved from vascular and non-vascular plants, arthropods (crustaceans, insects), fish, amphibians, reptiles, birds and mammals. The MLBM seeks to make material associated with voucher specimens (or parts thereof) available for study to all qualified investigators. However, there are significant costs associated with collecting, preparing, curating, and storing museum specimens and associated materials. In addition, tissue samples are resources that become depleted over time. Therefore, we feel that it is appropriate that policies are in place to insure that reasonable requests for tissue samples (consumable loans), semi-destructive sampling and destructive sampling requests are evaluated by a common set of criteria. In formulating these guidelines, we have followed, at least in part, policies developed by other institutions that house tissue collections. Below are outlines to assist potential users with developing proposals for loans that involve tissue or destructive sampling

General Guidelines

The MLBM will provide samples of tissue or DNA to qualified researchers. The samples are intended to *assist* investigators with their research projects. It is assumed that researchers obtain their own material as well (e.g. the research project is not a result of loans from a series of tissue depositories). All requests are regarded as explicit acknowledgment that the researcher supports legitimate scientific collecting that made the loan of material possible in the first place. In addition, it assumed that the researcher appreciates the time, expense and effort required in collecting, preparing, curating and maintaining museum collections. In exchange for granting samples for research, the MLBM may ask researchers to provide verbal or written support of scientific collecting and of the MLBM research collections.

Proposals for each type of request should be made in writing to the Curator in charge of the collection in which the material is archived. Cover letters should be submitted on institutional letterhead and sent to the appropriate Curator; those from students must be signed by the student's major advisor. Proposals will be evaluated by curators and investigators will be notified within a reasonable period of time. If the request is granted, investigators will agree to the following:

1. Samples will be used only for the study as outlined in the original proposal. A borrower may not loan, transfer, or subsequently give material to a third party without written consent of the curator who approved the original proposal. A borrower may not use the material for any research other than that outlined in the original proposal without written consent of the curator who approved the proposal.

2. The MLBM and the collection involved will be acknowledged in any publication or presentation based on use of material loaned by the MLBM. Copies of reprints will be provided to the appropriate collection.
3. Normally, any unused portion(s) of material loaned (either whole tissue or DNA extracts) will be returned to the MLBM upon completion of the study.
4. The borrower(s) will sign and return a loan form that lists the nature and quantity of material borrowed/sampled.
5. Any genomic or proteomic information submitted for publication based on MLBM material will be entered into a standard, centralized genomic or proteomic data bank (such as GenBank). MLBM voucher numbers provided on the original loan form will be associated with each genetic sequence that is submitted.
6. Costs of express mail shipments will be paid by the borrower.
7. Any additional requirements as established by policy for a particular collection will be adhered to by the borrower.

Tissue Loan Proposal

A tissue loan proposal is defined as a request for a portion of a voucher specimen (liver, muscle, floral part, etc.) or its DNA where the material is archived separately from the voucher specimen. The borrower is requesting a physical subsample of the archived material and not a portion of the voucher itself.

Each proposal should include the following:

1. The purpose and objectives of the research project, its scientific merit and evidence that the project has undergone some sort of internal or external review process (funded grant proposals, etc.)
2. The sampling protocol for the project to include:
 - a. Justification of the type and quantity of material requested including number of each taxon, geographic location and amount of material to be sampled.
 - b. Indication of the amount of material collected by the investigators and/or requested from other institutions/collectors.
 - c. Justification as to why museum material is preferred to freshly obtained specimens and a statement about why it is necessary to use specimens housed in the MLBM (as opposed to other collections).
3. Evidence of the researcher's ability to perform the necessary laboratory techniques to capture useful and reliable genomic data from the borrowed material. Evidence includes published

papers, unpublished manuscripts, grants or other research proposals and any other indicators of laboratory competence.

4. Some evidence of investigator's ability to perform the analyses and publish results in a timely manner. This is particularly relevant for subsequent loan requests.
5. If the proposal is submitted by a graduate or undergraduate student, their advisor will cosign the request and assume responsibility for meeting the terms of the loan.

Semi-destructive Sampling Request Proposal

A semi-destructive sampling proposal is defined as a request to borrow a museum voucher specimen with the intent to destroy a portion of the original voucher by harvesting skin, feathers, floral parts, insect leg, etc., with the understanding that the specimen will be returned to the MLBM.

Each proposal should include the following:

1. The purpose and objectives of the research project, its scientific merit and evidence that the project has undergone some sort of internal or external review process (funded grant proposals, etc.)
2. The sampling design for the project to include:
 - a. Justification of the type and quantity of material requested including number of each taxon, geographic location and amount of material to be sampled.
 - b. Indication of the material the researcher already has acquired with the sources of such material (collecting, other museum loans, etc.).
 - c. Justification as to why museum material is preferred to freshly obtained specimens and why it is necessary to use specimens housed in the MLBM (as opposed to other collections).
3. A description of the destructive sampling protocol including:
 - a. Description of the protocol and a justification for why it is the least intrusive method possible.
 - b. Description of the quantity of the voucher specimen to be harvested, which portions will be returned and the expected condition of the voucher upon its return.
4. Evidence of the researcher's ability to perform the necessary laboratory techniques to capture useful and reliable genomic data from the borrowed material.
 - a. Evidence includes published papers, unpublished manuscripts, grants or other research proposals, or any other indicators of laboratory competence.
 - b. If the material is old and/or degraded, some evidence that the investigator can generate reliable genetic information from dated material.

5. Evidence of investigator's ability to perform the necessary analyses and publish results in a timely manner.
6. If the proposal is submitted by a graduate or undergraduate student, their advisor will cosign the request and assume responsibility for meeting the terms of the loan.

Destructive Sampling Request Proposal

A destructive sampling proposal is defined as a request to borrow a museum voucher specimen which will result in the destruction of the entire voucher during the tissue harvesting process.

Each proposal should include the following:

1. The purpose and objectives of the research project, its scientific merit and evidence that the project has undergone some sort of internal or external review process (funded grant proposals, etc.)
2. The sampling design for the project to include:
 - a. Justification of the type and quantity of material requested including number of each taxon, geographic location and amount of material to be sampled.
 - b. Indication of the material the researcher already has acquired with the sources of such material (collecting, other museum loans, etc.).
 - c. Justification as to why museum material is preferred to freshly obtained specimens and why it is necessary to use specimens housed in the MLBM (as opposed to other collections).
3. A description of the destructive sampling protocol including:
 - a. Description of the protocol
 - b. A justification for why a less destructive method is not possible.
4. Evidence of the researcher's ability to perform the necessary laboratory techniques to capture useful and reliable genomic data from the borrowed material.
 - a. Evidence includes published papers, unpublished manuscripts, grants or other research proposals, or any other indicators of laboratory competence.
 - b. If the material is old and/or degraded, some evidence that the investigator can generate reliable genetic information from dated material.
5. Evidence of investigator's ability to perform the necessary analyses and publish results in a timely manner.
6. If the proposal is submitted by a graduate or undergraduate student, their advisor will cosign the request and assume responsibility for meeting the terms of the loan.