

Hollister Herbarium Destructive Sampling Policy

Policy for removal or consumption of specimen material

Administrative unit	Department of Biology, College of Arts and Sciences
Policy owner	Director and Curator, Hollister Herbarium
Approval authority	Department of Biology and Tennessee Tech
Effective date	June 1, 2026
Review cycle	Every three years or sooner if requirements change

Principle

Destructive sampling permanently consumes or alters part of an irreplaceable specimen. HTTU may authorize it when the research value is substantial, the question cannot reasonably be answered with non-destructive methods or newly collected material, and the remaining specimen retains adequate scientific and physical integrity. Permission is discretionary and may include conditions.

Activities requiring approval

- Removal of tissue, fragments, pollen, spores, seeds, wood, or other material.
- DNA or chemical extraction, isotope analysis, microscopy requiring removal, clearing, staining, sectioning, or mounting.
- Sampling from material already removed from a sheet or stored in a fragment packet.
- Any method likely to alter color, structure, surface chemistry, labels, or future analytical value.

Request requirements

Required information	What to provide
Research purpose	Question, significance, methods, expected outputs, and why HTTU specimens are needed.
Researcher	Names, qualifications, institution, responsible supervisor, and contact information.
Specimens	Taxa, catalog numbers if known, quantity requested, and selection criteria.
Method	Material amount, sampling location, preparation, extraction, storage, hazards, and whether the method consumes the sample.
Alternatives	Evidence that living material, field collection, duplicates, existing sequences, images, or non-destructive methods were considered.

Required information	What to provide
Compliance	Permits, funding, material transfer conditions, sensitive-data safeguards, and anticipated deposition of data and publications.

Evaluation criteria

- Scientific merit, feasibility, and qualifications of the research team.
- Amount and condition of material, presence of duplicates, and representation of the taxon at HTTU and elsewhere.
- Age, historical significance, rarity, conservation status, geographic importance, and legal or donor restrictions.
- Likelihood that the method will produce useful results and whether it preserves material for future methods.
- Potential benefit to HTTU records, taxonomic knowledge, conservation, education, or public understanding.

Material normally excluded

Sampling will not normally be approved from a type, a sole or exceptionally early record, a specimen with very little material, a taxon represented at HTTU by fewer than three adequate specimens, legally restricted material, or material with unresolved ownership or permit conditions. An exception requires a compelling justification, evidence that alternatives are unavailable, and any additional institutional approval required.

Sampling conditions

1. HTTU selects the specimen and the exact area or fragment to be sampled. Removal is performed by HTTU staff or by an approved researcher under supervision unless otherwise authorized.
2. The smallest amount likely to produce a valid result is removed. Existing loose fragments are used before attached material when suitable.
3. Each sampled specimen receives an annotation stating the material removed, purpose, researcher, institution, and date. The database and sampling register are updated.
4. The researcher may not transfer samples or derivatives to another investigator or use them for an unapproved purpose without written permission.
5. Unused material and remaining extracts are returned, retained, or disposed of as specified in the approval.

Researcher obligations

- Provide resulting sequences, accession numbers, images, measurements, revised determinations, and other specimen-level data in a usable form.
- Deposit sequence data in an appropriate public repository when publication and ethical or legal conditions allow.
- Cite each specimen using HTTU and its catalog number, acknowledge the Hollister Herbarium, and provide a publication or stable link.
- Report unsuccessful analyses. Failed sampling is still part of the specimen history and may prevent unnecessary repeat sampling.

- Follow sensitive-locality, permit, benefit-sharing, intellectual-property, and Tennessee Tech requirements.

Decision record

The Director and Curator records the request, decision, conditions, specimens sampled, material removed, and outputs received. Denial does not require HTTU to supply substitute material, but staff may suggest images, data, loans, duplicates, or field sources when practical.