

**Biodiversity Research and Teaching Collections**  
**Department of Wildlife and Fisheries Sciences**  
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**BRTC Grant Policies**

**Policy Regarding Requests for Destructive Sampling of BRTC Specimens**

We are receiving increasing numbers of requests for use of specimens involving varying degrees of destructive sampling. These include requests to excise small pieces of skin, hair, feathers, bones, and fluid-preserved specimens for biochemical analyses, to dissect fluid-preserved specimens, and to remove feathers or hairs for coloration, pigment, and trace mineral studies. Subsampling of frozen, buffered, or alcohol-preserved tissue specimens also fall into the category of destructive sampling.

Because specimens used in these kinds of studies cannot be returned in the condition in which they were lent, we have a formal loan request protocol for destructive sampling. We follow the terminology suggested by other collections of genetic resources and use the term "grant" instead of loan to apply to these types of specimen use.

**Guidelines for Grants**

The following guidelines are to assist us in evaluation of proposals involving destructive sampling to specimens.

Please be aware that requesting specimens from our collection is an explicit acknowledgment that you support legitimate scientific collecting efforts, and that you value the time and effort that goes into collecting, preparing, and maintaining museum collections. In exchange for granting these specimens for research, we may call on you to provide verbal or written support of scientific collecting and our collections.

We generally do not charge for shipping these specimens. Unfortunately, our access to dry ice for shipping frozen specimens is limited; therefore, we prefer researchers to accept buffer or ethanol-preserved methods of storing the tissues for shipping.

We also require a transport permit (VS FORM 16-6A) from the USDA in order to be able to legally ship bird blood or tissues to researchers in the US. If your institution does not have this permit, access the USDA's web address (<http://www.aphis.usda.gov>) and download and fill out VS FORM 16-3. Please be aware that USDA can take more than two months to process a transport permit request.

**To initiate a Destructive Sampling Grant:**

1. Requests for destructive sampling of specimens should be made in writing. Please submit letters on institutional letterhead, addressed to the Curator of the appropriate division. Letters from students should be co- signed by faculty advisors. Requests made by e-mail (with the formal request on letterhead stationary included as an attachment) are acceptable.

Requests for grants should contain:

- a brief summary of the proposed research with sufficient detail to allow us to assess its scientific merit
- demonstration that the techniques being used will likely be successful (for example, the genetic system to be evaluated should have a high probability of resolving the particular research question)
- demonstration that the researcher is proficient in such techniques (provide details of preliminary analyses using similar kinds of museum materials or tissue samples)
- why destructive sampling of specimens is necessary
- availability of material from wild or captive sources
- justification of numbers and types of specimens being requested from our collection (consider the overall rarity of specimens in the wild and in collections)
- the amount of tissue required
- availability of funding to complete the project
- an estimate of the time frame of the study

2. For grants of frozen, buffer, or alcohol-preserved tissue specimens, we prefer to provide supplemental material to researchers who have demonstrated a willingness to collect some material for themselves (see above). Grants of large numbers of tissues across many taxa will be rare.

3. Requests for samples to be taken from study skins for biochemical or other analyses involve additional issues. These requests should address the following:

- what is the minimal amount of skin that can be used for a particular technique?
- can other materials be used instead? For example, could cartilage or tissue left on the underside of the skin or scraped off a skeleton be used?

4. Requests for samples of fluid-preserved specimens should address the following:

- for biochemical analyses, can the biomolecules be extracted despite the fact that the specimen has been fixed in formalin?
- for dissection of specimens, there needs to be additional justification for any project involving the dissection of both sides of a specimen.

### **After a Grant is Approved**

1. Please provide detailed instructions for shipping specimens, including contact people and their phone numbers and whether the specimens can be shipped in alcohol or buffer.
2. We request return of any unused portions of samples when the project is over. If slides of sectioned materials are made, we request representative examples be returned.
3. Written permission is required if, 1) the samples are to be used in a study other than that for which they were initially requested (i.e., a new project outline is required, or 2) prior to transfer of material to another institution or researcher, even if that researcher is part of the initial request.
4. We request detailed protocols for the extraction of DNA from our museum specimens (both successful and unsuccessful). We will use these successful and unsuccessful protocols to assist researchers with what we know can be a difficult task.
5. In any publications resulting from the use of BRTC specimens, we request that their voucher numbers (TCWC specimen number) be included. An acknowledgment of the grant is expected to appear in any publication, and we require reprints or PDF's of any work wholly or partially based on BRTC material. We also request a complete list of GenBank numbers (or accession numbers from equivalent genetic databases) from each specimen, and for each gene sequenced per specimen.