

National Herbarium of New South Wales (NSW)



Destructive Sampling Policy

The botanical collections held by the National Herbarium of New South Wales (NSW) are maintained with the goal of balancing the mandate to preserve the integrity of the herbarium specimens with the need for taxonomic, systematic, and other research use.

For the purposes of this document, destructive sampling is defined as the removal of material from a specimen for research purposes other than routine taxonomic examination. For example, removal of leaf material for extraction of DNA or for phytochemical or isotope studies is regarded as destructive sampling. Dissection or removal of parts of a specimen for microscopic inspection is not destructive sampling if it remains within the bounds of normal taxonomic practice.

Requests for destructive sampling of specimens are considered on a case-by-case basis and dependent on the merits of the request. Every effort will be made to accommodate the needs of researchers where requests are in accordance with this policy, but the decision for destructive sampling ultimately lies with the National Herbarium of NSW. Where possible, researchers must make every effort to source fresh material and request destructive sampling from herbarium specimens only when there is no other option.

Provision of a loan or physical access to specimens does not imply permission to destructively sample material. Such permission will only be granted through specific application for destructive sampling under this policy.

Note that the *Convention on International Trade in Endangered Species of Wild Fauna and Flora* (CITES; <http://www.cites.org>) and *Australian Environment Protection & Biodiversity Conservation Act 1999* control the movement of specimens and parts of specimens of some taxa. Specimens or samples can be sent only to registered scientific institutions. For information on registration and registered institutions, see <http://www.environment.gov.au/biodiversity/wildlife-trade/trading/non-commercial/scientific>.

General Conditions:

1. Requests to destructively sample specimens are to be made in writing to the Manager Collections, Dr Shelley James (shelley.james@rbgsyd.nsw.gov.au).
2. Requests must include a completed *NSW Destructive Sampling Request* form. Where possible, requests to destructively sample specimens on loan should be made at the time the loan is requested.
3. For large or complicated requests, researchers are encouraged to visit the National Herbarium of NSW to select specimens for sampling.
4. Specimens in collections may have been treated in various ways (e.g., with preservatives, sterilants, insecticides, freezing, gamma irradiation, methyl bromide) at times. Records on the history of treatment of specimens may not be available. Material from specimens is supplied with no warranty of any kind, and the National Herbarium of NSW is not liable for misinterpretations or false results due to such treatments.

Material available for sampling

5. Permission will not be granted to destructively sample from type collections, historical specimens (pre-1900), or from taxa represented in the herbarium by less than 3 collections, except in exceptional instances, and then only by an appropriate NSW staff member.
6. Material may be destructively sampled from a specimen only if there is adequate material available and the integrity of the herbarium specimen is not compromised. Only the agreed or specified amount of material may be sampled.
7. Material may not be removed from a specimen for a second time if the nature of the study is the same without approval from the Manager Collections, National Herbarium of NSW.
8. Where possible, samples should be taken from the material in fragment packets and/or from obscured portions of the specimen. Specimens with the most abundant leaf, fruit or flower material should be sampled first. Care must be taken not to damage the scientific value of the specimen.
9. Unused material removed for study must be placed in the specimen packet, box or spirit container.

Responsibilities for sampling

10. Removal of material for destructive sampling must be done under the guidance of an experienced taxonomist; students, in particular, must be trained in good herbarium practice before being allowed to destructively sample from specimens.
11. Researchers must remove no more than the agreed, specified amount of material.
12. Material removed for destructive sampling and not used must be returned to a fragment packet on the specimen, or placed in the specimen packet, box or spirit container.
13. For each specimen from which material has been sampled, an archival-quality paper slip annotated in typescript or indelible ink (not ballpoint pen) must be attached with only a plastic paper clip to the sheet or packet. The annotation slip should indicate what was removed, the nature of the study, the researcher's name and institutional affiliation and the date.
14. Sampled material or derivatives (e.g. aliquots, extracts, and images) must not be made available to any third parties without written permission from the Manager Collections, National Herbarium of NSW and a separate authorised Materials Transfer Agreement.
15. Sampled specimens should be cited by the specimen accession (NSW) number in any resulting publication(s) and a copy of the publication(s) sent to the National Herbarium of NSW. The National Herbarium of NSW must be acknowledged in any resulting publication(s).
16. Please note that the National Herbarium of NSW is not responsible for validating the provenance or permit authorization of specimens housed in the collection. Users of materials are responsible for ensuring that State and Commonwealth legislative requirements are met, and that international conventions and treaties are not contravened.

Samples for anatomical and other studies

17. Depending on the nature of the study and the specific requirements of the institution involved, physical records derived from specimens (e.g., permanent slides, SEM stubs and/or photographs) should be returned with the loan. This material will be cross-referenced to the associated specimen and made available to other researchers upon request.

Samples for molecular studies

18. Requests for molecular studies must include an estimate of the amount of material needed.
19. Results (both positive and negative) must be recorded on an annotation slip to be attached to the specimen.

20. DNA sequence data must be lodged in a publicly accessible database (e.g., GenBank). The NSW specimen accession number must be included in the specimen voucher field.
21. GenBank and other accession numbers must be included on the annotation slip or provided to the National Herbarium of NSW as they become available. If retained extracts are used to sequence additional regions, the additional GenBank numbers must be also be supplied.

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Destructive Sampling Request

Researcher: _____

Institution: _____

I have read and agree to the conditions of NSW Destructive Sampling Policy

Signature: _____ Date: _____

Supervisor/Faculty Adviser (if researcher is a student): _____

Signature: _____ Date: _____

Project outline (include project title, what efforts have been made to obtain fresh material, what and how much material will be removed (e.g., one flower, 20 mg leaf material), evidence of well-developed protocols for DNA extraction, etc.):

Taxa or list of specimens to be sampled (attach list if necessary):

Please complete and return this agreement as a scanned PDF or hardcopy.

National Herbarium of NSW use only. Loan number:	
Approved by:	Date:
NSW Curator(s) informed and agreed:	Date: