

SANBI POLICY DOCUMENT

DIVISION: Biosystematics Research and Biodiversity Collections	POLICY NUMBER: D5
EFFECTIVE DATE: 1 February 2015	LAST AMENDED: 26 November 2014

CURATION OF HERBARIUM COLLECTIONS

Background

The South African National Biodiversity Institute (SANBI) is mandated to manage, control and maintain herbarium collections. The collections and associated data, recorded in the BRAHMS database, may be used nationally and internationally for research and conservation purposes. Herbaria are irreplaceable facilities and resources in which the botanical diversity of the country is archived and studied.

Although the focus of SANBI's herbaria is on the documentation of southern Africa's rich natural flora, the facilities may also house non-native material that is of economic importance or for comparative purposes.

In line with international standards, herbarium scientists and support staff actively curate the collections to reflect recently published scientific results. This is done to facilitate easy access and retrieval of specimens and to ensure that the archival integrity of the material is maintained.

Scope

This policy deals with the updating and maintenance of existing herbarium collections and their associated literature. The incorporation of new herbarium accessions is dealt with in Policy D5, 'Incorporating new accessions into herbarium collections'.

Policy

- Herbarium scientists and support staff must update families they are responsible for according to the latest publication, or if the nomenclature/ classification system used is based on an earlier publication, this must be approved by the Checklist Committee.
 - Taxon name changes for the checklist and BRAHMS Database must be referred to the checklist coordinator.
 - The updated checklist for a particular genus must be used to prepare cupboard lists.
 - Staff must make arrangements for loose or damaged specimens to be repaired and for infected specimens to be treated.
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Process

Refer to Chapters 5, 6 and 7 in Victor, J., Koekemoer, M., Fish, L., Smithies, S. & Mössmer, M. 2004. *Herbarium Essentials: the southern African herbarium user manual*. [SABONET Report No. 25](#). SABONET, Pretoria.

A summary of the procedures is provided in ADDENDUM 1 under the following headings:

1. Updating collections
 - 1.1. Sourcing relevant literature
 - 1.2. Updating specimens in general collections
 - 1.3. Making changes in the electronic names and specimens checklist
 - 1.4. Updating cupboard lists
 - 1.5. Updating the Quick Guide
 - 1.6. Filing literature for a taxon
 2. Handling returned loans
 3. Maintaining collections
 - 3.1. General maintenance
 - 3.2. Treating damaged specimens
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ADDENDUM 1

1. Updating collections

1.1. Sourcing relevant literature

Staff should keep abreast of the latest literature relevant to the group/s in their care. Refer to Victor *et al.* (2004: 70).

1.2. Updating of specimens in general collections

- 1.2.1. Add 'Cited as' labels to all material cited by the author in the publication.
- 1.2.2. Ensure that type specimens cited in the publication have been scanned and are in type folders.
- 1.2.3. If the publication indicates a phylogenetic arrangement of species within the genus then this should be reflected in the filing arrangement of the collection, the cupboard list and the Quick Guide. Refer to 1.5 and 1.6. below.
- 1.2.4. If possible, using either the taxonomic key provided or by comparisons with author-determined material, re-identify and re-file all the specimens not cited or determined by the author.
- 1.2.5. Nomenclatural changes, such as the inclusion of a previously accepted taxon into synonymy, should be reflected on the relevant genus and species folder as well as the cupboard list and Quick Guide.
- 1.2.6. The full literature citation for the latest revision used to identify the specimens can be written on the outside of the first species' folder for each genus.
- 1.2.7. Newly described species that are published independently of a generic revision should be filed alphabetically at the end of the genus. The publication where the species is described should be written on the outside of the species folder.

1.3. Making changes in the electronic checklist of names and specimen database

Refer to 'Checklist Policy'.

1.4. Updating of cupboard lists

- 1.4.1. Update the cupboard list to reflect any new taxa or synonyms as well as any changes to the phylogenetic arrangement of the taxa. This should be done once all the changes are reflected in the electronic checklist of names and in the specimen database. Refer to Victor *et al.* (2004: 43–44).
- 1.4.2. General guidelines to draw up a cupboard list:
 - The genus name and author should be on the top edge, in the middle of the page; together with the genus number on the top, right-hand side.
 - If the species are arranged phylogenetically then insert 'Arranged according to', followed by the full literature reference for the paper on which the arrangement is based.
 - Include all literature references arranged chronologically according to their respective year of publication. Each reference has its own code.
 - Arrange the taxa alphabetically on the left and indicate the sequential species number by which it is arranged on the right. Reference codes can be inserted on the left to indicate whether a taxon is included in the publications.
 - Those taxa where a phylogenetic sequence in a revision has not been done (i.e. species described after the revision) are filed alphabetically after the numerical phylogenetic order. They are listed alphabetically on the cupboard list with reference to 'alph.'

1.5. Updating the Quick Guide

- 1.5.1. Ensure that the specimens in the Quick Guide are correctly identified. If necessary, update the Quick Guide using authenticated specimens.
- 1.5.2. The arrangement of the Quick Guide should be the same as in the main collection.
- 1.5.3. Each taxon on the cupboard list should be represented in the Quick Guide by a typical specimen. Where less than three specimens are available or only type material is available; then an image of a specimen or an original description and distribution or photograph or drawing of the plant should be obtained and filed in the Quick Guide. Importantly, type specimens or the only specimen of a taxon in the collection should never be filed in the Quick Guide.
- 1.5.4. Each specimen is placed in a self-sealed plastic bag.
- 1.5.5. Diagnostic features and distribution can be written in pencil on the specimen sheet.
- 1.5.6. In PRE, distribution maps are pasted onto the first species cover of each taxon.

The bryophyte Quick Guide consists of micro-preparations filed in family slide boxes.

1.6. Filing literature for a taxon

Obtain a reprint, .pdf version or make a photocopy of the publication and file it in a species cover marked 'Notes' or 'Literature' at the beginning of the species or genus concerned. If relevant, a copy should also be placed with the Quick Guide.

Bryophyte and Lichen literature are filed in Family folders in separate filing cabinets.

2. Handling returned loans

Returned loan material is incorporated back into the collection in the same way as described in Policy D5, 'Incorporating new accessions into herbarium collections'. Addendum 1, Point 3.

3. Maintaining collections

3.1. General maintenance:

- Old specimens on brittle mounting boards should be remounted on new mounting boards.
- Loose specimens should be secured by replacing or adding gummed strips to mounting board.
- Loose parts of the specimen (flowers, seed, etc.) should be put into envelopes and glued to the specimen mounting board.
- Fumigate entire collection annually and treat infested specimens by placing in deep freezer. Refer to Policy A3 on 'Collection and preparation of herbarium specimens'.

3.2. Treating damaged specimens:

Take note of the condition of specimens when filing. Remove and report infestations or damaged specimens immediately to the relevant staff member assigned to repair the specimens.