

Few issues have caused the same degree of tension among botanical taxonomists as debate on generic concepts. While changes to family circumscriptions and differing species concepts will continue to abound, the genus concept is likely to remain the most contentious. In some ways, the generic concept is the most important in our classification, as it provides a ready label for what are usually the most readily recognisable groups of plants. Proponents of the *Phylocode* downplay this importance with a proposed rankless classification (Cantino and de Queroz 2000).

With the rapid rise of molecular phylogenetic analyses, generic realignments have become commonplace in taxonomic journals. On occasion there has been rigorous debate over these new alignments [usually for iconic groups such as Eucalypts (Ladiges 1997; Brooker 2000) and orchids (Hopper and Brown 2004)]. The case of *Acacia* has been a prime example of a carefully considered change with several options placed before the botanical community over an extended period of time (Maslin *et al.* 2003). The process taken to research the facts, and propose ‘best’ solutions is admirable, and is encouraged.

Some 20 years on from the *Boden Conference* on large genera in Thredbo (Hopper 1985), a mini-symposium on large genera and generic concepts opened the proceedings of the *150 Conference*, celebrating 150 years of the National Herbarium, Victoria, in September 2003. *The 150 Conference* celebrated the rich history of systematic botany in Australia and the important role of the National Herbarium of Victoria, past and present. The conference was co-organised by the Royal Botanic Gardens Melbourne, the School of Botany, The University of Melbourne, the Australian Systematic Botany Society and the Australasian Mycological Society.

This volume was formed from a combination of papers presented at the conference and invited papers. The various authors take different approaches to resolving the issues faced in stabilising the classification of the groups concerned.

Significant changes proposed in the *Pultenaea* group (Orthia *et al.*, this volume) and Hibisceae (Pfeil and Crisp, this volume) will have major ramifications Australia-wide and internationally. We recommend a cautious approach be taken in implementing these changes, supported by expanded data sets presented and considered by the botanical community at large for a consensus on the most suitable classification.

A number of Australia’s charismatic groups are assessed (*Banksia* and *Dryandra*, Mast *et al.*, this volume; Mirbeliae, Orthia *et al.*, this volume; saltbushes, Shepherd *et al.*, this volume), along with the more cosmopolitan Hibisceae (Pfeil and Crisp, this volume) and monkey flowers (*Mimulus* and allies, Beardsley and Barker, this volume).

Broad consideration of ‘the other plants’ has to some extent been slower on the uptake. This volume considers a number of cryptogamic groups, the hornworts (Cargill *et al.*, this volume), mosses (Klazenga, this volume) and the algal genus *Chara* (Casanova, this volume).

Consensus among the broader botanical community may be difficult to achieve and is unlikely to satisfy all concerned, but at the end of the day, stability can be achieved. The approach presented by Entwisle and Weston (this volume) for the Australian Virtual Herbarium project is a welcome contribution.

General discussion following the symposium made particular note of the current explosion in new information leading to new interpretations of classification. While this means considerable upheaval in the short-term, detailed studies should definitely lead to relatively stable classifications, even for groups that are ‘unresolvable’ with current data sets. With this in mind, we can best serve the end-users of our classifications by maintaining ‘*status quo*’ until we are confident that our data are sufficient to provide a stable classification.

The role of taxonomists is to provide a language with which scientists and the community can effectively and clearly communicate. As such, taxonomy is, and must be, a continually changing field, to represent the growth in scientific understanding of the natural world.

Conclusions will vary considerably, particularly with the division between those who are happy to accept paraphyletic taxa in a classification versus those who wish classifications to reflect strict monophyletic phylogenies (see Brummitt 2003). In the case of *Banksia*/*Dryandra*, it is easy to recognise the two ‘genera’ on morphological grounds and many will prefer to do so, even though this renders *Banksia* paraphyletic. The classification as two genera is considered by some to be more practical, even if it does not reflect true genetic relationships in the group concerned.

This volume will stimulate a greater consideration of proposed changes by botanists, outside their own groups of specialisation, for the purpose of reaching a broad consensus that will well serve the botanically-minded public and professionals alike. At stake is the credibility of taxonomy as a science that serves the needs of its users. As Peter Stevens remarked in his opening address, “... if we keep on lumping and splitting, we deserve everything we have coming to us”.

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Russell L. Barrett^{A,B}, Stephen D. Hopper^B and Simone L. Farrer^C

^{A,B}Kings Park and Botanic Garden, Botanic Gardens and Parks Authority, West Perth, WA 6005, Australia.

^BSchool of Plant Biology, Faculty of Natural and Agricultural Science, The University of Western Australia, Crawley, WA 6009, Australia.

^CCSIRO Publishing, PO Box 1139, Collingwood, Vic. 3066, Australia.

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