MYURIACEAE

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Myuriaceae M.Fleisch., *Musc. Buitenzorg* 4: 1663 (1923).

Type: *Myurium* Schimp.

Dioicous or phyllodioicous. Pleurocarpous. Stems mostly sympodially branched, ascending, erect parts not or sparingly branched; branch primordia *Climacium*-type, subtype SA or SO. Leaves mostly long-acuminate, often concave; costa absent or short and double. Lamina cells linear, smooth; alar cells well differentiated. Capsule long-exserted, erect. Peristome diplolepideous; exostome reduced; endostome rudimentary.

Myuriaceae is a small pleurocarpous family of five genera, characterised by mainly sympodial branching, long-acuminate leaves and long-exserted straight capsules with reduced peristomes. One genus, *Oedicladium*, occurs in Australia.

References

Iwatsuki, Z. (1979), Re-examination of *Myurium* and its related genera from Japan and its adjacent areas, *J. Hattori Bot. Lab.* 46: 257–283.

Maschke, J. (1976), Taxonomische Revision der Laubmoosgattung *Myurium* (Pterobryaceae), *Bryophytorum Biblioth.* 6: 1–218.

OEDICLADIUM

Oedicladium Mitt., *J. Linn. Soc., Bot.* 10: 194 (1868); from the Greek *oideos* (swollen) and *klados* (a branch), alluding to the swollen appearance of the branches, caused by the concave leaves.

Type: *O. involutaceum* Mitt.

Dioicous. Stems lacking a central strand. Pseudoparaphyllia foliose. Rhizoids on underside of the creeping part of the stem, papillose. Leaves erect to erecto-patent, ovate-lanceolate to abruptly acuminate above an elliptical basal part, slightly canaliculate to concave. Laminal cells often slightly vermiculate.

Capsules cylindrical to ellipsoidal, smooth; stomata phaneropore; annulus differentiated; operculum rostrate above a conical base; exostome teeth fragile, fenestrate, smooth; endostome consisting of a low basal membrane. Spores spherical, mostly papillose.

Oedicladium is a genus of nine or ten species with a south-east to east Asian (north to Japan) and Pacific distribution. It is distinguished from other genera of the Myuriaceae by the absence of a central strand in the stem, foliose pseudoparaphyllia, papillose rhizoids, smooth leaves and exostome teeth without palisade-like appendages.

One species with two varieties occurs in tropical Australia.

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Oedicladium rufescens (Reinw. & Hornsch.) Mitt., *J. Linn. Soc., Bot.* 10: 195 (1868)

Leucodon rufescens Reinw. & Hornsch., *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 14(2): 712 (1829); *Myurium rufescens* (Reinw. & Hornsch.) M.Fleisch., *Musc. Buitenzorg* 3: 672 (1908). T: Java, [Indonesia], *C.F.Hornschuch*; lecto: G, *fide* J.Maschke, *op. cit.* 31; iso: L.

Plants yellowish green to reddish brown or purplish, growing in loose turfs or rough mats. Stems creeping, then ascending, occasionally to more than 10 cm long, mostly sympodially branched; erect parts not or sparsely branched, to c. 6 cm tall. Leaves imbricate, erect to erecto-patent, ovate-lanceolate to abruptly contracted above the broadly elliptical basal part, 1.6–4.1 mm long, (0.4–) 0.7–1.3 mm wide, concave, smooth; margin entire throughout or serrulate in the upper part. Mid-laminal cells linear, often slightly vermicular, (28–) 50–110 × (0.6–) 0.7–12 μm, conspicuously pitted, smooth, gradually shorter in the acumen; alar cells partly double-layered, thick-walled, colourless to dark brown.

Australian plants are generally much less robust than specimens from elsewhere. Sporogones have not yet been found in Australian collections.

Maschke (1976) recognised three subspecies within his *Myurium rufescens*, two of which, subsp. *rufescens* and subsp. *purpuratum* have been reported from Australia. The subspecies *purpuratum* differed from the type subspecies by the purplish coloration, and longer and gradually long-acuminate leaves (abruptly contracted in subsp. *rufescens*). Australian specimens of both taxa are very easily distinguished, but some stems with very slightly contracted leaves of intermediate length are present in one collection of subsp. *rufescens*.

More intermediates were found among foreign material. Since the distributions of the two Australian taxa are so similar, recognition at the varietal level is more appropriate and, consequently, as no combination for var. *purpuratum* is available under *O. rufescens*, the new combination is made here.

Leaves ±abruptly contracted into a long acumen, 1.6–3.7 mm long ..... **a.** var. **rufescens**

Leaves gradually long-acuminate, 3.5–4.5 mm long, often purplish..... **b.** var. **purpuratum**

a. **Oedicladium rufescens** (Reinw. & Hornsch.) Mitt. var. **rufescens**

Illustrations: J.Maschke, *op. cit.* 33, fig. 3, as *Myurium rufescens* subsp. *rufescens*; Z.Iwatsuki, *J.Hattori Bot. Lab.* 46: 268, fig. 5 (1979).

Plants yellowish green to yellowish brown or reddish. Leaves ±abruptly contracted above the broadly elliptical basal part, 1.6–3.7 mm long, (0.4–) 0.7–1.5 mm wide; margin entire throughout or serrulate in the upper part. Mid-laminal cells (28–) 50–110 × (0.6–) 0.7–10.0 μm.

Only known from two localities in north-eastern Qld, the Thornton Peak collection was found hanging from a rock overhang at an elevation of 1300 m; also widespread in tropical Asia as far west as southern India and Sri Lanka, and the south-western Pacific islands east to Vanuatu.

Qld: "Major's Falling" (?), Ravenshoe, *W.W.Watts 534e* (H-BR); Thornton Peak, [Daintree Natl Park], *P.Phillips 467, 490* (MELU).

Outside Australia *O. rufescens* var. *rufescens* is found mostly on twigs, branches and trunks of trees, or on rotting wood, rarely on rocks.

b. **Oedicladium rufescens** var. **purpuratum** (Mitt.) Klazenga, *comb. et stat. nov.*[*]

Oedicladium purpuratum Mitt., *in* B.C.Seemann, *Fl. Vit.* 393 (1873); *Myurium rufescens* subsp. *purpuratum* (Mitt.) Maschke, *Bryophytorum Biblioth.* 6: 48 (1976). T: Aneityum, Vanuatu, *Milne 373*; holo: NY; iso: S, W.

Illustration: J.Maschke, *op. cit.* 50, fig. 4, as *Myurium rufescens* subsp. *purpuratum*.

[*] Cite as: *Oedicladium rufescens* var. *purpuratum* (Mitt.) Klazenga, *Australian Mosses Online 32. Myuriaceae* 2 (2012) [http://www.anbg.gov.au/abrs/Mosses_online/Myuriaceae.pdf]. Published 25 May 2012.

Plants reddish brown to dark purplish. Leaves imbricate, erect to erecto-patent, ovate-lanceolate, 3.5–4.5 mm long, 1.0–1.5 mm wide, gradually long-acuminate; margin serrulate in the upper part. Mid-laminal cells 60–110 × 10–12 μm.

Known from a single locality in north-eastern Qld where it grew on the sides of rocks that were at least periodically submerged (alt. 600 m); also scattered in Malaysia (Sabah, Sarawak), Indonesia (Sulawesi), Papua New Guinea (d'Entrecasteaux Is.), New Caledonia, Vanuatu (Aneityum) and Fiji.

Qld: Roaring Meg Ck, Daintree Natl Park, *M.Godwin* [*I.G.Stone 23000, 23061*] (MEL).

Outside Australia this variety is also found on tree stems and in non-rheophytic habitats.