

Grimmia australis, new combination

Coscinodon australis Dixon & Sainsbury was described in 1945 based on a New Zealand collection made by Sainsbury. Both the original description (Sainsbury, 1945) and the subsequent flora of New Zealand (Sainsbury, 1955, p. 67) described this taxon in detail except for the calyptra, as none was found by the authors. When examining an isotype of *C. australis* kept in F, a single calyptra, attached to an unopened capsule, was found. It is mitrate and smooth, and covers the operculum down to the capsule mouth. Species of *Coscinodon* have larger calyptrae that cover the capsule almost to the base. Therefore, calyptra shape excludes *Coscinodon* for generic placement and points to *Grimmia*.

Ochyra (1993) described and illustrated two new species from New Zealand, *Grimmia immersa* and *G. perpilosa*, for which the calyptrae were also unknown. Recently, Greven (1998) considered both taxa synonymous. Indeed, the types of *G. immersa* and *G. perpilosa* fall into the range of variation of *C. australis*, and accordingly the following changes are needed.

***Grimmia australis* (Dixon & Sainsbury) J. Muñoz & Ochyra, comb. nov.**

Basionym: *Coscinodon australis* Dixon & Sainsbury, Trans. & Proc. Roy. Soc. New Zealand 75: 175. 1945. TYPE: New Zealand. Mt. Cassidy, Arthur Pass, Canterbury, South Island, 31 December 1935, *Sainsbury 827* (lectotype, here designated, BM!; isolectotypes, F!, FH!, NY!).

Grimmia immersa Ochyra, Fragm. Florist. Geobot. Suppl. 2: 223, figs. 3–4. 1993, **syn. nov.** TYPE: New Zealand. South Island. Canterbury. Mount Cook National Park, end of North Ridge, Mt. D'Archiac, elev. 6100 ft., rotten rock and rubble; 26 January 1972, *H. D. Wilson 2314* (holotype, CHR!).

Grimmia perpilosa Ochyra, Fragm. Florist. Geobot. Suppl. 2: 220, f. 1. 1993, **syn. nov.** TYPE: New Zealand. Gertrude Saddle, 23 December 1974, *Child s.n.* (holotype, BM!; isotype, KRAM!).

Greven (1998) has shown that *Grimmia australis* (as *G. perpilosa*) cannot be satisfactorily separated from *G. grisea*, a synonym of *G. reflexidens* according to Muñoz (1998). *G. reflexidens* (= *G. grisea*) is a gametophytically

plastic species from what several other taxa besides *G. australis* cannot be distinguished without sporophytes (Muñoz 1998, 1999).

G. australis has previously been known only from New Zealand, but we have found a collection from S.E. Australia. Further work in Tasmania and the eastern side of the Australian mainland could render new collections of this rare taxon.

Additional collection studied: AUSTRALIA. **New South Wales:** Southern Tablelands, summit of Mt. Kosciusko, 18 March 1962, *Wilson s.n.* (MEL).

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TAXONOMIC ADDITIONS AND CHANGES: *Grimmia australis* (Dixon & Sainsbury) J. Muñoz & Ochyra comb. nov. (syn. *G. immersa* Ochyra, *G. perpilosa* Ochyra).

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