

BOOK REVIEW

A World Synopsis of the Genus *Grimmia* (Musci, Grimmiaceae). By Jesus Muñoz and Francisco Pando. Missouri Botanical Garden Press. Vol. 83. P.O. Box 299, St. Louis, Missouri 63166-0299. 2000. 133 pp. ISBN 0-915279-92-4. Price: US \$22.00 (paper).

With the publication of "A world synopsis of the genus *Grimmia*" we are presented with an ambitious attempt by a current world authority, Jesus Muñoz, to summarize the nomenclatural status of a large and complicated bryophyte genus. The authors clearly state that they are limiting themselves to nomenclature, so despite the title, "Synopsis," there are not even brief species descriptions. Rather, the work should be considered an extensive checklist of synonymies.

The work represents a review of over 500 papers covering the protologues of most species of *Grimmia*. Anyone who has spent time at the tedious task of searching for and translating protologues has to respect the strengths of Muñoz and Pando as bibliophiles.

The book contains three major sections: 1) the synopsis, which is the alphabetical checklist of species accepted by Muñoz, with synonyms in chronological order of publication; 2) taxa excluded from *Grimmia*, which lists species originally named as *Grimmia* but now placed in other genera; and 3) names with type material not seen. Also included is a world key to the genus.

The synopsis, which forms the bulk of the work, is well structured making it easy to find species and items of concern to taxonomic researchers. For each species there is: the "protologue," stated to be an exact transcription of the type locality according to the protologue; the "type," which is the "transcription of the type label; herbarium(a) where the type(s) is housed;" and "distribution," which is a list of countries from which herbarium material had been seen.

The literature cited is extensive and forms a reasonable core of literature for beginners in *Grimmia* systematics. It is also surprisingly current, citing papers published as recently as 2000. There are, however, significant recent contribu-

tors not or only weakly cited (e.g., Greven, Delgadillo, Hastings).

A large number of synonymies, several of which are questionable and some of which are dealt with in other ways in recent papers, are not cited in this work. To mention a few examples: 1) in this volume *Grimmia limprichtii* is synonymous with *Grimmia anodon*. But *G. limprichtii* is supposedly dioicous, while *G. anodon* is autoicous. No reason is given for putting these two taxonomic entities into the same species. 2) *Grimmia arizonae* was synonymized with *G. pilifera* by Muñoz in 1999. This was a contentious synonymy, immediately contested by Greven (1999) in his synopsis of the *Grimmia* of Mexico. Muñoz and Pando may not agree with Greven's work, but they should not have ignored it. 3) In 1992, Smith sorted out several problems in the *G. trichophylla* group and reported a number of synonymies. Smith wrote, "A nomenclatural statement is required..." and in the next paragraph he correctly synonymized both *Grimmia subsquarosa* and *G. stirtonii* with *G. trichophylla*. Despite Smith's clear statement, Muñoz and Pando fail to cite this important work.

The authors also claim: "Bibliographic references to lectotypifications by other authors have also been indicated where appropriate" and "We have selected new lectotypes for all names not typified previously." A major issue I have with the work, aside from the many problems with the key, is the large number of unsupported lectotypifications. I found many examples of species that I consider to have a designated type. Yet here they are lectotypified, without a statement of justification. A nomenclatural review should have discussed reasons for lectotypifications. To cite a few examples: 1) *G. australis* was lectotypified by Muñoz and Ochya (1999). There was no need to lectotypify this species. I have seen Dixon's material in BM; he clearly designated the holotype in his own handwriting and it matches the protologue. I am aware that before publication, Muñoz had seen a photocopy of the original label. 2) *Coscinodon bolivianus* is here isolectotypified by Muñoz. In 1996, I published on *Coscinodon* in South America. Having seen the type material in H-BR it was