

## SANBI POLICY DOCUMENT

DIVISION: Biosystematics Research and Biodiversity Collections	
EFFECTIVE DATE: 1 April 2013	LAST AMENDED: June 2018
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### Updating the South African National Plant Checklist

<b>Background</b>	In order to ensure that the South African National Plant Checklist, managed by SANBI, provides the most up-to-date information, it must be regularly maintained. <b><i>Documented and consistently implemented policy and procedures for the maintenance of national checklists are critical</i></b> to ensure that all contributors and users understand the rationale for the inclusion of data and for changes and additions made, and also to ensure that there is some degree of standardization across taxa in terms of approach to updating. The procedures ensure transparency about how changes are made and who is responsible.
<b>Aim</b>	A policy for national checklist maintenance is necessary to ensure consistency and credibility in decision-making relating to the checklist.
<b>Policy</b>	<ul style="list-style-type: none"> <li>• A single staff member, with a sound knowledge and understanding of plant nomenclature and literature, will take full responsibility for maintaining the plant checklist as the Checklist Co-ordinator at SANBI.</li> <li>• The checklist will be updated on an ongoing basis, with changes identified in the literature being incorporated into the checklist within a reasonable amount of time.</li> <li>• Only published changes will be incorporated; where a publication leaves unresolved issues this may be stated in a notes field.</li> <li>• If new combinations of a genus are not all published, the Checklist Co-ordinator will contact the original author to ask for remaining combinations to be made.</li> <li>• Depending on the proportion of names for South African taxa requiring new combinations, updating of the checklist can be postponed until all combinations are made for a group.</li> </ul>

- The latest published, evidence-based classification for a genus, or subdivision of a genus, will be followed.
- Experts within SANBI or from other institutions can submit an application to the Checklist Co-ordinator to not implement a change to the checklist in certain cases where strong objection exists, for example if it will have a major impact on the stability of nomenclature and classification and it is likely to be repudiated within a short period of time by other published research, or where there are two opposing published classifications based on the same evidence. These applications will be considered by the South African Plant Checklist Committee.
- In cases where the name or taxonomy needs to be treated with caution, or where the latest published treatment is not followed, an explanation should be given in the appropriate notes field in BODATSA.
- All new validly published (according to the ICN) names will be added to the list, either as the currently accepted name, or as a synonym with reference to the accepted name. If scientists disagree with new names they must publish the synonyms and reasons for the proposed synonymy.
- One higher-level classification system will be used for each phylum in the checklist and adhered to in its entirety. The classification systems chosen for the different groups of plants are:
  - Angiosperms: Angiosperm Phylogeny Group [APG] II system, using the bracketed families. New families described after publication of APG II, as well as family 'splits' recognised in APGIII and IV, are incorporated. However, 'lumping' of families post-APGII are not accepted.
  - Gymnosperms: Christenhusz *et al.* in *Phytotaxa* 19: 55–70 (2011)
  - Ferns and lycophytes: Pteridophyte Phylogeny Group [PPG] 1 in *Journal of Systematics and Evolution* 54(6): 563-603 (2016)
  - Mosses, liverworts and hornworts: Missouri Botanical Garden's TROPICOS database, and the following phylogenetic classification systems:
    - Bryophyta (mosses): Goffinet *et al.*, *Morphology and classification of the Bryophyta*, in Goffinet & Shaw (eds.) *Bryophyte Biology* 2nd edition: 55–138 (2008). And subsequent updates as published on <http://bryology.uconn.edu/classification-2/>

Anthocerotophyta (hornworts): Suprageneric classification: Duff *et al.* in *The Bryologist* 110: 214–243 (2007) and Stotler & B. Crandall-Stotler in *The Bryologist* 108: 16–26 (2005). Generic classification: Renzaglia *et al.*, New insights into morphology, anatomy and systematics of hornworts, in Goffinet & Shaw (eds.) *Bryophyte Biology* 2nd edition: 139–172 (2008). And subsequent updates as published on <http://bryology.uconn.edu/classification-hornworts/>

Marchantiophyta (liverworts): Crandall-Stotler *et al.* in *Edinburgh Journal of Botany* 66: 155–198 (2009). And subsequent updates as published on <http://bryophytes.plant.siu.edu/class.html>

- The higher-level classification system will be reviewed every five to ten years and may be amended then.
- The Policy will be reviewed annually by the South African Plant Checklist Committee and amended if necessary.

**Dissemination:**

- The updated electronic checklist will be disseminated through SANBI's website, preferably with a function that allows a search by date so that the latest changes can be identified by users.
- A summary of annual updates and changes will be made available through the SANBI website.
- A feedback function that allows comments by external users is required on the website. The Checklist Co-ordinator will be responsible for responding to comments.

## **Appendix 1: The SANBI procedures for maintaining the South African National Plant Checklist.**

The Checklist Co-ordinator will:

- Scan the published literature to which SANBI subscribes for identification of relevant publications;
- Establish and communicate regularly with a network of researchers who publish taxonomic papers on South African plants to request copies of newly-published work not in the list of journals to which SANBI subscribes. The editors of some of the more obscure journals will be contacted and a similar request made;
- Use an accessible literature database to search at least biannually for new species and other relevant publications;
- Scan IPNI on a six-monthly basis to identify any publications that might have been missed, and to check the status of names.

The following will be recorded for each change, as appropriate:

- new species or species for which status has changed;
  - synonyms;
  - reference;
  - date that the change was made;
  - a comment, where required, explaining the change.
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## **Appendix 2: Composition of the South African Plant Checklist Committee.**

The South African Plant Checklist Committee will be made up as follows:

- Chair: SA Plant Checklist Co-ordinator
  - Other key SANBI members: DD: Research, e-Flora Co-ordinator
  - SANBI taxonomists: 3
  - Non-SANBI taxonomists: 5
  - End user consultant: Red List Officer from Threatened Species Programme – not voting
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