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A new species of *Geniostoma* (Loganiaceae) from Lord Howe Island

Barry J. Conn

Abstract

Conn, Barry J. (National Herbarium of New South Wales, Royal Botanic Gardens, Mrs Macquaries Road, Sydney, NSW, Australia 2000). 1993. A new species of Geniostoma *(Loganiaceae) from Lord Howe Island.* Telopea *5(2): 301–304.* **Geniostoma huttonii** is described for the first time.

Introduction

Exploration of the flora of Lord Howe Island by Mr Ian Hutton has revealed the presence of an undescribed species of *Geniostoma*. This species is here described for the first time. Terminology and presentation follows that used by Conn (1980).

Geniostoma huttonii *Conn*, **sp. nov.**

Frutex subscandens ad 1 m altus. *Ramuli* teretes, internodiis supremis complanatis, glabri; stipulae depresse deltoideae ad annularibus, 1–1.4 mm longae, apice rotundato. *Folia* glabra; petiolus 4–6 mm longus; lamina ovata, 20–30 mm longa, (9–)14–16 mm lata, basi acuta ad breviter subattenuata, margine integra, apice subacuta ad subacuminata. *Inflorescentia* axillaris, unifloris vel trifloris, fortasse quinquefloris, minus quam 10 mm longa; pedunculus absens vel usque ad 1 mm longus; pedicellus circa 2 mm longus, glaber. *Calyx* 1.3–1.5 mm longus, pagina externa glabra, pagina interna moderate tomentosa; lobi ovato-deltoidei, 0.6–1 mm longi, margine breviter fimbriata, apice acuta. *Corolla* campanulata, 2.5–3.5 mm longa, pagina externa glabra; tubus 0.8–1 mm longus; lobi 2.5–3 mm longi, basaliter glabri, distaliter papillosi. *Filamenta staminum* anguste ovoidea, circa 1 mm longa; antherae plus minusve ovatae, 0.5–0.6 mm longae, lobis obtusis, apice breviter deltoideo. *Pistillum* 1.4–2 mm longum, ovario circa 0.5 mm alto, stylo 0.2–0.6 mm longo, stigmate ellipsoideo. *Capsulae* plus minusve globulares ad leviter ellipsoideae, diametro 5–6 mm. Figure 1.

TYPE: AUSTRALIA: NEW SOUTH WALES: Lord Howe Island: South-east spur of Mt Lidgbird, above the saddle between Mt Gower and Mt Lidgbird, *Conn 3578 & Hutton*, 29 Feb 1992 (holo NSW 253452; iso in MEL).

Scrambling shrub to 1 m high. *Branches* slightly compressed laterally on distal internodes; distal internodes with 2 pairs of lateral ridges extending from between the leaf bases to the next more basal node; glabrous; stipules interpetiolar, depressed triangular to collar-like, 1–1.4 mm long, glabrous, distally rounded. *Leaves* glossy mid-green, glabrous; petiole 4–6 mm long; lamina ovate, 20–30 mm long, (9–)14–16 mm wide [length to width ratio 1.5–1.9]; base acute to shortly subattenuate; margin entire; apex subacute to subacuminate; midrib raised on lower surface, slightly sunken on upper surface, veins indistinct. *Inflorescence* axillary, 1–3-flowered, possibly to 5-flowered (see note below), less than 10 mm long; peduncle absent or up to 1 mm long; pedicels c. 2 mm long, glabrous; bracts ovate, c. 0.5 mm long, glabrous, with margin shortly fimbriate. *Calyx* 1.3–1.5 mm long; outer surface glabrous; inner surface moderately hairy, hairs minute, to c. 0.1 mm long; lobes ovate-triangular, 0.6–1 mm long, margin shortly fimbriate, apex acute; veins not distinct. *Corolla* 5(or 6)-merous, campanulate,

2.5–3.5 mm long; outer surface glabrous; tube 0.8–1 mm long, with inner surface glabrous; lobes 2.5–3 mm long, glabrous basally, papillose distally; margin papillose to shortly fimbriate (hairs <0.05 mm long); venation complex, each lobe supplied by one vein which has usually divided in the upper part of the tube to produce 2 lateral branches which ascend into the lobe, with short to long divergent branchlets usually

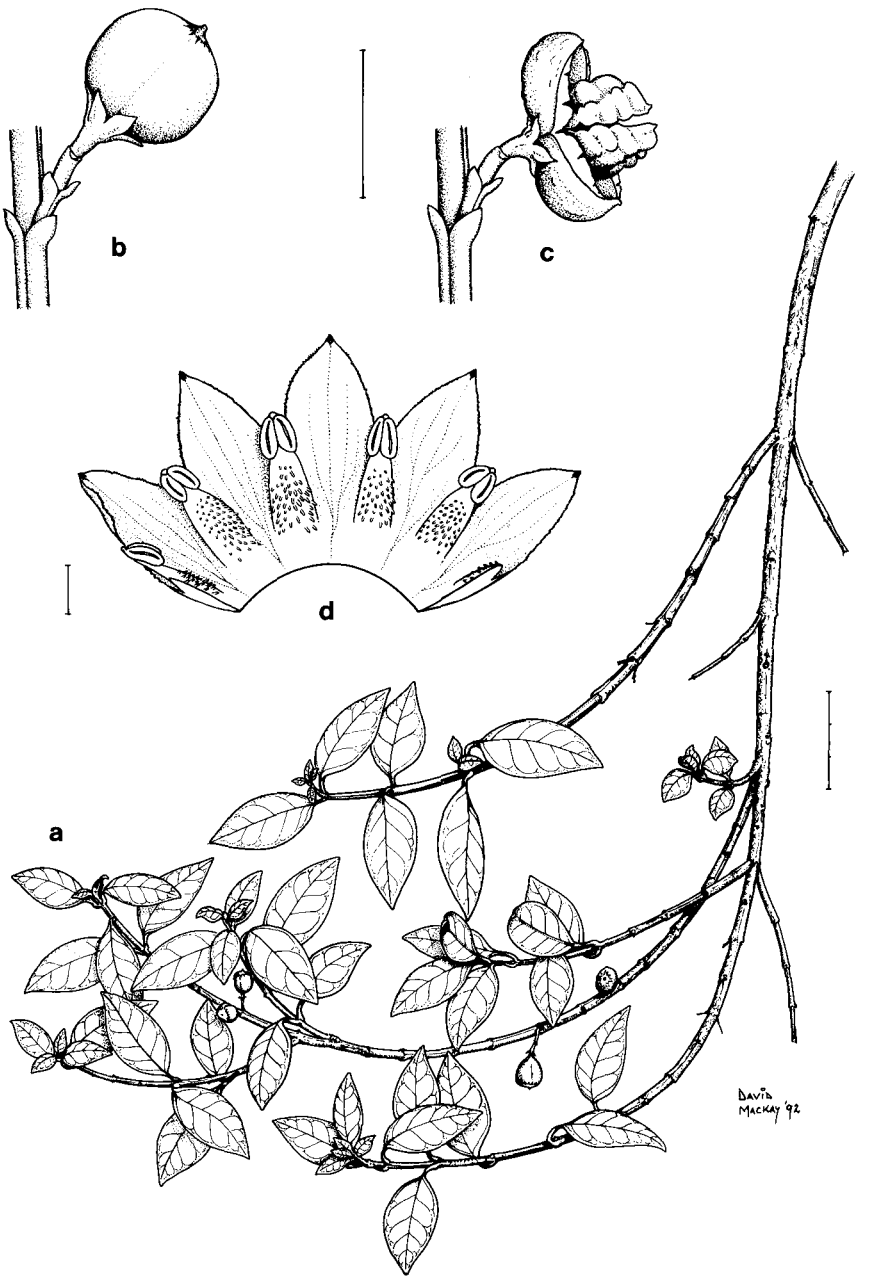

Figure 1. *Geniostoma huttonii*. **a**, Branch with capsules; **b**, detail of capsule and calyx; **c**, open capsule showing seeds in pulp; **d**, open flower showing corolla and stamens (all from *Conn 3578*). Scale bar: a = 3 cm; b & c = 1 cm; d = 1 mm.

present. *Staminal filaments* narrowly ovoid to slightly ligulate, c. 1 mm long, c. 0.4 mm wide, moderately hairy on ventral surface, hairs to 0.1 mm long, glabrous dorsally; anthers ovate, slightly incurved distally, 0.5–0.6 mm long, basal lobes obtuse, glabrous, apex sparsely to moderately covered with patent hairs to 0.1 mm long, connective slightly extended to form a minute triangular, apical appendage c. 0.1 mm long. *Pistil* 1.4–2 mm long; ovary glabrous, c. 0.5 mm long; style 0.2–0.6 mm long, moderately hairy with patent hairs to 0.1 mm long; stigma ellipsoid, 0.3–0.7 mm long. *Capsule* globular to slightly ellipsoid, 5–6 mm diameter.

DISTRIBUTION: Endemic to Lord Howe Island, New South Wales, Australia.

HABITAT: This species occurs on steep slopes in *Metrosideros nervulosa* and *Westringia viminalis* shrub communities, in basalt-derived soils. Altitude 600 m.

NOTES: Although the inflorescence is usually uniflorous or triadic, it is either derived from a botryoidal or metabotryoidal inflorescence because of the prophylls and metaxyphylls (together there are usually 2 pairs, rarely 3 pairs).

Geniostoma huttonii is readily distinguished from *G. petiolosum*, the other species that occurs on the island, by several characters. *Geniostoma huttonii* has smaller leaves (petiole 4–6 mm long; lamina ovate, 20–30 mm long, (9–)14–16 mm wide) than *G. petiolosum* (petiole 10–15 mm long and lamina narrowly ovate-oblong to oblong-elliptic, 80–115 mm long, 20–35 mm wide). The inflorescence of the former species is few-flowered, probably less than 5-flowered, and less than 10 mm long, whereas *G. petiolosum* has a mostly botryoidal or metabotryoidal inflorescence, although sometimes triadic, and (8–)10–20 mm long. *Geniostoma huttonii* has short peduncles (up to 1 mm long or absent) and pedicels (c. 2 mm long), whereas, *G. petiolosum* has longer peduncles (3–4 mm long) and pedicels (4–6 mm long). The calyx of *G. huttonii* is 1.3–1.5 mm long, with inner surface moderately covered with minute hairs, whereas *G. petiolosum* has a larger glabrous calyx (2.5–4 mm long). *Geniostoma huttonii* is a scrambling shrub (usually less than 1 m high), whereas *G. petiolosum* is a small tree (2–5 m high). The flowers of *G. huttonii* lack an odour, but those of *G. petiolosum* are very strongly and pungently aromatic.

The affinities of this new species are not clear, but there are strong similarities to *G. antherotrichum* of New Guinea. Both species lack hairs on the inner surface of the corolla and have similar venation patterns on the corolla lobes. The two species have reduced inflorescences and similar sized leaves (characteristic of *G. antherotrichum* var. *archboldianum*, rather than of the typical variety of the latter). However, the short pistil (reduced style) of *G. antherotrichum* and the unusually thickened staminal filaments of *G. huttonii* (see Fig. 1d) lessen the likelihood of the two taxa being closely related.

ETYMOLOGY: The epithet of this new species honours Mr Ian Hutton whose extensive knowledge of the natural history of Lord Howe Island has increased understanding of many species occurring there. He discovered this new species in a relatively inaccessible part of the island.

OTHER SPECIMENS EXAMINED: Lord Howe Island: South-east spur of Mt Lidgbird, above the saddle between Mt Gower and Mt Lidgbird, *Conn 3575 & Hutton, 3581, 3582*, 29 Feb. 1992 (NSW 253366, 253459 & 253460, respectively); same locality, *Hutton 646, 647*, 11 Jan. 1991 (CBG 9105214 & CBG 9105215, respectively) [the locality of these *Hutton* collections was incorrectly given as 'above the Nobbin', the actual position of 'The Nobbin' is on the north-western face of Mt Lidgbird]; *Hutton 657*, 24 Jun. 1991 (CBG 9105219).

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Reference

Conn, B.J. (1980) A taxonomic revision of *Geniostoma* subg. *Geniostoma* (Loganiaceae). *Blumea* 26: 245–364.

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