

FABRONIA

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Fabronia Raddi, *Atti Accad. Sci. Siena* 9: 230 (1808); named after Giovanni Valentino Mattia Fabbroni (1752–1822), an Italian scientist, economist and politician.

Type: *F. pusilla* Raddi

Autoicous. Plants small, lightly to densely tufted. Primary stems creeping (c. 2 cm long); branches usually erect, simple or rarely with short branchlets. Rhizoids present on primary stem, mostly at the base of branches, brown, smooth. Leaves imbricate, often secund, erecto-patent when dry, spreading when wet, ovate to linear-lanceolate; apex piliferous, acuminate, acute or rarely obtuse; costa weak, ending in mid-leaf or apparently absent; margin entire to markedly ciliate. Laminal cells hexagonal to rhomboidal; alar cells distinct, subquadrate.

Perigonia and perichaetia on short branches from primary stems. Seta to 5 mm long. Capsules erect, usually ovoid to oblong, ±wider at the mouth; operculum umbonate or rounded. Peristome single; exostome teeth usually in pairs, papillose-striate, erect or reflexed against the mouth of the capsule.

A cosmopolitan genus of c. 90 species; four species in Australia.

Key

- 1 Leaf margins dentate or ciliate2
- 1: Leaf margins entire, denticulate or serrulate3
 - 2 Leaves linear-lanceolate; cilia c. 100 µm long 2. **F. hampeana**
 - 2: Leaves ovate-lanceolate or lanceolate, dentate or ciliate; cilia < 80 µm long 1. **F. australis**
- 3 Leaves ovate-lanceolate to lanceolate; apex acuminate in a long point; marginal cells at mid-leaf usually not subquadrate 1. **F. australis**
- 3: Leaves ovate to ovate-lanceolate; apex acute or acuminate (rarely obtuse), subquadrate to rhomboidal cells along the margin to above mid-leaf4
 - 4 Leaf apex acuminate due to elongate cells3. **F. scottiae**
 - 4: Leaf apex acute (rarely obtuse), lacking elongate cells4. **F. brachyphylla**

1. *Fabronia australis* Hook., *Musci Exot.* 2: 160 (1819)

T: King George Sound, [W.A.], 1791, *Menzies*; holo: BM (?) *n.v.*

Fabronia tayloriana Hampe, *Linnaea* 36: 522 (1870). T: “Mount Dissapointment” [Disappointment], Vic., *N.Taylor*; holo: MEL *n.v.*

Illustrations: G.A.M.Scott & I.G.Stone, *Mosses of Southern Australia* 433, pl. 84 (1976); D.G.Catcheside, *Mosses of South Australia* 326, fig. 202 (1980); W.R.Buck, D.H.Vitt & W.M.Malcolm, *Key to the Genera of Australian Mosses* 90 (2002).

Plants pale to medium green, with or without a silvery sheen. Leaves imbricate, ovate-lanceolate, lanceolate or, rarely, linear-lanceolate, (0.56–) 0.65–1.35 mm long, (0.18–) 0.20–0.33 mm wide; apex piliferous or short- to long-acuminate; margins plane, entire, denticulate, dentate or covered with cilia of single elongate cells (to 80 µm long); costa weak, failing around mid-leaf. Mid-leaf laminal cells elongate-hexagonal to long-rhomboidal, (32–) 48–90 (–110) × 6–12 µm; alar cells 10–20 × 12–14 µm. Spores (14–) 18–24 µm diam. *n* = 20, *fide* H.P.Ramsay, *Austral. J. Bot.* 22: 331 (1974).

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Cite as: S.R.Gilmore, *Australian Mosses Online. 3. Fabroniaceae: Fabronia*.
http://www.anbg.gov.au/abrs/Mosses_Online/Fabronia.pdf (2012)

Occurs in W.A., S.A., Qld, N.S.W., A.C.T., Vic. and Tas.; grows in moist conditions, at the bases of trees and on rock or soil. Also in New Zealand.

W.A.: Mt Chudalup, 17 km SSE of Northcliffe, *H.Streimann* 54332 (CANB). Qld: Eukey–Wybera road, 19 km ESE of Stanthorpe, *H.Streimann* 52915 (CANB). A.C.T.: Brindabella Rd at Five Fords by Condor Ck entrance track, *D.G.Catcheside* 65.74 (CANB). Vic.: Mt Zero, 24 km SE of Horsham, *H.Streimann* 2615 (CANB). Tas.: Lenah Valley, Mt Wellington, *A.V.Ratkowsky* H205 (CANB).

The leaf margins are highly variable, and when the cilia are long, this species can be confused with *F. hampeana*. Alternatively, the entire leaf margins can resemble those of *F. scottiae*. Leaf shape, cell length and the presence of a long hairpoint are the most reliable diagnostic characters.

2. *Fabronia brachyphylla* Müll.Hal., in V.F.Brotherus, *Öfvers. Förh. Finska Vetensk.-Soc.* 37: 167 (1895)

T: Botany Bay, N.S.W., *T.Whitelegge* 276; syn: *n.v.*; Brisbane R., Qld, *F.M.Bailey*; syn: *n.v.* (specimens not at B, JE or NSW).

Plants pale to medium green, lacking a silvery sheen. Leaves imbricate, crowded, ovate, less commonly ovate-lanceolate, (0.34) 0.40–0.63 mm long, 0.17–0.32 mm wide; apex acute to obtuse; margin plane, entire to very finely serrulate; costa weak, failing in mid-leaf. Laminal cells hexagonal, 22–60 × 8–12 µm; basal alar cells subquadrate or, less commonly, short-rectangular, 10–20 × c. 10 µm; marginal cells subquadrate or rhomboidal, extending to at least mid-leaf and, usually, to the apex. Spores 16–24 µm diam.

This endemic species is known from Qld, N.S.W. and A.C.T.; grows at the bases of trees.

Qld: Robinson Gorge, Expedition Natl Park, 73 km NW of Tarooma, *H.Streimann* 52675 [*Musci Australas. Exs.* 283] (CANB). N.S.W.: Colo R., 23 km NW of Windsor, *H.Streimann* 65210 (CANB). A.C.T.: Torrens St, Bradden, *M.Streimann* 5 (CANB).

Fabronia brachyphylla is readily distinguished from *F. australis* by its acute leaf apices and considerably shorter laminal cells. Unlike *F. scottiae*, it lacks elongate cells in the leaf apex.

3. *Fabronia hampeana* Sond., *Icon. Musc.* 13 (1844)

T: on a trunk of *Macrozamia preissii*, near Perth, [W.A.]; holo: *n.v.*

Fabronia incana Taylor, *London J. Bot.* 5: 58 (1846). T: Swan R., W.A., *J.Drummond*; holo: *n.v.*

Fabronia tomentosa Hook.f. & Wilson, *Icon. Pl. Rar.* 8: 739C (1848). T: Swan R., W.A., *J.Drummond*; holo: *n.v.*

Illustration: G.A.M.Scott & I.G.Stone, *Mosses of Southern Australia* 433, pl. 84 (1976).

Plant distinctly silvery green. Leaves imbricate, linear-lanceolate, 0.8–1.0 mm long, 0.11–0.19 mm wide; apex a long hairpoint; margins plane and covered with very long single-celled wavy cilia (to 150 µm long); costa weak to very weak, usually ending c. mid-leaf, occasionally with short cilia projecting on the abaxial side. Laminal cells markedly elongate, 60–120 × 5–6 µm; alar cells subquadrate, 10–20 × c. 10 µm. Spores 14–20 µm diam.

Endemic to W.A. Recorded elsewhere (N.S.W and Vic.), but it is most likely that those specimens were highly ciliate forms of *F. australis*.

W.A.: between Neerabup Natl Park and Kinross, 28 km NNW of Perth, *J.A.Curnow* 4799 (CANB.)

4. *Fabronia scottiae* Müll.Hal., *Linnaea* 35: 614 (1868)

T: Ash Island, [Hunter R., N.S.W.], *H.Scott s.n.*; not located [not at B, JE, or NSW; possibly destroyed]

Plants pale to medium green, lacking a silvery sheen. Leaves imbricate, crowded, ovate to ovate-lanceolate, (0.38–) 0.52–0.73 (–0.91) mm long, (0.14–) 0.23–0.38 µm wide; apex acuminate; costa weak, ending in mid-leaf; margins entire, rarely serrulate towards the apex. Laminal cells hexagonal 26–54 × 8–14 µm, shorter and rhomboidal towards the margins; alar cells subquadrate, 12–18 × 14–16 µm; subquadrate to rhomboidal marginal cells extending

up the side to above mid-leaf, and often as far as the base of the hairpoint. Spores 16–20 μm diam.

This Australian endemic is known from Qld, N.S.W. and A.C.T.

Qld: Wyberbay junction of Old Hwy and Eukey Rd, 23 km SSW of Stanthorpe, *H.Streimann 52975* (CANB).
N.S.W.: Lane Cove R., *W.W.Watts 4659* (NSW); Buckenbowra R., 7 km WNW of Batemans Bay, *H.Streimann 5676* (CANB). A.C.T.: corner of Marcus Clarke St. and Edinburgh Ave., Acton, Canberra, *M.Streimann 12* (CANB).

Fabronia scottiae has a longer, acuminate leaf apex than in *F. brachyphylla*. Moreover, it differs from entire to dentate forms of *F. australis* by not having as long an apex, and leaves that are more concave and tightly arranged on the stem. The costa appears a little more distinct than in *F. australis* due to the shorter laminal cells.