SPIRIDENTACEAE

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Type: Spiridens Nees

Dioicus. Large and robust rigid glossy plants forming loose tufts. Stems round or oval in T.S., with a central strand, a hyaline inner cortex, and a multilayered outer cortex of very thick-walled cells. Primary stem short, rhizomatous, with brown rhizoids; secondary stems moderately long to very long (to 40–50 cm), horizontal or pendent from tree trunks, densely leafy all around, sparingly branched. Paraphyllia lacking. Leaves lanceolate-subulate from a sheathing or semi-sheathing base, terminating in a short to very long arista; costa thick, extending to the arista or excurrent, in T.S. with median guide cells, abaxial stereid groups and scarcely differentiated epidermal cells; lamina with a border 2 to many cells thick throughout.

Perichaetia terminal on very short branches; perichaetal leaves much smaller than vegetative leaves. Calyptra cucullate. Seta short (Spiridens) or long (Franciella). Capsules erect or weakly bent, thick-walled, with a short apophysis with superficial stomata; operculum rostrate. Peristome double; exostome and endostome ±equally tall; exostome teeth spirally inrolled when dry, with longitudinal striations externally and dense lamellae internally; basal membrane of endostome ±developed; processes narrow, keeled, not appendiculate. Spores small.

A family of two genera: Spiridens in Malesia, the Philippines, Melanesia, Polynesia and Lord Howe Island (with nine species), and the monotypic Franciella Thér. which is endemic to New Caledonia.

Spiridentaceae is subsumed into the Hypnodendraceae in the classification of Goffinet et al. (2012).

References


SPIRIDENS

Spiridens Nees, Nov. Actorum Acad. Caes. Leop.-Carol. German. Nat. Cur. 9: 143 (1822); from the Greek speira (a coil) and dens (teeth), in reference to the spirally inrolled exostome teeth.

T: S. reinwardtii Nees.

As for the family, but having a very short seta (unlike Franciella).

A Palaeotropical genus of nine species; S. vieillardii occurs in Lord Howe Island, but the genus is not known from mainland Australia.


T: New Caledonia, 1862(?), E.Vieillard; holo: PC?

Spiridens muelleri Hampe, Linnaea 38: 668 (1874). T: Mt Gower, Lord Howe Island, 1872, J.P.Fullagar; holo: MEL.


Plants dark green, 15–20 cm tall, sparingly branched above. Leaves densely arranged, spreading, 8–12 mm long, including an arista 4–9 mm long; leaf margin with small teeth 9–16 µm long, or teeth very sparse or absent; cells of the leaf sheath hyaline, elongate-rhomboid. Laminal cells elongate-rhomboid, bistratose; border thicker, 10–12 cells wide and 2–4 cells thick.

Seta 1–3 mm long. Capsules glossy, curved, c. 5 mm long and 1.5 mm wide; operculum rostrate, c. 2 mm long.

Occurs on and near the wooded summits of Mt Gower and Mt Lidgbird, Lord Howe Island in the south-western Pacific Ocean. Also in forest in Papua New Guinea and New Caledonia.

Lord Howe Island: Mt Lidgbird, 1869, C.Moore (MEL); s. loc., T.Whitelegge (MEL); summit of Mt Gower, 28 Nov. 1959, R. Le Rossignol (MEL); loc. id., June 1966, J.W.Evans (NSW); loc. id., 23 May 1971, J.Pickard (MEL, NSW); loc. id., H.Streimann 15185 (NSW); loc. id., D.H.Vitt 28480 & H.P.Ramsay (NSW); ESE side of Mt Lidgbird, A.C.Beauglehole 73533 (MEL, NSW).