HAMPEELLA

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Hampeella Müll.Hal., *Beih. Bot. Centralbl.* 7: 348 (1881); named in honour of Georg Ernst Ludwig Hampe (1795–1880), a prominent German bryologist.

Type: *H. pallens* (Sande Lac.) M.Fleisch.

Dioicous. Plants golden green, forming dense erect or loose pendent turfs. Secondary stems simple to sparingly branched; paraphyllia absent. Leaves appressed when dry, ovate-oblong, shallowly to deeply concave; subtubulous or canaliculate just below the apex, acute or acuminate; apex occasionally reflexed; margin entire throughout or toothed at the apex; costa short and double or absent. Laminal cells linear, thin-walled, not pitted; basal cells quadrate to rectangular, thick-walled, pitted. Gemmae often present in upper leaf axils, long and filiform.

Calyptra cucullate, smooth. Capsules exserted, erect to inclined, cylindrical, deeply furrowed; stomata superficial, at the base of the capsule; annulus differentiated. Peristome: exostome with the outer face having conspicious transparent regions along the median line, densely horizontally striate at the base, occasionally papillose at the base; tips coarsely papillose, inner face horizontally striate; endostome colourless to pale yellow, slightly longer than the exostome, smooth, with a high basal membrane; processes narrow, keeled; cilia absent. Spores globose to ellipsoidal, smooth or papillose.

Hampeella is a genus of three species occurring in Australasia and Malesia. All three occur in Australia, with one endemic to north-eastern Queensland.

References

Enroth, J. (1991), Bryophyte flora of the Huon Peninsula, Papua New Guinea. XLI. Ptychomniaceae (Musci), *Acta. Bot. Fenn.* 143: 35–41.

Hattaway, R.A. & Norris, D.H. (2008), A new species of *Hampeella* (Musci, Ptychomniaceae) from Queensland, Australia, *Novon* 18: 490–493.

Key

1 Leaves asymmetrical; stems ±complanate throughout ..... **3. H. pallens**

1: Leaves symmetrical; stems terete-foliate throughout or the upper stem ±complanate 2

2 Leaf margins narrowly recurved ..... **1. H. alaris**

2: Leaf margins not recurved..... **2. H. concavifolia**

1. Hampeella alaris (Dixon & Sainsbury) Sainsbury, *Rev. Bryol. Lichénol.* 20: 95 (1951)

Glyphothecium alare Dixon & Sainsbury, *J. Bot.* 71: 246 (1933). T: Marina Springs, Nelson, New Zealand, *J.H.McMahon 632*; holo: BM.

Plants forming tufts 10–40 mm tall, green to yellow above, golden brown below. Stems terete-foliate below, often ±complanate towards the apex. Leaves erect, symmetrical, oblong, concave, those near the stem apex narrower and less concave; apex acute, subtubulous, hooked; margin entire throughout or with a few apical teeth, narrowly recurved to c. mid-

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leaf. Laminal cells 63–96 µm long, shorter towards the apex; basal cells yellowish; alar cells quadrate to short-rectangular, thick-walled, pitted, pale yellow to orange-brown.

Seta 7–8 mm long. Capsules erect. Peristome: exostome teeth orange; tips hyaline, with a narrow transparent zone along the median line on the outer face, horizontally striate with papillae on striae; inner face smooth below, papillose above. Spores globose to ellipsoidal, 41–53 µm long.

The narrowly recurved margins and exostome teeth with papillae on the striae, distinguish *H. alaris* from other Australian species. Two varieties are recognised.

Alar patches conspicuous, dark yellow to orange-brown; leaf margin narrowly recurved to c. mid-way along the leaf; leaf apex conspicuously hooked..... **1a.** var. **alaris**

Alar patches pale yellowish; leaf margin narrowly recurved to 75% of leaf length to just below apex; leaf apex straight to slightly recurved ..... **1b.** var. **symmetrica**

1a. Hampeella alaris (Dixon & Sainsbury) Sainsbury var. **alaris**

Illustration: G.O.K.Sainsbury, *Bull. Roy. Soc. New Zealand* 6: 343, fig. 2 (1955).

Leaves 1.7–2.0 mm long, 0.4–0.5 mm wide; apex hooked; margin narrowly recurved to c. mid-way along the length of the leaf; alar cells dark yellow to orange-brown.

Occurs in Vic. and Tas. in cool-temperate rainforest at altitudes of 170–760 m; epiphytic on *Nothofagus cunninghamii*, *Atherosperma moschatum* and on thick branches of shrubs. Also in New Zealand.

Vic.: Acheron Gap, Acheron R., 21 Nov. 1984, *G.A.M.Scott s.n.* (MEL); Pioneer Creek Rd, Powelltown, 3 Mar. 1982, *G.A.M.Scott s.n*. (MEL); near MMBW Road Seven, Yarra Ranges Natl Park, *A.McLean 46* (MEL). Tas.: near Scotts Peak Dam, 10 May 2000, *S.J.Jarman & L.Cave s.n.* (HO); Watts Lookout, *A.Moscal 30409* (HO); Lyall Hwy, above Saddle Ck, 2 miles [c. 3.2 km] E of Rosebery, *D.H.Norris 33674* (CANB).

1b. Hampeella alaris var. **symmetrica** (Sainsbury) J.Milne & Klazenga, *comb. nov.* *

Basionym: *Hampeella pallens* (Sande Lac.) M.Fleisch. var. *symmetrica* Sainsbury, *Rev. Bryol. Lichénol.* 20: 95 (1951). T: between Lake Rotoeho and Bay of Plenty, North Island, New Zealand, *K.W.Allison 2052*; holo: WELT; iso: CHR *n.v.*

Leaves 2.0–2.8 mm long, 0.5–0.8 mm wide; apex straight to slightly recurved; margin entire below, serrate at the apex, narrowly recurved to 75% of the leaf length to just below apex; alar cells pale yellow.

Occurs in south-eastern Qld, eastern N.S.W. and eastern Vic.; epiphytic in wet-sclerophyll and cool-temperate rainforest at 100–1220 m, on stems and branches of trees. Also in New Zealand, where it is known only from the type locality.

Qld: near O'Reilly's guest-house, Lamington Natl Park, *D.H.Norris, 34619* (BRI). N.S.W.: Chaelundi Rd at Foamy Creek Rd, Marengo S.F., 36 km NW of Dorrigo, *H.Streimann 47629* (CANB); Tweed Range Scenic Drive, Border Ranges Natl Park, 22 km NE of Kyogle, *H.Streimann 61190* (CANB). Vic.: Bemm R., Princes Hwy, 8 km SSW of Club Terrace, *H.Streimann 35535* (CANB); Cann River Township, *J.H.Willis 181W* (MEL).

This moss was first described as a variety of *Hampeella pallens*, but the plants are more similar to *H. alaris*.

We agree with Allan Fife's comment on the holotype of *H. pallens* var. *symmetrica* that there is no *H. pallens s. str.* in this collection. Although the secondary stem is terete-foliate below, and often ±complanate towards the apex, which is characteristic of *H. alaris*, leaf morphology does differ from typical *H. alaris*. The leaves in this New Zealand collection closely match those of specimens from Queensland, New South Wales and far-eastern Victoria, and although they resemble typical *H. alaris* at first glance, on closer examination

* Cite as: *Hampeella alaris* var. *symmetrica* (Sainsbury) J.Milne & Klazenga, *Australian Mosses Online 31. Ptychomniaceae: Hampeella* 2 (2012)
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they vary sufficiently and consistently for us to consider them a distinct variety of that species.

2. Hampeella concavifolia Hattaway & D.H.Norris, *Novon* 18: 490 (2008)

T: Mt Haig, Qld, *D.H.Norris 41471*; holo: UC *n.v.*; iso: MEL.

Illustration: R.A.Hattaway & D.H.Norris, *op. cit.* 491.

Plants forming erect tufts to c. 30 mm tall, pale green to golden. Secondary stems simple, rarely branched, terete-foliate, almost complanate distally, often attenuate. Leaves erect, broadly ovate to oblong-lanceolate, 2.0–2.7 mm long, 0.65–1.20 mm wide, deeply concave, with an acuminate apex, strongly canaliculate to almost subtubulous; distal leaves lanceolate, acuminate; margin entire, occasionally serrulate at the apex in distal leaves. Laminal cells 85–110 × 6–8 µm; basal cells rectangular, yellowish; alar cells scarcely differentiated, yellow to orange.

Calyptra not seen. Seta to 15 mm long. Capsules erect. Peristome: exostome teeth 16, yellowish to orange, with hyaline tips and a very narrow transparent zone along the median line on the outer face, densely horizontally striate in lower 75%, finely papillose at the apex. Spores globose, 16–20 µm diam.

Endemic to north-eastern Qld; epiphytic in shaded montane rainforest at altitudes of 940–1300 m.

Qld: W ridge of Thornton Peak, NE of Daintree, *D.H.Norris 43913* (MEL); 17 km NNW of Mount Molloy, Main Coast Ra., *H.Streimann 30393* (CANB); Old Forestry Camp, 11 km NW of Mount Molloy, Main Coast Ra., *H.Streimann 30446* (CANB); 21 km NE of Atherton, Lamb Ra., *H.Streimann 29808* (CANB); Creek Track, Mt Bellenden Ker, *I.G.Stone 16834, 16790* (MEL).

Hampeella concavifolia closely resembles *H. alaris* with which it shares concave lower stem leaves and almost complanate upper stem leaves. However, it can be distinguished by the more concave leaves and non-recurved basal margins. Furthermore, the apices of the basal leaves are erect or only weakly recurved as opposed to strongly recurved in *H. alaris*. Although the cells in the basal corners are often orange, alar cells do not differ in shape from the other basal cells. The exostome teeth of *H. concavifolia* lack the papillae on the striations of *H. alaris*. Gemmae are pale green to almost colourless in the collections examined and not dark brown or black, as described by Hattaway & Norris (2008).

3. Hampeella pallens (Sande Lac.) M.Fleisch., *Musc. Buitenzorg* 3: 664 (1908)

Cladomnion pallens Sande Lac., *Verh. Kon. Ned. Akad. Wetensch., Afd. Natuurk.* 13: 12 (1872). T: Jati-Kalangua, Java, [Indonesia], *F.W.Junghuhn s.n.*; isolecto: L, *fide* J.Enroth, *Acta Bot. Fenn.* 143: 36 (1991).

Hampeella kurzii Müll.Hal., *Bot. Centralbl.* 7: 348 (1881).

Illustrations: J.Enroth, *Acta Bot. Fenn.* 143: 37, figs a, b (1991).

Plants in scattered tufts, to 7 cm long, bright green to pale green-yellow. Stems complanate-foliate. Leaves erecto-patent, asymmetrical, ovate-lanceolate to cultriform, 1.5–2.5 mm long, 0.4–0.6 mm wide, plane; apex long-acuminate, straight; margin serrulate near the apex, entire below, narrowly recurved on one side. Laminal cells 76–96 µm long, shorter towards the apex; basal cells yellowish; alar cells quadrate to short-rectangular, pale yellow, forming a small often indistinct patch.

Seta 9–12 mm long. Capsules erect to inclined. Peristome: exostome teeth red-brown, with hyaline tips and conspicuous transparent zones along the median line on the outer face, densely horizontally striate at the base, papillose above. Spores globose, 20–25 µm diam.

Occurs in rainforest in eastern Qld, N.S.W. and Vic.; epiphytic on narrow twigs, occasionally epiphyllous along leaf margins, especially in Qld, and on rotting logs. Also in Malesia and Taiwan.

Qld: Dunns Ck, Kirrama S.F., 24 km WNW of Cardwell, *H.Streimann & B.Mishler 61804* (CANB); Bellenden Ker (Centre Peak), 12 km NW of Babinda, Wooroonooran Natl Park, *H.Streimann & T.Pócs 64357* (CANB); Creek Track near dam, Mt Bellenden Ker, *I.G.Stone 16834* (MEL). N.S.W.: Ulong–Coramba road (1 km SE

of Ulong), 23 km WNW of Coffs Harbour**,** *H.Streimann 63739* (CANB). Vic.: Harrisons Ck, c. 1.5 miles [c. 2.5 km] above Marshmead High School, Howe Ra., 3 Nov. 1969, *J.H.Willis* (MEL).

Hampeella pallens is distinguished from *H. alaris* and *H. concavifolia* by its asymmetrical leaves which are ±complanate throughout. The alar patch, if present, is small and lacks the orange-brown pigment of *H. alaris* var. *alaris*. Furthermore, it is the only *Hampeella* with the exostome teeth having a conspicuous, transparent furrow on both sides of the median zig-zag line.