

Corybas geminigibbus (Orchidaceae), a new species record for Thailand

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ABSTRACT

Corybas geminigibbus J.J. Sm., is newly discovered in lower montane forest in southern Thailand. A description, line drawings, and photographs are provided.

KEYWORDS: orchid, peninsular Thailand, rare species.

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INTRODUCTION

Corybas Salisb. is a genus of terrestrial orchids comprising about 120 species, and is widely distributed from India, South China, peninsular Thailand, the Malesian region, to New Zealand and the Western Pacific Islands (Dransfield *et al.*, 1986; Pridgeon *et al.*, 2001; Pedersen, 2011). The members of the genus are characterized by 1) being small in size with a single cordate leaf and a single underground tuberoid; 2) dorsal sepal and labellum which together form a tube with expanded mouth; 3) lateral sepals and petals often tentacle-like; and 4) labellum usually bearing two spurs (Dransfield *et al.*, 1986).

In Thailand, only one species has been recorded, namely *Corybas ecarinatus* Anker & Seidenf. (Anker & Seidenfaden, 2001; Pedersen, 2011). During fieldwork carried out to study the orchid flora of Thailand, an interesting collection of the genus *Corybas* was made in the southern part of the country. Based on literature and comparisons of herbarium specimens, it was identified as *D. geminigibbus* J.J. Sm., which is a new record for Thailand. The description and illustrations below are based on this collection.

DESCRIPTION

Corybas geminigibbus J.J.Sm., Mitt. Inst. Bot. Hamburg 7: 13. 1927; Dransfield *et al.* (1986: 593); Seidenfaden & Wood (1992: 121). Type: Indonesia,

Borneo, West Kalimantan, Mt Mulu, *Winkler 4968* (holotype **HBG**). Figs. 1–2.

Small terrestrial herbs with underground tuberoids. *Tuberoid* globose or ovoid to ellipsoidal, fleshy, 2.5–4 mm diam. *Stem* short, erect, whitish-green, 4–8 mm long, 1–1.2 mm diam., with a basal sheath; stolons whitish, hairy, up to 2.5 cm long, 1.2–1.5 mm diam. *Foliage* leafsessile, broadly ovate to cordate, acuminate at apex, glabrous, 4–6 mm long, 3.5–5 mm wide at the widest point, slightly undulate along margin, pale green with paler veins, the veins scarcely conspicuous. *Inflorescence* one-flowered, terminal; bract pale green, lanceolate-triangular, acuminate, ca 4 mm long, recurved. *Flower* whitish marked with dark purple. *Dorsal sepal* whitish, strongly curved, hood-like, elliptic-oblong to oblanceolate; ca 8 mm long, 2.5–3 mm wide, mucronate at apex. *Lateral sepals* free, narrowly triangular, tentacle-like, ca 10 mm long, whitish tinged purplish along the middle. *Petals* whitish, almost free, similar to lateral sepals but smaller, ca 7 mm long. *Labellum* differentiated into 2 parts, erect in basal half and strongly reflexed above, 5.5–6.5 mm long in total length; the basal half with margins strongly inrolled throughout, and forming a tube with the dorsal sepal; the upper half slightly expanded, ca 3 mm long, 2.5–3.5 mm wide, central part white with dark purple margin, acute at apex, margin irregularly dentate to fimbriate-ciliate;

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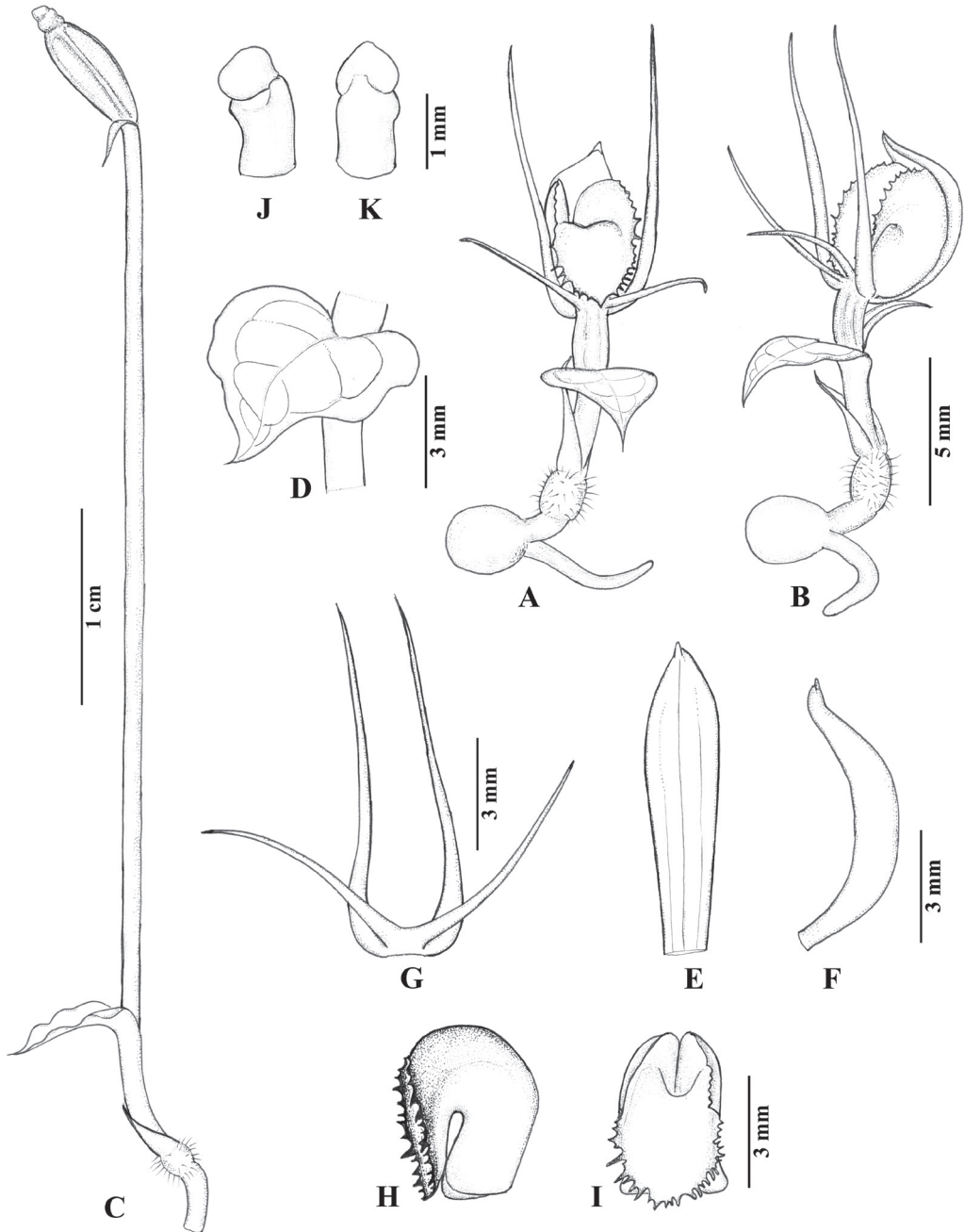


Figure 1 *Corybas geminigibbus* J.J. Sm.: A–B. plant with flower; C. plant with mature fruit; D. leaf; E–F. dorsal sepal; E. dorsal view; F. lateral view; G. lateral sepals and petals; H–I. labellum; H. lateral view; I. front view; J–K. column; J. side view; K. dorsal view. All from Chantanaorrapint *et al.* 194 (BKF, PSU). Drawn by S. Chantanaorrapint.

spurs 2, very short, broad and rather poorly developed, ca 1 mm long. *Column* very short, 1.2–1.4 mm long, slightly curved, with small wings at apex; stigma rounded; anther erect, smooth; pollinia 2, coarsely granulate. *Ovary* green, glabrous, ca 2.5 mm long. *Capsule* erect, ellipsoid or fusiform, 6.5–8 mm long, ca 3 mm diam. *Peduncle* strongly elongated before capsule dehiscence, to 5 cm long. *Seed* not seen.

Thailand.— PENINSULAR: Nakhon Si Thammarat [Ron Phibun, Summit of Khao Ramrom Mt, 08°14'19.75" N, 99°48'20.23"E, ca 950 m altitude, 7 Mar. 2016, *Chantanaorrapint et al.* 194 (BKF, PSU, spirit)].

Distribution.— Thailand, Peninsular Malaysia (Kedah), Indonesia (Borneo, type), Philippines (Palawan).

Ecology.— In Thailand, *Corybas geminigibbus* was found growing amongst bryophytes (Figs. 2A–B), such as *Heteroscyphus coalitus* (Hook.) Schiffn. and *Plagiochila* sp., on humus under shade of lower montane forest, ca 950 m altitude. Flowering and fruiting recorded in March.

Notes.— The Thai material seems to be smaller than the type and Malaysian specimens, having a somewhat narrower and shorter labellum blade, a more acute dorsal sepal, shorter lateral sepals and



Figure 2 *Corybas geminigibbus* J.J. Sm.: A–B. plants in natural habitat, on humus associated with *Heteroscyphus coalitus* (Hook.) Schiffn. and *Plagiochila* sp.; C. plant with mature fruit; D–F. flowers and leaves. Photographs by S. Chantanaorrapint.

petals, and a rather poorly developed leaf. We consider these differences to be part of the variability of *C. geminigibbus*, possibly because the Thai material was collected during the dry season. The distinctive features of *C. geminigibbus* are 1) the V-shaped throat; 2) the free lateral sepals and petals; 3) the central part of labellum white with dark purple

margin; 4) margins of labellum irregularly dentate to fimbriate-ciliate; and 5) spurs very short, poorly defined.

There are now two species of *Corybas* known from Thailand. A key to distinguish these is given below.

KEY TO THE SPECIES OF CORYBAS IN THAILAND

1. Petals connate at base; central portion of labellum bearing callus; spurs well-developed, conical, slightly oblique to erect
C. ecarinatus
1. Petals almost free; central portion of labellum nearly smooth; spurs inconspicuous, broad and poorly developed, very short
C. geminigibbus

The continual discovery of new species and new records of Orchidaceae from southern Thailand (e.g. Suddee & Pedersen, 2011; Ormerod *et al.*, 2012; Wai, 2012; Tetsana *et al.*, 2013; Rojchana-umpawan *et al.*, 2014, 2015; Kurzweil & Tripetch, 2015) suggests that several orchid taxa still await discovery in this area. More detailed investigations into the orchids of Thailand, particularly in the southern part of the country, should therefore prove to be rewarding and may lead to the discovery of additional new taxa.

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REFERENCES

- Anker, K. & Seidenfaden, G. (2000). *Corybas ecarinatus* sp. nov. (Orchidaceae) from Thailand. *Nordic Journal of Botany* 20: 557–559.
- Dransfield, J., Comber, J.B. & Smith, G. (1986). *Corybas* west of Wallace's Line. *Kew Bulletin* 41: 575–613.
- Kurzweil, H. & Tripetch, P. (2012). A new species of the genus *Peristylus* (Orchidaceae) from southern Thailand. *Thai Forest Bulletin (Botany)* 43: 24–29.
- Ormerod, P., Chantanaorrapint, S. & Kurzweil, H. (2012). *Cephalantheropsis longipes* (Orchidaceae), a new record for Peninsular Thailand. *Thai Forest Bulletin (Botany)* 40: 118–120.
- Pedersen, H.Æ. (2011). *Corybas*. In: Flora of Thailand. T. Santisuk & K. Larsen (eds.), Vol. 12(1): 42–44. The Forest Herbarium, Department of National Parks, Wildlife and Plant Conservation, Bangkok, Thailand.
- Pridgeon, A.M., Cribb, P.J., Chase, M.W. & Rasmussen, F.N. (eds). (2001). *Genera Orchidacearum Volume 2: Orchidoideae (Part one)*. Oxford University Press, Oxford.
- Rojchana-umpawan, P., Chantanaorrapint, A. & Chantanaorrapint, S. (2015). A new species record of *Hylophila* (Orchidaceae) for Thailand. *Thai Forest Bulletin (Botany)* 43: 66–69.
- Rojchana-umpawan, P., Chantanaorrapint, S., Suddee, S. & Chantanaorrapint, A. (2014). *Didymoplexiella trichechus* (Orchidaceae), a new species record for Thailand. *Thai Forest Bulletin (Botany)* 42: 68–70.
- Seidenfaden, G. & Wood, J.J. (1992). *The Orchids of Peninsular Malaysia and Singapore*. Olsen & Olsen, Fredensborg.
- Suddee, S. & Pedersen, H.Æ. (2011). A new species of *Lecanorchis* (Orchidaceae) from Thailand. *Taiwania* 56: 37–41.
- Tetsana, N., Pedersen, H.Æ. & Sridith, K. (2013). Five species of *Liparis* (Orchidaceae) newly recorded for Thailand. *Thai Forest Bulletin (Botany)* 41: 48–55.
- Wai, J. (2012). *Orchippedum Breda* (Orchidaceae, subfam. Orchidoideae), a new generic record for Thailand. *Thai Forest Bulletin (Botany)* 40: 105–107.