

**BOTANY TISSUE SAMPLE REQUEST POLICY**  
GGI&BDG-Plant Genetic Resources Collection  
National Museum of Natural History  
Smithsonian Institution

NMNH botanists and their collaborators have amassed a collection of plant tissue samples, most of which are accompanied by voucher specimens in the US National Herbarium, Department of Botany. These samples are available to qualified scientists doing legitimate research. However, the expense of acquiring, curating, and maintaining this collection requires that material be transferred only with thoughtful consideration. All researchers requesting samples from this collection are asked to comply with the following guidelines.

Requests for subsamples of frozen leaf or other **plant** tissue collected by the *Global Genome Initiative-Gardens* or the *Biological Diversity of the Guiana Shield* Program must be accompanied by the completed form and submitted for approval. Please read this policy sheet before filling it out the form. Any questions can be addressed to Vicki Funk ([funkv@si.edu](mailto:funkv@si.edu)).

## REQUESTS

Some samples are available online. If not, an informal inquiry via letter or e-mail may be used to determine which taxa are available and other information about the samples in our collection. Most samples are silica gel dried and stored at  $-80^{\circ}\text{C}$ ; a subset of these collections are liquid nitrogen flash frozen and kept in cryo-storage systems at  $-120^{\circ}\text{C}$ . The flash frozen collections are not necessarily collected for RNA preservation and may not be suitable for transcriptome work.

Formal requests must be made in writing on institutional letterhead. Requests from pre- and postdoctoral students must be co-signed by the head of the student's laboratory or by the student's graduate advisor, who accepts full responsibility for compliance with the terms of the exchange or transfer. We recommend that permission to use tissues be requested before grant or thesis proposals are submitted. Requests should cover the following:

- Brief description (1–2 paragraphs) of research: Items to include are objective, general techniques, lab facilities, investigators involved and their experience, availability of funding, and significance of the study. Please specify the proportion of all samples needed for the study that the applicants will collect for themselves, which taxa or OTUs will be collected, and where these samples and their vouchers will be deposited.
- List of material requested: please specify taxon name (taxa names), collector & collecting number(s), specimen barcode if available, and amount of material requested (please use the form available on the Botany public webpage <http://botany.si.edu/> (select 'collections')). Please state your preferred method of shipping. We will provide dried material unless special justification is made for any frozen holdings. We generally do not ship frozen tissues unless requestor provides their Federal Express account number and funds for dry ice. We will typically provide enough material for a standard DNA extraction (about the size of a dime) (e.g., a Qiagen DNeasy Plant Mini Kit). Additional justification is required for larger amounts.
- Evidence of reciprocal benefit: Genetic resource collections are expensive and time-consuming to build and maintain, and are depleted with use. We encourage requesters to support the growth, maintenance and accessibility of these collections. Please describe your efforts in this regard, such as availability of vouchered samples from you or your institution. Applicants associated with labs or institutions that do not maintain genetic resource or museum specimen collections may wish to consider depositing samples and voucher specimens at US. Applicants who cannot reciprocate in kind may be charged a replacement fee for samples to help defray the cost of maintaining the collection. Requests for large numbers of samples may require negotiations with the senior collector and/or the staff of the NMNH Biorepository. Requests for material under purview of US National Herbarium Curators, special permission or negotiations of use may

be required for adequate attribution of scientific effort and intellectual property rights

Shipping Instructions: Please provide detailed instructions including address, contact phone numbers and Federal Express (or other) account number to be charged if the material is to be shipped overnight. Please provide copies of relevant permits, especially if material is to be exported and subject to customs declarations and CITES.

All requests must contain a statement that the requestor(s) agree to the terms of the tissue loan (listed below).

## CRITERIA FOR APPROVAL

Each request will be evaluated by researchers in the Department during the regularly scheduled *Botany Curators Molecular Advisory Meeting* that usually takes place in the first week of every month and is open to all curators and invited guests.

### **Approval will be based on the following criteria:**

- the scientific value and feasibility of the project
- the qualifications of the investigators
- evidence of sufficient lab facilities and funding
- rarity of specimen and opportunity for replacement
- approval of original senior collector or their designate
- proportion of samples being collected by applicants
- evidence that the applicants are contributing to the base of genetic resources available for study by collecting, properly documenting and depositing samples and voucher specimens in collections where they are available to others or by supporting such collections financially.

## TERMS

Tissue transfers are made under the following conditions:

- Samples will be used only for the purposes stated in the Description of Research. The Description of Research may not be amended nor may the material be used for other purposes without written permission from the NMNH.
- Neither the samples nor any part, extract or product there of may be given or loaned to another laboratory or investigator without prior written consent from NMNH.
- No commercial use will be made of, nor license or patent applied for on the samples or any information or data derived from them without written consent from NMNH. In some cases, commercial or restrictive use of the samples would violate terms of the permits under which they were collected.
- Recipients will allow NMNH investigators reasonable access to the samples and parts, products, extracts and data derived from them for purposes of replication or verification of published results obtained with the samples.

- The "US" (the preferred acronym of the US National Herbarium) will be explicitly acknowledged in each publication that was based in part or entirely on data derived from NMNH specimens. Recipients will report USNM sample and/or voucher specimen numbers and collector's name for each sample in every publication that results from research on or other use of the samples. This may be done in table or text format, but collector's names should be associated with individual specimens.
- Recipients will send 1 reprint of each such paper or one copy of each book to the NMNH upon publication. Electronic documents (PDF) are preferred instead of paper reprints.
- GenBank accession numbers must be reported to the Department of Botany. Hopefully these data will be appended to the official specimen record available on line in the NMNH database.
- Any other stipulations made by NMNH as a condition of a particular transfer or exchange.
- All responsible parties must sign and date a letter of agreement specifying the terms of the transfer.

**PLANT TISSUE-SAMPLE REQUEST FORM**  
GGI&BDG-Plant Genetic Resources Collection  
National Museum of Natural History  
Smithsonian Institution  
[expand categories as needed]

Requests for subsamples of frozen leaf or other **plant** tissue collected by the *Global Genome Initiative-Gardens* or the *Biological Diversity of the Guiana Shield* Program must be accompanied by this completed form and submitted for approval. Please read the policy sheet before filling it out. Completed forms should be attached to an email addressed to Vicki Funk ([funkv@si.edu](mailto:funkv@si.edu)) or Carol Kelloff ([kelloffc@si.edu](mailto:kelloffc@si.edu))

**Brief description of research**

Title:

Objective:

Methods (general statement):

Lab facilities available:

Investigators involved and a 2-page cv for each PI or Co-PI:

Sources of funding:

Proportion of all samples needed for the study that the applicants will collect for themselves, which taxa or OTUs will be collected, and where these samples will be vouchered:

**List of samples requested:**

Taxon name (taxa names), collector & collecting number(s), specimen barcode if available, amount of material requested (for more than a few samples a spread sheet is required):

Amount of material needed:

Justification if necessary:

**Evidence of reciprocal benefit:**

Describe your efforts in this regard, such as availability of vouchered samples from you or your institution.

Plans for deposition of material in Voucher collections and/or biorepositories:

**Shipping Instructions**

Full Name:

Address:

Contact phone numbers:

If you require Federal Express (or other delivery service) the account number to be charged:

All requests must contain a statement that the requestor(s) agree to the TERMS of the tissue loan (listed below).

**TERMS**

Tissue transfers are made under the following conditions:

- Samples will be used only for the purposes stated in the Description of Research. The Description of Research may not be amended nor may the material be used for other purposes without written permission from the Department of Botany, NMNH.
- Neither the samples nor any part, extract or product there of may be given or loaned to another laboratory or investigator without prior written consent from the Department of Botany, NMNH.

- No commercial use will be made of, nor license or patent applied for on the samples or any information or data derived from them without written consent from the Department of Botany, NMNH. In some cases, commercial or restrictive use of the samples would violate terms of the permits under which they were collected.
- Recipients will allow Department of Botany, NMNH investigators reasonable access to the samples and parts, products, extracts and data derived from them for purposes of replication or verification of published results obtained with the samples.
- The "US" (the preferred acronym of the US National Herbarium) will be explicitly acknowledged in each publication that was based in part or entirely on data derived from the Department of Botany, NMNH specimens. Recipients will report US sample and/or voucher specimen numbers and 'collector's name and number' for each sample in every publication that results from research on or other use of the samples. For more than a few samples this information should be submitted in a spreadsheet.
- Excess tissue, DNA, or RNA will be returned to US.
- Recipients will send 1 reprint of each such paper or one copy of each book to the Botany Department upon publication. Electronic documents (PDF) are preferred instead of paper reprints.
- GenBank accession numbers must be reported to the Department of Botany. These data will be appended to the official specimen record.
- Any other stipulations made by NMNH as a condition of a particular transfer or exchange.
- All responsible parties must sign and date a letter of agreement specifying the terms of the transfer.

[Institution and address, requesting permission.]

Researcher name/title (please print)

Signature of researcher

Date

Advisor or host name/title (please print)

Signature of advisor or host [if student or visitor]

Date

**For Smithsonian Institution use only**

We have reviewed the request and [grant] [deny] permission for the sampling of herbarium specimens, with the restrictions stated above.

Representative of the Smithsonian Institution, U.S. National Herbarium

Name/title (please print):

Signature

Date