



Destructive Sampling of Herbarium Specimens

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The collections at the University of Hawai'i Herbarium [HAW] are maintained with the goal of balancing preservation of the integrity of herbarium specimens with their utilization for scientific research. While every effort will be made to accommodate researchers, decisions concerning destructive sampling are made on a case-by-case basis. The judicious dissection of specimens is normally permitted. This policy, applies to destructive sampling, i.e., permanent removal of material for purposes such as SEM, DNA, palynological, and anatomical studies. These guidelines, a supplement to "[Collections Use Policies](#)" and "[HAW Herbarium Loan Policies](#)," recognize these analyses as necessary components of contemporary systematic research. Please read this policy statement carefully, complete the agreement, and attach your written request.

If you are studying any taxon listed on any of the CITES Appendices, please familiarize yourself with the Text of the Convention and the resolution regarding herbarium specimens that pertain to the use and transport of specimens and their parts and products (e.g. DNA extracts). In brief, specimens (incl. parts and products) may be used only for scientific study (not commercial purposes) and may be transported internationally only between institutions registered with CITES.

1) Material may not be removed from herbarium sheets without prior approval from the Director of the University of Hawai'i Herbarium [HAW]. Permission is granted on a case-by-case basis and is contingent upon return of the signed destructive analysis regulations and adherence to them. Requests must detail the specimens and materials required, the procedures to remove them from the specimens, and the method of preparation for study.

2) Leaf material, pollen, spores, fungal tissue, bryophyte stem segments, etc. may be removed from specimens only when there is adequate material available. Care must be taken not to damage the scientific value of the specimen.

3) Pollen should be removed from no more than one flower per sheet. If possible, the whole flower should not be removed or damaged.

4) Samples may be removed only when adequate material is available on the sheet. Damage to the specimen should be avoided. Whenever possible, samples should be taken from pieces in fragment packets and from obscured portions of specimens.

5) Material *may not* be removed from type collections, historical collections, or taxa represented in the herbarium by less than two collections, except in rare instances, and then only by a designated staff member or with express permission from an appropriate staff member.

6) Material *may not* be removed from a herbarium sheet for a second time if the nature of the study is the same (i.e., pollen material for SEM, leaf material for DNA analysis, etc.).

7) Each specimen must be annotated, indicating the type of material removed, the name and institutional affiliation of the researcher who removed the sample, the type of the study, and the date of removal. Labels for these purposes are available.

8) For anatomical and morphological studies, the researcher must return to HAW a duplicate permanent pollen, spore, or leaf slide or SEM photograph. The slide or photo should be labeled with the name of the taxon, the collector's name and number, the country of origin of the voucher sheet from which the sample was obtained, the magnification and the method of slide preparation (e.g., acetolysis). Such material will be housed with like material in the Herbaria, cross-referenced to the specimen from which it was removed, and made accessible to other researchers as requested.

9) Any DNA sequence data derived from these specimens should be deposited in GenBank (www.ncbi.nlm.nih.gov/Genbank/GenbankOverview.html). The GenBank accession numbers should be provided to HAW and/or included on the annotation.

10) Requests for removal of material for molecular studies will be reviewed by the appropriate herbarium staff. Requests should include an estimate of the amount of material needed. Results (both positive and negative) must be reported in writing, preferably on an annotation to be attached to the specimen; specimens must be annotated with the identification of the specimen accepted by the researcher

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