

NOTES ON *GOODYERA LANCEOLATA* (ORCHIDACEAE), A MYSTERIOUS ORCHID SPECIES

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Abstract. *Goodyera lanceolata* Ridl., a rare orchid species previously known only from Selangor, Peninsular Malaysia, was newly discovered in lower montane forests in southern Thailand. A description, line drawings and photographs are provided, and its diagnostic characters and geographical distribution are briefly discussed.

Key words: *Goodyera lanceolata*, distribution, new record, orchid, peninsular Thailand, rare species

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INTRODUCTION

Goodyera R.Br. is a genus of terrestrial orchids with about 100 species, widely distributed from North and Central America and Eurasia to northern Queensland and the western Pacific islands and across the Indian Ocean to Madagascar and Mozambique (Pridgeon *et al.* 2003; Pedersen 2011). The genus is very similar to *Hylophila* Lindl. in general appearance, but the latter differs in the hypochile forming a subglobose sac (Pridgeon *et al.* 2003).

Eight species have been recorded from Thailand (Seidenfaden 1978; Pedersen 2011). During fieldwork devoted to revising the orchid flora of Thailand, two interesting collections of the genus *Goodyera* were made in the southern part of the country. Based on the literature and comparisons of herbarium specimens, the unknown collection was identified as *Goodyera lanceolata* Ridl., which was first established by Ridley (1903) based on a collection from Selangor, Malaysia. *Goodyera lanceolata* is one of the most mysterious orchids, not only because it was considered endemic to

Peninsular Malaysia, but also for the remarkable fact that only one sample was previously collected (Ridley 1903; Holttum 1953; Seidenfaden & Wood 1992). The description and illustration below are based on the recent collections in Thailand.

DESCRIPTION

Goodyera lanceolata Ridl. Figs 1 & 2
J. Straits Branch Roy. Asiat. Soc. 39: 86. 1903.

TYPE: MALAYSIA. Selangor, Gap, May 1902, Curtis *s.n.* (HOLOTYPE K000942759, photo seen).

Terrestrial orchid, rhizomatous herb; creeping stem-like rhizome rooting from its nodes, succulent, reddish brown, glabrous. *Flowering shoots* 20–30 cm tall, erect, reddish; lower part of stem 3.5–5.2 mm in diameter. *Foliage leaves* 3–5, pale to dark green; lanceolate to elliptic, 4.2–6.4 cm long, 1.3–2.3 cm wide, acute to acuminate; petiole (including sheaths) 2.3–3.0 cm long. *Inflorescence* pubescent, terminal; rachis green, 9–15 cm long, 1.5–3.0 mm in diameter, 3–12-flowered; bracts pubescent, lanceolate to triangular-ovate, 9–11 × 3.2–4.3 mm, acuminate. *Flowers* greenish brown,

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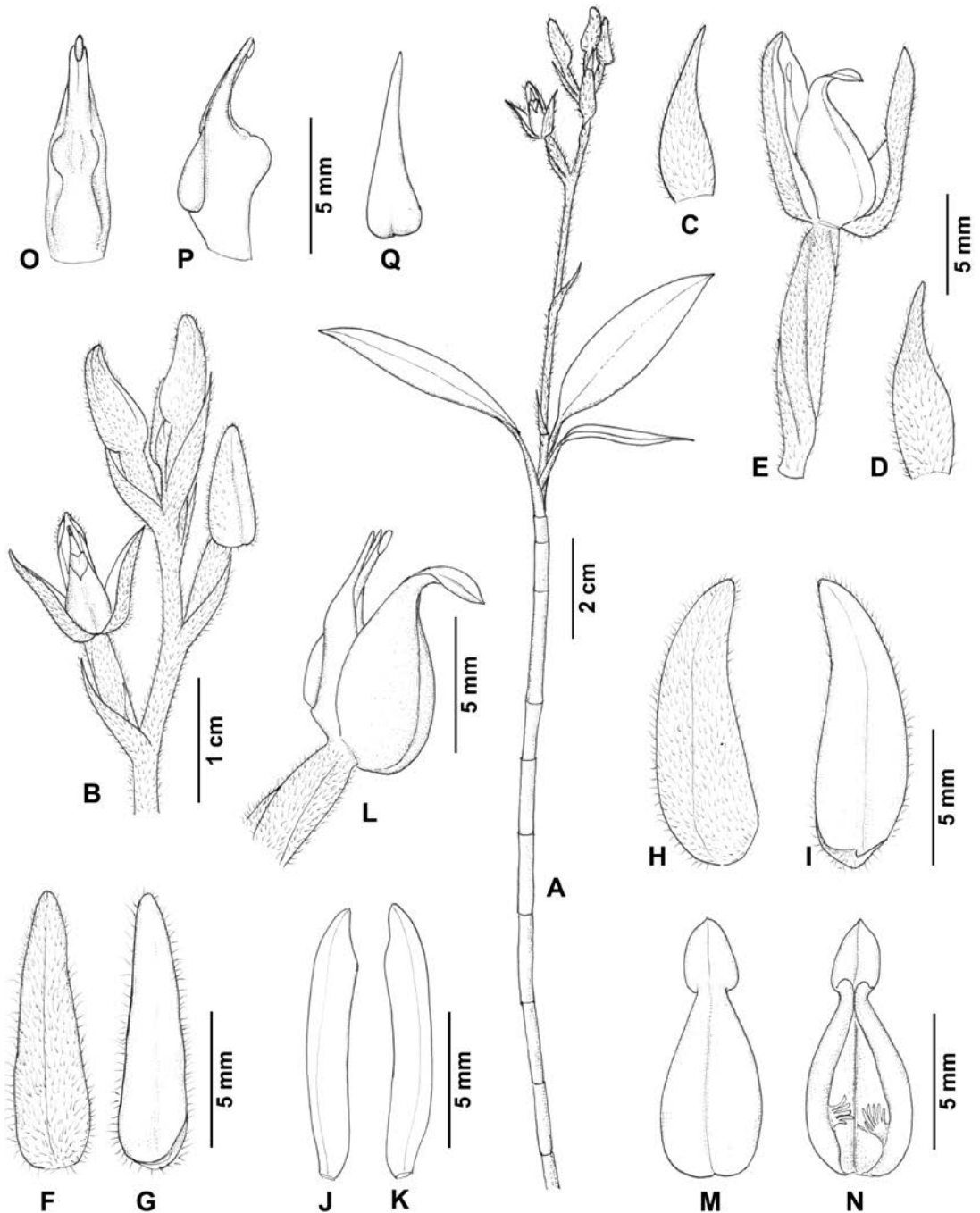


Fig. 1. *Goodyera lanceolata* Ridl. A – habit, B – inflorescence, C & D – floral bracts, E – flowers in side view (lateral sepal removed), F & G – dorsal sepal, H & I – lateral sepals, J & K – petals, L – column and labellum in side view, M & N – labellum, O & P – column, Q – anther cap. Drawn by S. Chantanaorrapint from S. Chantanaorrapint, A. Chantanaorrapint & J. Wai 03 (PSU).



Fig. 2. *Goodyera lanceolata* Ridl. A & B – plants in natural habitat, on humus under shade in lower montane forest, C – part of inflorescence, D & E – flowers. Photo S. Chantanaorrapint.

opening widely. *Sepals* greenish brown, pubescent on dorsal side; dorsal sepal curved, hood-like, narrowly lanceolate, 11–12 × 3.0–3.5 mm, obtuse; lateral sepal spreading, obliquely falcate, 11.0–12.5 × 3.6–4.2 mm, acute to obtuse. *Petals* glabrous,

forming a hood with the dorsal sepal, slightly falcate, linear, 1-veined, ca 10 × 1.5 mm, acute. *Labellum* fleshy, white at apex, yellowish below, narrowly ovate to lanceolate, 9–11 mm long, concave to saccate at base, nearly flat at apex; sac

shallowly bilobed, with tuft of bristles each side of middle within; apex acute, recurved to reflexed. *Column* straight, 4.5–5.0 mm long; stigma bilobed; rostellum 3.0–3.5 mm, shortly bifid; anther lanceolate, 6.5–7.0 mm long, *ca* 2 mm wide, acuminate; pollinia 2, basitonous; stipe *ca* 4 mm long; viscidium elliptic, *ca* 1 mm long. *Ovary* reddish brown, pubescent, 10–13 mm long, 1.5–1.8 mm in diameter. *Capsule* sessile, reddish brown, pubescent, fusiform, 15–20 mm long, 2.0–2.5 mm in diameter. *Seed* not seen.

SPECIMENS EXAMINED: THAILAND. NAKHON SI THAMMARAT PROVINCE, Khao Nan National Park, *ca* 1200 m altitude, 10 May 2007, *Khunwasi et al.* (BCU); Summit of Khao Ramrome Mt., 08°14'19.75"N, 99°48'20.23"E, *ca* 950 m altitude, 13 May 2007, *S. Chantanaorrapint, A. Chantanaorrapint & J. Wai 03* (PSU).

DISTRIBUTION. Peninsular Malaysia (Selangor) and peninsular Thailand.

HABITAT AND ECOLOGY. In Thailand, *Goodyera lanceolata* was found growing on humus under shade in lower montane forests, between 950 and 1200 m a.s.l. Flowering and fruiting in May.

TAXONOMIC NOTES. *Goodyera lanceolata* is characterized by its (i) lanceolate to narrowly elliptic leaves, (ii) hairy flowers, (iii) saccate labellum with a pair of tufts of bristles inside and (iv) very long acuminate anther. *Goodyera lanceolata* can be confused with *G. viridiflora* (Blume) Blume, a widely distributed species, in flower form and anther shape, but *G. viridiflora* differs from *G. lanceolata* in having cordate-ovate to ovate-elliptic leaf laminas, glabrous flowers, and obliquely oblanceolate to spatulate-rhombic petals.

Goodyera lanceolata was previously known from the type collection only, so this rediscovery after 100 years in Thailand is significant. This is the first record of the species for Thailand and the second report worldwide. The new record represents the northernmost locality of this species. In Thailand it is known only from Nakhon Si Thammarat Province but it may have a wider distribution and may occur in other areas of southern Thailand as well.

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