



## **Western Australian Herbarium Destructive Sampling Policy**

The collections held by Australasian herbaria are maintained with the goal of balancing the preservation of herbarium specimens with the need to use them for taxonomic and systematic research. The Australasian herbarium community acknowledges the changing needs of the scientific community, and endeavors to support a wide range of botanical research.

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, if it remains within the bounds of normal taxonomic practice.

Requests for destructive sampling of specimens at the Western Australian Herbarium (PERTH) are considered on a case-by-case basis and according to the merits of the request. Every effort will be made to accommodate the needs of researchers where requests are in accordance with this policy.

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.

Address Destructive Sampling requests to the Collections Manager or Curator ([herbarium@dpaw.wa.gov.au](mailto:herbarium@dpaw.wa.gov.au)).

Note that the Convention on International Trade in Endangered Species of Wild Fauna and Flora and Australian Environment Protection & Biodiversity Conservation Act 1999 control the movement of plant specimens and parts thereof. Specimens or samples can be sent only to registered scientific institutions. For information on registration and registered organizations, see <http://www.environment.gov.au/biodiversity/wildlife-trade/sources/non-commercial/exchange/index.html#register>

### **General conditions**

1. Requests to destructively sample specimens are to be made in writing to the Collections Manager and must include a completed Destructive Sampling Request form. Where possible, requests to destructively sample specimens on loan should be made at the time the loan is requested.
2. For large or complicated requests, researchers are encouraged to visit the herbarium to select specimens for sampling.
3. Permission will not be granted to destructively sample from type collections or historical specimens (pre 1900) except in exceptional instances.

4. Material may be destructively sampled from a specimen only if there is adequate material available and only if the scientific integrity of the specimen is not compromised by its removal.
5. 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.
6. Researchers must remove no more than the agreed, specified amount of material.
7. 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. In general, material should not be removed from a specimen for a second time if the nature of the study is the same.
10. 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 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 (see below for examples).
11. Sampled material or derivatives (including aliquots, extracts, and images) must not be made available to any third parties without written permission from the Collections Manager.
12. Sampled specimens should be cited by the specimen accession number in any resulting publication(s) and a copy of the publication(s) sent to the Western Australian Herbarium. The Western Australian Herbarium must be acknowledged in any resulting publication(s).
13. Specimens in collections may have been treated in various ways (e.g. with preservatives, sterilants, insecticides, freezing, gamma irradiation) 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 Western Australian Herbarium is not liable for misinterpretations or false results obtained as a result of these treatments.

#### **Samples for anatomical and other studies**

14. 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 or forwarded to the herbarium if material for sampling was sent separately from a specimen.. This material will be cross-referenced to the associated specimen and made available to other researchers upon request.

### **Samples for molecular studies**

15. DNA sequence data must be lodged in a publicly accessible database (e.g. GenBank). The PERTH specimen accession number must be included in the specimen voucher field.
16. GenBank and other accession numbers must be included on the annotation slip if available (see below for example). If retained extracts are used to sequence additional regions, the additional GenBank numbers must be supplied to the loaning institution.
17. Where possible, unused derived material should be returned as dried aliquots with accurate quantification indicated on the label.

Example annotation slips:

Leaf material removed for DNA  
analysis. Studies into Xerochrysum  
and related genera  
G.K. Brown (MELU) 7 June 2010  
DNA isolation number: GB123  
GenBank number: AF234567

Fruit removed for SEM imaging.  
C.Tauss (PERTH) 21 July 2011

# Western Australian Herbarium (PERTH)

## Destructive Sampling Agreement

**Researcher:** .....

**Institution** .....

**Email:** .....

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

**Signature** ..... **Date** .....

**Supervisor/Faculty Adviser (if researcher is a student)** .....

**Signature** ..... **Date** .....

**Project outline** (include project title, 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)

**Office use only:**

Approved: Yes No

Comment:

PERTH Loan Number:

Signed/Date: