

A New Species of *Globba* (*Zingiberaceae*) from Southern Thailand

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A new species, *Globba ranongensis* (*Zingiberaceae*), is described from peninsular Thailand and illustrated. Relationship with other closely related taxa is discussed.

Key words: *Globba ranongensis*, new species, southern Thailand, *Zingiberaceae*.

With an aim to establish the correct taxonomic status of some commonly used Thai materia medica, e.g., Wan Ron Thong, Wan Phaya Hong Thong, Wan Phaya Hong Ngen, Wan Krachai Thong, for future research in drug development, we have extended our study into the tribe *Globbeae* Petersen (*Zingiberaceae*) in Thailand. This tribe consists of three genera: *Hemiorchis* Kurz, *Gagnepainia* K. Schum. and *Globba* L. The genus *Hemiorchis* Kurz in Thailand was revised (Picheansoonthon et al. 2009) and the revision of the genus *Gagnepainia* K. Schum. is scheduled to be published.

The genus *Globba* L. is one of the largest genera of the family *Zingiberaceae*. Forty-one species were preliminarily listed for Thailand (Larsen and Larsen 2006). It was recently classified into three subgenera: *Mantisia* (Sims) K. J. Williams, *Ceratanthera* (Horan.) K. J. Williams and *Globba* based on phylogenetic studies (Williams et al. 2004). A species producing the flowering shoots before the leafy shoots, *Globba praecox* Chokthawee-

& al., was recently added (Chokthaweeapanich et al. 2005). This taxon was placed in the subgenus *Mantisia* (Sims) K. J. Williams, sect. *Haplanthera* (Horan.) Petersen (characterized by the anthers without any appendages).

In this paper, the second species, *Globba ranongensis* Picheans. & Tiyawora., with the same features (flowering shoots appear before the leafy shoots), but of subgenus *Globba*, section *Nudae* K. Larsen, subsect. *Mediocalcaratae* (K. Schum.) K. J. Williams (characterized by the two anther appendages), is recognized with full description and illustration.

Taxonomic treatment

Globba ranongensis Picheans. & Tiyawora.,
sp. nov. [Figs. 1, 2]

Type: Thailand: Changwat Ranong, Amphoe Kra Buri, Ban Lum Liang, 10°19' 29.59"N 098°45' 52.18"E, alt. 51 m, 30 May 2008, Picheansoonthon 1032 (BKF–holotype; BK, SING– isotypes).

Globbae pendulae similis, foliis anguste

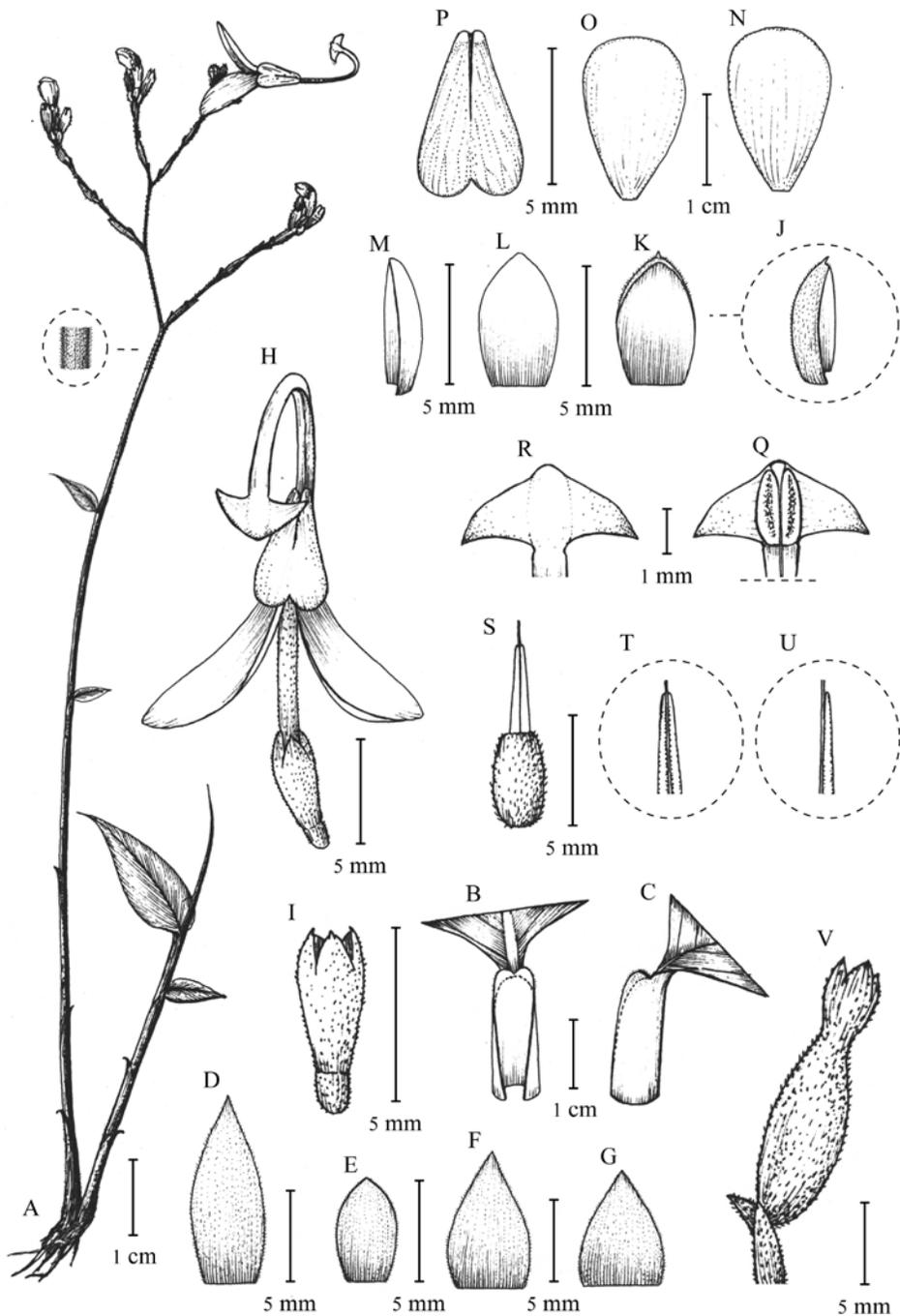


Fig. 1. *Globba ranongensis* Picheans. & Tiyawora. A. Habit showing flowering shoot and young leafy shoot. B–C. Ligule, front view (B) and side view (C). D. Bract. E–G. Bracteole. H. Flower (front view). I. Calyx tube and ovary. J–K. Dorsal corolla-lobe, side view (J) and front view (K). L–M. Lateral corolla-lobe, rear view (L) and side view (M). N–O. Lateral staminode. P. Labellum. Q–R. Anthers and appendages rear view (Q) and front view (R). S. Ovary and stylodial glands, front view (S), rear view (T) and side view (U) and part of the style. V. Fruit. Drawn by Chalermchoke Boonchit.

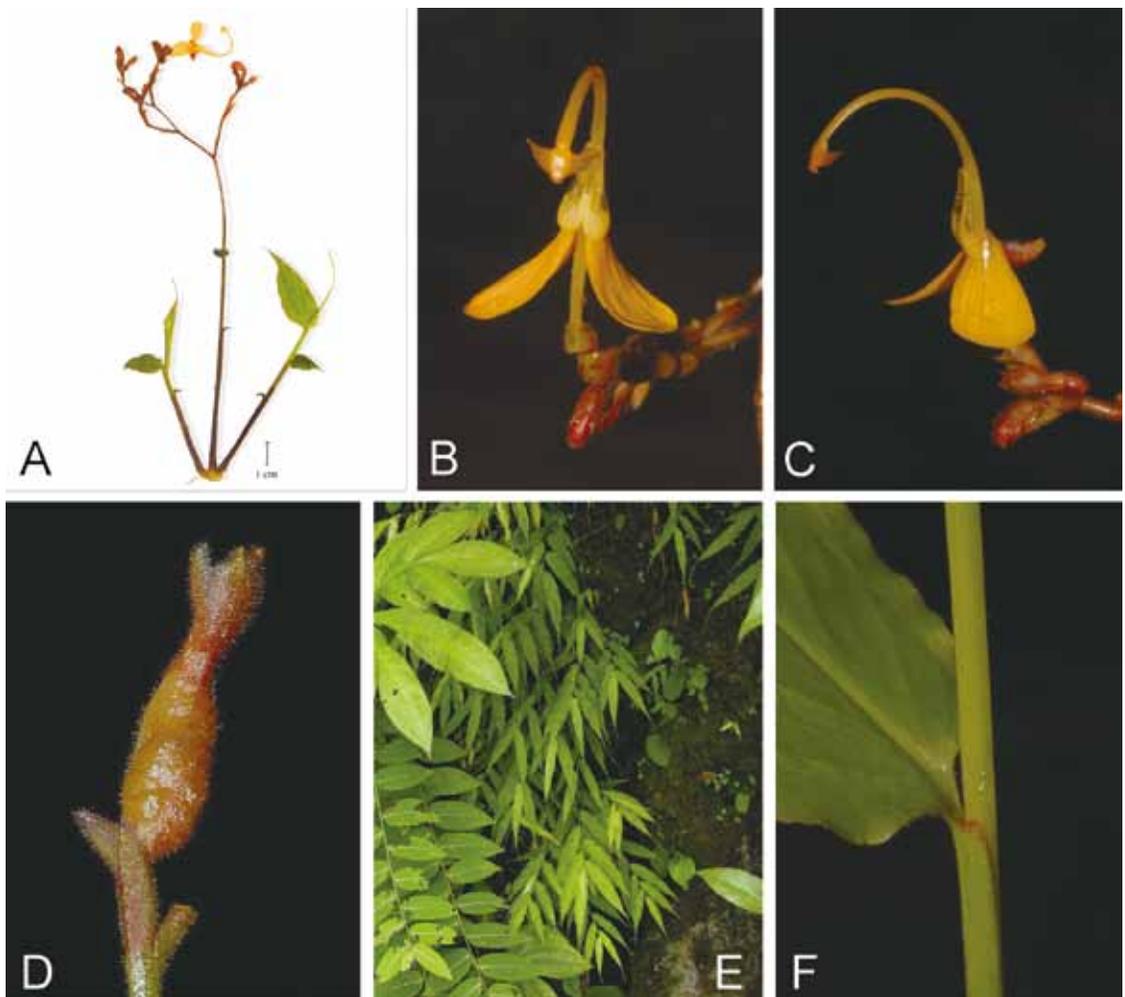


Fig. 2. *Globba ranongensis* Pichens. & Tiyawora. A. Habit showing a flowering shoot and two young leafy shoots. B–C. Flower, front view (B) and side view (C). D. Fruit. E. Leafy shoot of plants in the type location. F. Part of pseudostem showing lower part of leaf and ligule. Photo by Chayan Pichansoonthon.

lanceolatis ad oblongis, ligula sparse pubescenti ad pubescenti apice bilobo, inflorescentiis e surculis discretis praecocibus, pedunculo rhachidi bractea bracteola calycis tubo ovario fructibusque pubescentibus, antherae appendicibus latis antherae maximam partem lateralem adnatis, fructibus ovatis ad ovato-oblongis rubrobrunneis differt.

Perennial slender herbs. Roots rather fleshy, but not thickened into distinct tubers. Leafy shoots 14.8–43.8 cm high (to top of the highest leaf sheaths), bladeless sheaths 1–3,

with red-spots, hairy. Leaves 7–12, sessile or shortly petiolate (to 2 mm); ligule 1–2 mm long, greenish, greenish red or reddish purple, apex bilobed, sparsely hairy to hairy; lamina narrowly lanceolate to oblong, the largest 11.3–16.6 by 1.6–2.4 cm, apex caudate (to 4.7 cm), base slightly oblique, cuneate or truncate, margin slightly undulate to undulate, upper surface bearing stiff hairs on midrib, lower surface pubescent on midrib. Inflorescences borne on separate shoots, appearing before the leafy shoots, 6.7–11.2 cm long; bladeless sheaths

4–5, upper 1–3 sheaths with reduced laminas; peduncle slender, 3.5–6.7 cm long, hairy; rachis 1.2–3.5 cm long, brownish red, hairy; bracts ovate, 0.5–1.2 cm by 3–5 mm, lower ones larger, apex acute, hairy, reddish. Cincinni 2–5, 1.2–4.1 cm long, hairy, 2–9-flowered, bulbil rare. Flowers golden yellow; bracteole ovate, 5–7 by ca. 3 mm, hairy; pedicel ca. 2 mm long, hairy; calyx tubular, 3–5 mm long, apex 3-lobed, apex of each lobe hooded with minute thorn-like appendages, hairy; corolla tube 0.3–1.5 cm long, pale yellow, hairy; dorsal lobe cucullate, 5–6 by 3–4 mm, hairy, apex hooded with minute thorn-like appendage, reddish; lateral corolla lobes cucullate, slightly smaller, reddish yellow; lateral staminodes obovate, 1.3–1.5 cm by 6–8 mm, golden yellow, apex rounded, placed ca. 6 mm lower than the labellum; labellum deltoid, 7–9 by 5–7 mm, apex bilobed; filaments 1.8–2 cm; anther ca. 3 mm, appendage 2, broad, attached to most of the lateral sides of the anther; stigma cup-shape, margin ciliate; ovary ca. 2 mm, hairy; stylodial glands 2, filiform, ca. 3 mm. Fruits ovate to ovate-oblong, ca. 1.3 by 0.8 cm, yellowish brown to brownish, hairy, crowned with persistent calyx.

Other specimen examined: Type location, 25 July 2007, Picheansoonthon 962 (BKF).

Distribution: Changwat Ranong in Peninsular Thailand. Endemic to Thailand.

Ecology: This new taxon grows in the limestone ridge surrounded by the mangrove forest, at the altitude of 5–51 m.

Etymology: This new species is named after Changwat Ranong in peninsular Thailand where this new species was discovered.

Note: This new species is rather unique with its inflorescences born on separate shoots. It is the second taxon of the genus, after *G. praecox* (Chokthaweeapanich et al. 2005), currently known with this habit. Unlike *G. praecox*, the flowering shoots of *G. ranongensis* appear a little earlier than the leafy shoots. Therefore, at certain point both flowering and leafy shoots may be present at the same time.

The flowering shoots of this new species generally composed of 4–5 bladeless sheaths, 1–3 of the uppermost ones may have much reduced lamina. It can be easily distinguished from other taxa by its hairiness of most parts, i.e. sheathes, peduncles, rachises, bracts, bracteoles, calyx and corolla tubes and fruits. The two anther appendages attached across most of the lateral sides of the anther and the ovate-oblong fruits are characteristic of the subgenus *Globba* sect. *Nudae* subsect. *Mediocalcaratae* (Williams et al. 2004).

The type location of this new taxon is less than 20 kilometers south of the Isthmus of Kra (Amphoe Kra Buri, Changwat Ranong). The Malay Peninsula species of the genus *Globba* found from south of the Isthmus of Kra were revised by Lim (1972). Among the taxa enumerated, the inflorescences and flowers of *G. ranongensis* are morphologically close to those of *G. pendula* Roxb., the most variable taxon found throughout Malay Peninsula. However, this new species is differed from the latter taxon in many characters, especially the hairiness of most parts and the shape of fruits.

The two anther appendages of *G. pendula* are generally attached basally to both sides of the anthers. However, most specimens of *G. pendula* found in southern Thailand have the appendages attached to most of the lateral sides of the anther similar to this new species.

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C. ピチュアンズーントン^{a,b}, S. チャウオラナント^b: タイ南部産 *Globba* (ショウガ科) の1新種

タイ南部半島部のラノー県から *Globba* 属 (ショウガ科) の1新種 *Globba ranongensis* Picheans. & Tiyawora. を記載した。本種は花をつけるシュートが葉をつけるシュートよりも先に伸びる性質をもち、この性質はタイ産 *Globba* 属 41種のうち *G. praecox* Chokthawee. & al. (*Mantisia* 亜属 *Haplanthera* 節)でのみ知られていたものであった。本種は、

葯の側方に2つの付属物があることと卵形～楕円形の果実をもつことから、*Globba* 亜属 *Nudae* 節 *Mediocalcaratae* 亜節に帰属する。また本種はマレー半島に生育する *G. pendula* Roxb. に花序と花の形態で似るが、全体に毛が多いこと、果実の形などで区別できる。

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