Hypnodendron (Müll.Hal.) Lindb. ex Mitt., in B.C.Seemann, Fl. Vitiensis 401 (1873); from the Greek hypnon (a kind of moss), adopted in the 18th century for a group of pleurocarpous mosses, and dendron (a tree), referring to the tree-like habit of the plants.


Type: H. junghuhnii (Müll.Hal.) A.Jaeger

Plants medium-sized to tall, erect or projecting obliquely from the substratum. Distal innovations absent or weak. Stipe tomentose at the base only, occasionally with a few scattered tufts of tomentum. Frond palmate to subumbellate, occasionally pinnate or umbellate. Branches mostly strongly complanate. Stipe leaves mostly appressed to obliquely spreading, smooth; base not decurrent; apex acute to shortly acuminate; margin entire to coarsely serrate; costa ending in apex to short-excurrent; lamina cells mostly smooth to distinctly prorate; marginal cells similar to the inner ones; alar cells usually indistinct. Branch leaves mostly glossy, anisomorphous, asymmetrical, smooth, mostly ovate-oblong; apex mostly acute to weakly acuminate; margin serrate; costa usually percurrent; lamina cells mostly prorate; submarginal cells often indistinctly elongated; alar cells indistinct.

Male gametocia scattered. Capsule thecae costate to sulcate, strongly inclined to horizontal, occasionally cernuous; operculum bluntly rostrate. Spores 10–19 μm diam.

Reference

Key
Stipe leaves spreading, rounded at the base; alar cells broader than mid-laminal cells; costa strong..........................

1. H. spininervium

Stipe leaves appressed to erecto-patent at the apex, not or scarcely narrowed at insertion; alar cells indistinct; costa weak ................................................................. 2. H. vitiense


subsp. archeri (Mitt.) Touw, Blumea 19: 277 (1971)


1 Nationaal Herbarium Nederland, Leiden University branch, P.O. Box 9514, 2300 RA Leiden, Netherlands.

Illustrations: A. Touw, *op. cit.* 274, fig. 20e, i–n–q; G. A. M. Scott & I. G. Stone, *The Mosses of Southern Australia* 343, pl. 64 (1976), as *H. spininervium*.

Plants erect or horizontal, dull to somewhat glossy. Fronds pinnate, palmate or irregularly branched, to 3.5 cm diam.; branches complanate. Distal innovations absent or weak. Stipe up to 5 cm long, mostly tomentose at the base only. Pseudoparaphyllia appressed. Stipe leaves deltoid to triangular-ovate, 1.0–2.3 mm long, spreading; base erecto-patent, broadly rounded, insertion concave; apex acute to short-acuminate; costa strong; margin finely serrulate to almost entire; alar cells broader than mid-leaf cells. Branch leaves ovate-oblong, 1.5–2.9 mm long; apex mostly acute, occasionally rather blunt; costa ending in the apex to percurrent; margin serrulate to short-serrate, the teeth simple or mixed with a few geminate ones; mid-leaf cells 35–85 µm long.

Sporophytes up to 8. Seta 1.5–4.0 cm long. Capsules obconical to short-cylindrical, mostly shallowly sulcate, often weakly strumose when deperculcated, 1.5–2.5 (–4.5) mm long; operculum rostrate. Spores 12–17 µm diam.

Endemic to Vic. and Tas. Grows on wet rocks, logs and humus in wet areas of rainforest and in tree fern gullies, from sea level up to 750 m alt.


Often occurring together with *H. vitiense* subsp. *australe*, which usually forms more robust and rigid plants having broadly palmate or subumbellate fronds. Subsp. *spininervium* occurs in New Zealand and Chatham Island; its plants have taller sporophytes and they are somewhat more regularly branched and less glossy. Plants lacking sporophytes cannot be named with certainty.


*T*: Fiji Islands, B. C. Seemann 842; *holo*: NY; *iso*: FH.

Plants mostly erect, very glossy. Fronds predominantly palmate, to 6 cm diam.; branches complanate. Distal innovations absent or very weak. Stipe to 9 cm long, tomentose at the base only. Pseudoparaphyllia appressed. Stipe leaves triangular to triangular-ovate, 1.2–2.9 mm long, appressed; acumen often erecto-patent; base appressed, not or only a little narrowed at insertion, the insertion line straight or nearly so; apex acuminate; costa weak; margin entire or nearly so; alar cells poorly differentiated. Branch leaves ovate-oblong, 1.8–2.9 mm long; apex acute to slightly acuminate; costa ending in the apex to percurrent; margin serrate, the teeth simple, or mixed with geminate ones; mid-leaf cells 35–95 µm long.

Sporophytes up to 18. Seta 2.0–4.5 cm long. Capsules narrowly cylindrical, sulcate, not strumose, 3.5–5.5 mm long; operculum rostrate. Spores 12–17 µm diam.

Two weak subspecies have been recognised, and both occur in north-eastern Qld where they appear to intergrade. However, all plants from that area are small and depauperate, and most are difficult to place because of their poor condition.

Stipe leaves broadest above the insertion; geminate teeth in branch leaves absent or few ..... 2a. subsp. *vitiense*

Stipe leaves broadest at the insertion; geminate teeth usually numerous in branch leaves, rarely sparse ..........

........................................................................................................................................ 2b. subsp. *australe*

2a. *Hypnodendron vitiense* Mitt. subsp. *vitiense*

Illustration: A. Touw, *op. cit.* 280, fig. 23a, b, f–i, m–o, q, s, u.

Stipe leaves to 2.0 (–2.3) mm long; base not narrowed at the insertion, or slightly narrowed in some leaves. Geminate teeth usually numerous in branch leaves.

Occurs in rainforest and *Araucaria* plantations in north-eastern Qld; grows on rocks in stream beds, in deep shade, from sea level up to c. 1250 m alt. This subspecies is especially common in central and eastern Malesia, Melanesia and Polynesia.

Qld: Atherton Tableland, B. O. van Zanten 681334 (GRO, L).
All Australian plants are poorly developed.


T: slopes of Mt Budawang, near Mongarlowe, N.S.W., 28 Sept. 1965, L.G.Adams 1425; holo: L; iso: B, BM, CANB, CHR, FH, MEL, NSW, P, TNS, US.


[Hypnodendron arcuatum auct. non (Hedw.) Mitt.: Linn. 1: 82 (1860)]

[Hypnum arcuatum auct. non Hedw., Sp. Musc. 245 (1801).]

This species occurs in New Zealand, Campbell Island and perhaps Norfolk Island. All Australian reports checked relate to either H. vitiense subsp. australis or H. spininervium subsp. archeri.

[Hypnodendron menziesii (Hook.) Paris, Index Bryol. 604 (1895)]


Widespread in New Zealand. Single 19th century collections are known from Norfolk Island (Gunn s.n.) and Tasmania (Cunningham s.n.), but both are most likely mislabeled.

[Hypnodendron planifrons Müll.Hal., Hedwigia 37:170 (1898).]

This is a heterotypic synonym of H. spininervium subsp. spininervium which has been reported erroneously from Australia by E.G.Paris (Index. Musc., 2nd edn, 2: 374, 1904).


Erroneously treated as validly published in H.Streimann & J.Curnow (op. cit. 197).