DICRANUM

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Dicranum Hedw., *Sp. Musc. Frond.* 126 (1801); from the Greek *dicranon* (a pitchfork), in reference to the split peristome teeth.

Lecto: *D. scoparium* Hedw.

Dioicous. Male plants similar in size to female ones or dwarfed. Female plants small to robust, growing in turfs. Stems frequently subflorally branched, tomentose, densely foliose; central strand present; rhizoidal gemmae in some species; flagelliferous branches occasional. Leaves falcate-secund to variously patent, ovate-lanceolate to linear, mostly ending in a long subula; alar patches 1–multilayered; margin entire to serrate; border not differentiated; costa narrow to broad, subpercurrent to percurrent, abaxially smooth, or with teeth scattered or in rows in the distal part. Basal laminal cells elongate to linear, thick-walled, pitted; upper laminal cells variable.

Perichaetial leaves mostly similar to stem leaves. Calyptra cucullate. Sporogones solitary or aggregated; capsules exserted, cylindrical, straight to curved; stomata present at the base of the capsule, phaneropore; annulus present or absent. Peristome teeth narrowly triangular, asymmetrically bifid in the upper half; outer face smooth to variably striate; peristome reduced or absent in some species. Spores spherical, finely papillose.

An almost cosmopolitan genus of c. 140 species; most diverse in the Northern Hemisphere, with one rare species in Australia.

Reference

Sainsbury, G.O.K. (1955), *A Handbook of the New Zealand Mosses* 120–124.

Dicranum scoparium Hedw., *Sp. Musc. Frond.* 126 (1801)

T: Europe (?).

Dicranum scoparium var. *orthophyllum* Brid., *Muscol. Recent.* Suppl. 1: 173 (1806). T: not designated.

Illustration: G.O.K.Sainsbury, *Handb. New Zealand Mosses* 122, fig. 1 (1955).

Plants growing in turfs, to 10 cm tall. Stems simple to very sparingly branched, loosely to densely tomentose; tips occasionally caducous and somewhat flagelliform. Leaves erect to erecto-patent, narrowly ovate-lanceolate, 3–6 mm long, 0.8–1.2 mm wide, canaliculate, smooth; alar patches at least partly 2-layered; margin entire or serrulate at the extreme apex to serrulate in the upper 40% of the leaf; border not differentiated; costa subpercurrent, abaxially smooth or with teeth on 2 ribs in the distal part; guide cells 5 or 6, with 2 or 3 layers of substereids on either side. Upper laminal cells slightly to conspicuously shorter than the basal ones, oblong to short-linear, 15–80 (–125) µm long, pitted. Perichaetia and sporogones unknown in Australian specimens.

Restricted to the Mount Kosciuszko area of alpine N.S.W.; terrestrial or epilithic in heaths, often with *Podocarpus*, in grassland or herbfields at altitudes of 1850–2200 m. Also in New Zealand, and common in Europe, Asia and North America.

N.S.W.: Hedley Tarn, near Blue L., 7 km NE of Mt Kosciuszko, *H.Streimann 9697* (CANB); track from Rawson Pass to L. Cootapatamba, Mount Kosciuszko Natl Park, *W.A.Weber & D.McVean s.n.* (MEL).

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The foregoing description pertains to Australian and New Zealand material only, as one would not be able to recognise the Australasian plants from a description of the species over its entire geographic range**.** Northern Hemisphere plants are typically more robust, have falcate-secund leaves, more strongly ornamented leaf margins and stronger and more strongly ornamented leaf costas. However, *D. scoparium* is an extremely variable species and the Australasian *Dicranum* does fit in the range of its variation. At the molecular level so far no difference has been found between Australian and European material.

Australian specimens have leaves that are serrulate at least at the apex, while the leaves of New Zealand material tend to be smaller with entire margins. However, in New Zealand some more robust specimens with serrulate margins have also been found.