

Timonius hughtanii, a new species from Borneo

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Abstract. A new species of *Timonius* (Rubiaceae) from Borneo is described and named *Timonius hughtanii* in honour of Associate Professor Hugh Tan of the National University of Singapore. This rare species is endemic to Sabah, where it is further restricted to ultramafic substrates in lower montane forests.

Key words. Borneo, lower montane forests, Rubiaceae, Sabah, *Timonius*, ultramafic

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INTRODUCTION

While the first author was an undergraduate with the National University of Singapore (NUS), nearly a decade ago, he approached Associate Professor (A/P) Hugh Tan with the objective of undertaking an Honours Project in plant taxonomy under his supervision, despite knowing that the research focus of Hugh's 'Plant Systematics Laboratory' has long shifted to plant ecology, urban ecology and urban agriculture. Fortunately, Hugh recommended exploring the possibility of a co-supervision with the second author, then Keeper of the Singapore Herbarium, who in turn suggested a revision of the genus *Timonius* on Mount Kinabalu. The project panned out very well, resulting in the discovery of nine new species (Chen et al., 2014) from Kinabalu Park, offering several insights on biogeography (Chen et al., 2015a) and micromorphology (Chen et al., 2015b), and soon expanded into a wider revision of the Bornean *Timonius*. Following a hiatus, during which the first author pursued his postgraduate studies while the second author tackled revisions for the Flora of Singapore project, our collaboration on the Bornean *Timonius* continued and is presently nearing completion (see the previous paper in this special issue on the *Timonius* conundrum which serves as a generic account). Of the 70 new species uncovered in our work, we name the present species here for A/P Hugh Tan in recognition of his mentorship of many budding botanists at NUS. The general morphological features of the genus are covered in the preceding article of this Valedictory Volume, so these are not repeated here.

THE NEW SPECIES

Timonius hughtanii Junhao Chen & K.M.Wong
(Fig. 1)

Diagnosis. Similar to *Timonius tambuyukonensis* Junhao Chen in being a treelet c. 2–3 m high and having imbricate stipules, strongly revolute leaf margins, coriaceous, (sub)bullate, elliptic leaves, obscure tertiary venation sometimes manifest as subparallel micro-wrinkles, leaf blades of similar size (5.8–11.8 × 3–5 cm) and similar habitat (ultramafic substrates on lower montane forests), but differing by the linear (vs broad-triangular) calyx lobes and indumentum of the midrib and secondary veins on the lower leaf surface, peduncle, floral hypanthium and fruit (densely long-appressed hairy with scattered long-spreading hairs vs (sub)glabrous).

Type. Borneo, Malaysia, Sabah, Telupid, summit of Bukit Tawai, 7 April 1994, male, Berhaman et al. SAN 134258 (holotype SAN [acc no. 103924]; isotypes K [K001129906], SAN [acc no. 115279]).

Description. Treelet recorded as c. 3 m high. **Stipules** ovate-lanceolate, 2-ridged, imbricate. **Leaves** opposite; blades drying discolorous (blackish brown on upper surface, castaneous on lower surface), elliptic, 6.1–11.8 × 3.2–4.6 cm, length/width ratio 1.9–2.7, base cuneate (sides converging at over 60–80° angle), lamina bullate, slightly decurrent to petiole base, apex short-cuspidate, cusp 1–3 mm long, less than one-tenth the lamina length, margins strongly revolute, coriaceous, lower surface smooth (not shagreen), matt when dry, densely long-appressed hairy on midrib and secondary veins, with scattered, long-spreading hairs, lamina densely long-appressed hairy, hairs visible to unaided eye, not velvety or rough-hairy to the touch, midrib not conspicuously different in colour from lamina when dry, secondary veins 5–7 pairs, 8–20 mm apart along the midrib, fading towards margin on lower surface, tertiary veins on lower surface obscure,

immersed in the lamina, sometimes visible as subparallel micro-wrinkles when dry, without dark fine vein reticulations when dry, upper surface subglabrous, with sunken secondary veins; subsessile, petioles 1–3 mm long, 2.5–4 mm diameter, densely covered with long-appressed hairs and scattered, long-spreading hairs (visible to unaided eye), sometimes becoming subglabrous. **Pistillate inflorescence** with a single flower (pistillate specimen only represented by fruiting material). **Staminate inflorescence** with 3–5 flowers, branching dichasial, distinctly pedunculate, peduncle 1.2–1.8 cm long, c. 2 mm diameter, densely long-appressed hairy with scattered long-spreading hairs, bracts ovate, not conspicuously enlarged, c. 6 × 3 mm, with dense long-appressed hairs and long-spreading hairs along the midline outside, flowers tightly clustered (not more than 1 mm apart on inflorescence axes); floral hypanthium c. 1 mm diameter, densely long-appressed brown hairy with scattered long-spreading brown hairs; calyx lobes 4, not foliaceous, linear, 4–6 mm long, c. 1 mm wide, length/width ratio 4–6, densely appressed hairy with scattered spreading hairs outside; corolla with tube c. 9 mm long, c. 1 mm diameter, hairiness outside same as calyx lobes, lobes 4 or 5, lanceolate, 3–4 mm long, c. 1 mm wide, densely spreading hairy outside. **Fruits** ellipsoid, 7–7.5 mm diameter, densely long-appressed hairy with scattered long-spreading hairs, surface smooth (not tuberculate), developing into a several-lobed structure; peduncle c. 3.5 mm long, c. 2 mm diameter, hairiness same as fruit; calyx tube at fruit apex c. 2 mm long, hairiness outside same as fruit, persistent calyx lobes not foliaceous, linear, 5–7 mm long, c. 2 mm wide, hairiness outside same as fruit.

Etymology. This new species honours A/P Hugh T.W. Tan, who was the first author's Honours Project supervisor at the NUS.

Distribution. Endemic to Sabah.

Habitat. Lower montane forest, on ultramafic substrates.

Additional specimens examined. Malaysia: Sabah: Tongod, Sg Imbak VJR, Block IID, 5°4'35"N 117°10'45"E, 1,203 m, 2 Apr 2014, male, Alviana et al. SAN 156564 (KEP n.v., SAN n.v., SING); Beluran, Ulu Tungud Forest Reserve, Bukit Tengkorak, 3,000 ft [914 m], 12 Aug 2004, female, Jamirus & Jemson SAN 145613 (SAN); west of Bukit Hampuan Forest Reserve, 6°01'22"N, 116°39'57"E, 1,508 m, 12 May 2010, female, Pereira et al. SAN 151736 (K n.v., SAN); Telupid, Summit of Bukit Tawai, 4176 ft [1,273 m], 11 Apr 1994, male, Sugau SAN 134306 (SAN).

Notes. The fruit on Pereira et al. SAN 151736 (SAN) is galled.

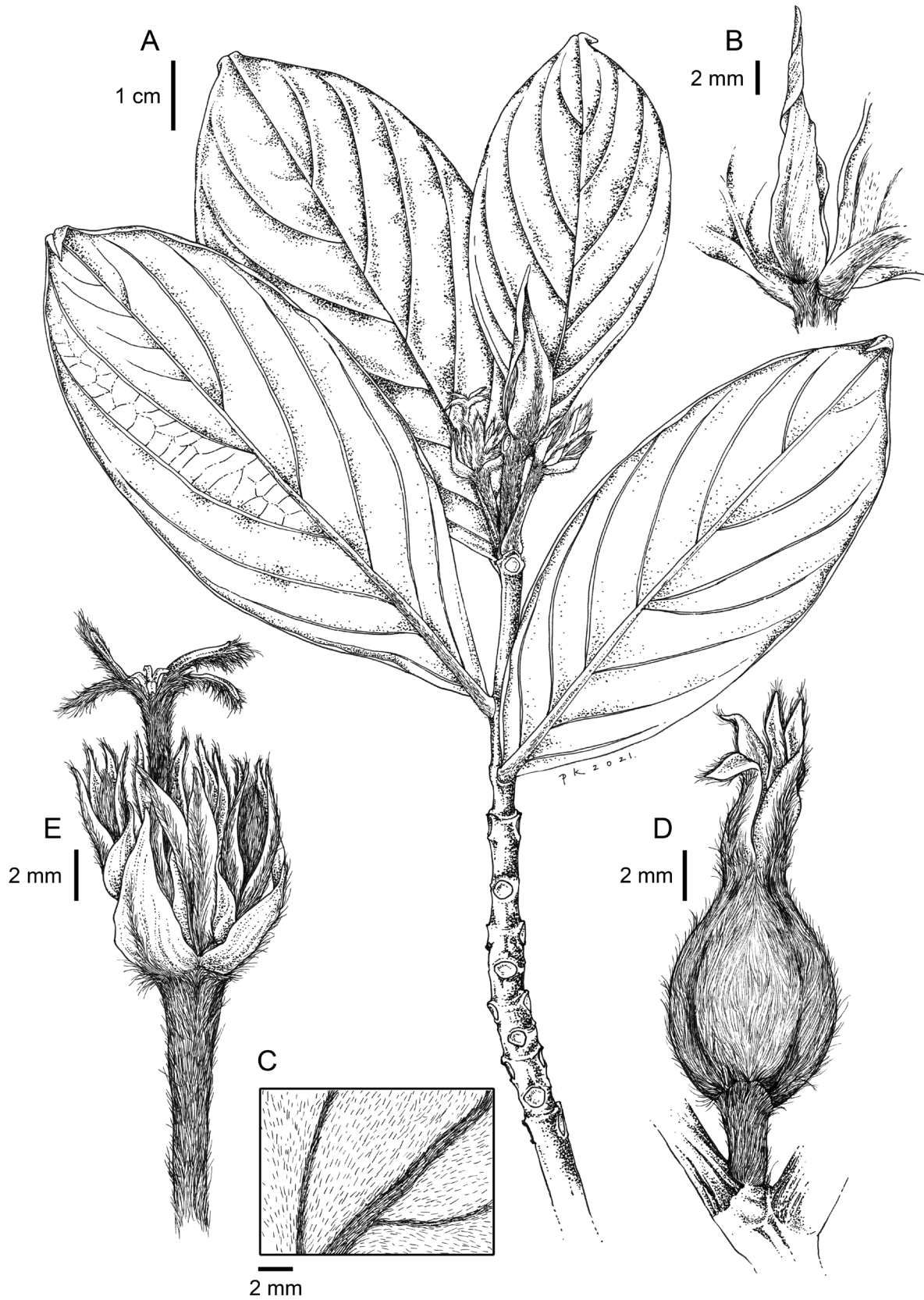


Fig. 1. *Timonius hughtanii*. A, habit; B, stipules; C, indumentum on lower leaf surface; D, fruit; E, male inflorescence. A–C, E from Berhaman et al. SAN 134258; D from Jamirus & Jemson SAN 145613. (Drawn by Cheng Puay Koon).

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