

## Plant Profile: *Bryum billardierei* Schwaegr.

By John Steel

Order: Bryales      Family: Bryaceae

The name is from the Greek, *bryon*, meaning moss. *Billardierei* is in honour J.J.H. de la Billardière, a French botanist and traveller who visited New Zealand in the late 1700's and after whom a number of plants have been named.

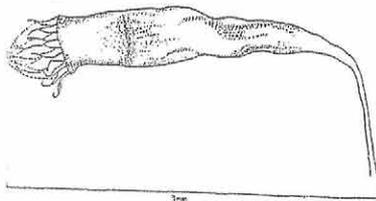
I suppose this genus matches most peoples idea of a moss and when it came to naming it the Greek word for moss was the natural choice. For the uninitiated, moss identification in the field can be difficult, even with the aid of a hand lens. *Bryum billardierei* is a handsome, small moss up to 6 cm tall, often in small clumps at the base, or in the shade, of larger plants. The unbranched, sturdy, reddish stems are crowned with a tuft of leaves with progressively smaller ones beneath. Below, and amongst the lower leaves, can be found a brownish, and often quite dense, matting of fine hairs (rhizoids). Our *Bryum* is dioicous (male and female organs on separate plants) so it is possible to find groups of plants close together, some with, and some without the distinctive sporophyte which ends in a cylindrical capsule pointing downward from the top of a hooked seta (stalk). The seta is reddish becoming paler above. The leaves are wide spreading when moist but close up, and may even twist slightly, when dry. They tend to be broader away from the stem and are toothed (lens needed) towards the tip. There is a central vein (costa) which can be seen without a lens and this projects from the leaf tip and is usually bent backwards slightly. The leaves have a border of several rows of long cells (lens needed) which are quite different from those of the rest of the leaf. *Bryum* can have small tubers under the soil and these can be found by carefully washing away the dirt in a small dish of water. They appear like tiny, dark red or orange potatoes and can be important aids to identification.

*Bryum* is a large, and problematic genus with thirty species, four of them endemic to New Zealand (Fife, 1995). *B. billardierei* is found throughout the Pacific islands, Australia, Chile, Argentina, the islands of the South Atlantic and the Galapagos Islands (Mohamed, 1979) and Japan (Ochi, 1970). It is common throughout New Zealand where two subspecies, *platyloma* (Gk. *platy-* = broad, and *-loma* = border, referring to the leaf border of at least four rows of long cells) and *billardierei* (leaf border of never more than four rows of long cells) are recognised. The former appears to have been the more commonly collected in the South Island.

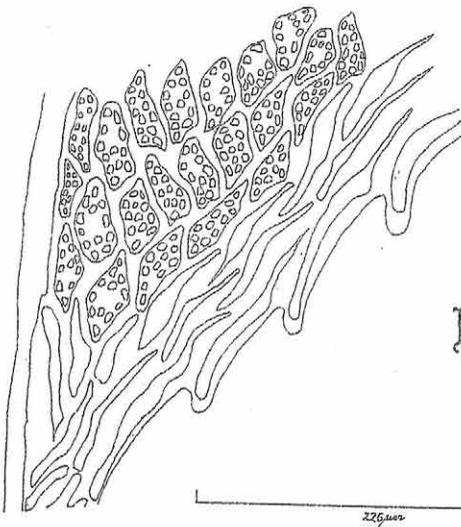
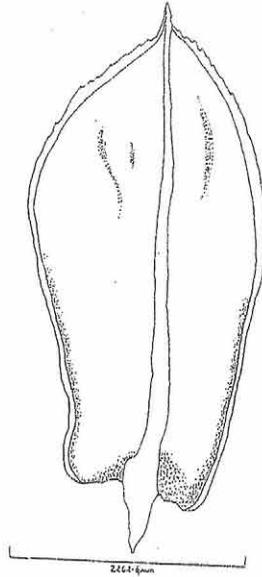
The collections in OTA are not identified to subspecies and only four have been made in the Dunedin area, from Swampy Summit to Kaikai Beach. It has a wide range of habitats from sand dunes and beech forest to boggy, snow-tussock grassland.

References:

- Fife, A.J. 1995: Checklist of the mosses of New Zealand. *The Bryologist*, 98: 313-337.
- Mohammed, M.A.H. 1979: A taxonomic study of *Bryum billardierei* Schwaegr. and related species. *Journal of Bryology*, 10:401-465.
- Ochi, H. 1970: A revision of the subfamily Bryoideae in Australia, Tasmania, New Zealand and the adjacent islands. *Journal of the Faculty of Education, Tottori University*, 21(1): 8-67.



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*Bryum billardierei*