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## *Crepidium klimkoanum* – a new orchid species (Orchidaceae, Malaxidinae), from Thailand

HANNA B. MARGÓNSKA

### ABSTRACT

MARGÓNSKA, H. B. (2005). *Crepidium klimkoanum* – a new orchid species (Orchidaceae, Malaxidinae), from Thailand. *Candollea* 60: 373-377. In English, English and French abstracts.

A new species of the genus *Crepidium* Blume (Orchidaceae, Malaxidinae), from Southeast Asia, is described and illustrated. One section is transferred from *Malaxis* to *Crepidium*.

### RÉSUMÉ

MARGÓNSKA, H. B. (2005). *Crepidium klimkoanum* – une nouvelle espèce d'orchidée (Orchidaceae, Malaxidinae) de Thaïlande. *Candollea* 60: 373-377. En anglais, résumés anglais et français.

Une nouvelle espèce du genre *Crepidium* Blume (Orchidaceae, Malaxidinae), du sud-est asiatique, est décrite et illustrée. Une section est transférée du genre *Malaxis* à *Crepidium*.

**KEY-WORDS:** ORCHIDACEAE – MALAXIDINAE – *Crepidium* – *Malaxis* – Taxonomy

While preparing the taxonomic revision of the subtribe *Malaxidinae* (Orchidaceae), I had the opportunity to study taxonomic collections kept at the Botanical Museum and Library of Copenhagen University (C). I was able to examine materials of the genus *Crepidium* Blume. Most of the species of *Crepidium* have previously been placed in the highly polymorphic *Microstylis* (Nutt.) Eaton or *Malaxis* Sw. SZLACHETKO (1995) included 167 species within *Crepidium* based on distinct differences in many aspects of their morphology, especially concerning the generative structures and the shape of the lip.

SZLACHETKO (1995) recognized two sections within *Crepidium*: sect. *Crepidium* and sect. *Commelinoides* (Schltr.) Szlach. Both sections, according to their protologues, include plants characterized, among others features, by flowers with dentate distal margins of their lip.

According to SCHLECHTER (1911-1914), *Microstylis* sect. *Hololobus* Schltr. includes species with a 3-lobed lip, with the mid-lobe entire or split in 2 sublobes. The distal margins of the lateral lobes are always entire, without teeth. Therefore, it is necessary to transfer the section to *Crepidium*. The section *Hololobus* encompasses all those species of *Crepidium* lacking teeth at the distal margins of the lateral lobes of the lip.

***Crepidium* sect. *Hololobus* (Schltr.) Marg., comb. nova.****Typus:** *Microstylis nitida* Schltr. ( $\equiv$  *Crepidium nitidum* (Schltr.) Szlach.). $\equiv$  *Microstylis* sect. *Hololobus* Schltr. in Repert. Spec. Nov. Regni Veg. Beih. 1: 124. 1911.  $\equiv$  *Malaxis* sect. *Hololobus* (Schltr.) K. D. Hill & Blaxell in Orchadian 8: 80. 1985.

Amongst materials of Seidenfaden's spirit collections deposited at the Botanical Museum and Library of Copenhagen University (C-GS), I found specimens characterized by a specific lip form, especially the morphology of the central cavity and a distinctive habit. The specimens deserve to be recognized as a new species of *Crepidium* sect. *Hololobus*.

***Crepidium klimkoanum* Marg., spec. nova (Fig. 1).****Typus: THAILAND. Wangchao:** Chiengdao, *G. Seidenfaden* & *T. Smitinand* GT 3031 (holo-: C-GS - *spirit. coll.*).

*Pars sterilis inflorescentiae aequilonga vel longior quam pars fertilis. Lobus centralis labelli triangularis, apice ad  $\frac{1}{4}$  symmetrice incisus. Cavum centrale lanceolatum vel anguste ovale aoice contiguum protuberationi semicirculari latisque ad  $\frac{1}{4}$ - $\frac{1}{3}$  longitudini lobi centralis attingens.*

Plant minute, 8-15 cm tall. Roots appearing from the basal nodes of pseudobulbs. Pseudobulbs 1-1.7 cm long, 0.5-0.7(-1) cm in diameter, ovoid, always underground, sheathing by 1-3 basal scales and leaf-bases, annual, whitish. Leaves 2(-3 rarely); leaf sheath 0.6-0.8(-1.2) cm in diameter, more or less rigid; leaf petiole 0.2-0.4(-0.8) cm long, 0.2-0.4(-0.5) cm wide when spread, strongly abbreviated, amplexicaul; leaf blade 3-6 cm long, 2.5-4.6 cm wide, 3-5-nerved, usually similar in size, usually ovate, acute to obtuse, at the base cordate, slightly succulent, subplicate, the inter-spaces raised above and giving the leaf a slightly bullate appearance, upper surface of lamina green, sometimes with reddish tint below; both leaf blade always decussately to radically positioned, horizontally flattened close above to the surface of ground. Inflorescence 8-13 cm long, olive to bright green, sometimes tinged reddish; peduncle 5-8 cm long, 1.4-2 mm in diameter, in adult inflorescence longer than raceme; raceme 3-5 cm long, 1-1.2(-1.4) mm in diameter, 5-15(-20)-flowered, dense, elongated with age. Sterile bract 1 to few, short and narrow. Floral bracts usually longer than ovary, narrowly lanceolate, acuminate, green, sometimes tinged reddish, deflexed. Ovary and pedicel 2-3 mm long, sinuate, greenish to pale greenish olive, sometimes with reddish tint. Flowers 5.8-6.2 mm long, 3-5 mm wide, greenish red. Sepals 3-nerved, with curved backward margins. Dorsal sepal 3-3.4 mm long, 1.1-1.4 mm wide, oblong elliptic to oblong ovate, rounded at apex; lateral sepals 2.8-3.2 mm long, 1.8-2.1 mm wide, oblique ovate, obtuse, revolute. Petals ca. 2.7-3.2 mm long, 0.7-0.8 mm wide, oblong, oblique obtuse, 1-nerved, reflexed – in mature flowers non-visible. Lip 4-4.5 mm long, 2.8-3.1 mm wide, always distinctly 3-lobed, very obscurely pear-shaped to ovate, callus on the disc raised fleshy rim divided the blade into basal and apical parts; mid-lobe 1.5-1.7 mm long, 1.3-1.5 mm wide, the broadest near the base, about triangular in outline, apically divided up to  $\frac{1}{4}$  (rarely to almost  $\frac{1}{3}$ ) its length, each of sublobules oblong (0.4-0.5 mm long, each 0.2-0.3 mm wide), usually symmetrical, obtuse to subacute, slightly convergent to overlapping at the apices, mid-lobe separated from the lateral lobes only by distinct, arcuate indentation of the margins; lateral lobes 2-2.3 mm long, 2.8-3.1 mm wide, orbicular to broadly obovate, with distal margins entire, auricles 1.7-1.8 mm long, 0.8-1 mm wide, triangular to broadly lunate subacute to obtuse, subparallel to nearly convergent; cavity 1.1-1.3 mm long, 0.6-0.7 mm wide, ca. 0.4-0.5 mm deep, narrowly ovate to lanceolate, distinctly limbate by convex, lateral nerves, only at apical part touching central convexity-hippocrepiform rim nearly ovate to elliptic in outline, more convex at apical half, advanced at about  $\frac{1}{4}$ - $\frac{1}{3}$  length of the mid-lobe. Gynostemium 1-1.2 mm long, 0.5-0.9 mm wide, erect, short when young greenish tinged, turn to pale yellow, sometimes reddish; staminodes oblong, fleshy, rounded to truncate. Anther broadly ovate to cordate, pale yellow to whitish yellow. Capsule to 0.8 cm long, to 0.4 cm in diameter, obovoid, pale greenish yellow to pale olive; stalk 0.2-0.3 cm long.

*Paratypes.* – **THAILAND:** Doi Suthep, *Seidenfaden & Smitinand GT 3038, GT 3042* (C-GS - *spirit. coll.*).

*Etymology.* – Dedicated to Prof. Dr. hab. Malgorzata Klimko, Polish taxonomist and botanist.

*Ecology.* – Terrestrial; in shaded forest. Flowering in September. Fruiting between October and December.

*Distribution.* – Thailand. Known so far only from the type collections.

*Note.* – SEIDENFADEN (1978) compared *Seidenfaden & Smitinand GT 3031, GT 3038, GT 3042* with the type of *Microstylis mackinnonii* Duthie ( $\equiv$  *Crepidium mackinnonii* (Duthie) Szlach.) deposited at K (Fig. 2) and recognized them as indistinguishable. I found these specimens in Seidenfaden's collection (C-GS) deposited at C, and the plants, in fact, are similar in many respects to the type of *Crepidium mackinnonii* e.g.: habit, underground pseudobulbs, shape and disposition of leaves, form of lip convexity and gynostemium (especially staminodes). However, the specimens collected by Seidenfaden & Smitinand have some features distinctly different from the type of *Crepidium mackinnonii* and can be easily distinguished by the peduncle being similar in length or longer than the raceme, the ovate lip with a triangular mid-lobe, separated from the lateral lobes by a arcuate recurvature of the margins (without any constriction), with small symmetrical sublobules (about  $\frac{1}{4}$  length of mid-lobe), and the central convexity of the lip embracing only about  $\frac{1}{4}$  -  $\frac{1}{3}$  length of the mid-lobe. These features provide sufficient background to recognize the Thai plants, collected by Seidenfaden and Smitinand, as a new species.

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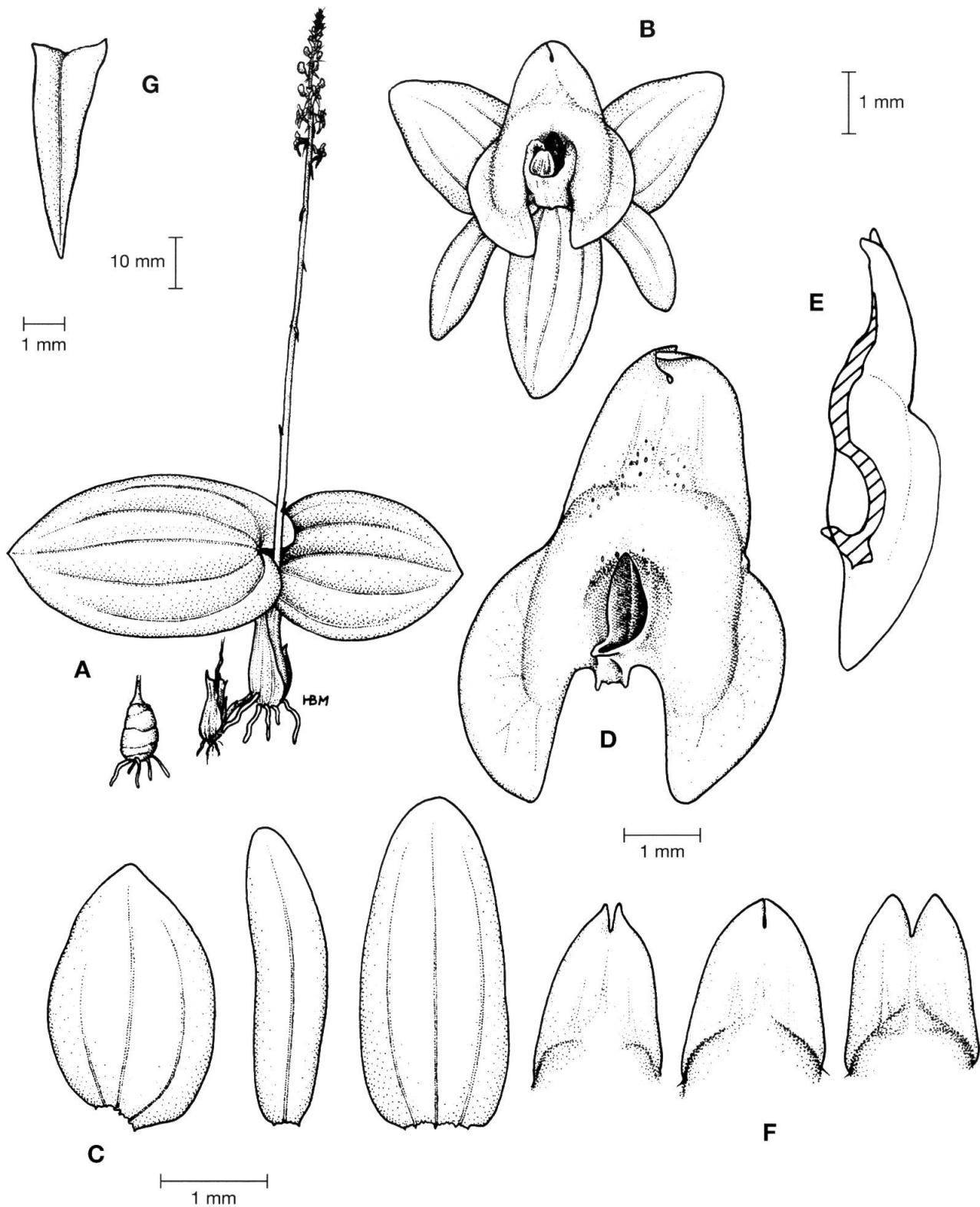


Fig. 1. – *Crepidium klimkoanum* Marg. **A.** Habit; **B.** Flower; **C.** Tepals; **D.** Lip; **E.** Longitudinal section of the lip; **F.** Different forms of the mid-lobe (part of lip) from the same inflorescence; **G.** Floral bract.

[*G. Seidenfaden & T. Smitinand GT 3031, C-GS, holotype*] (drawn by the author)

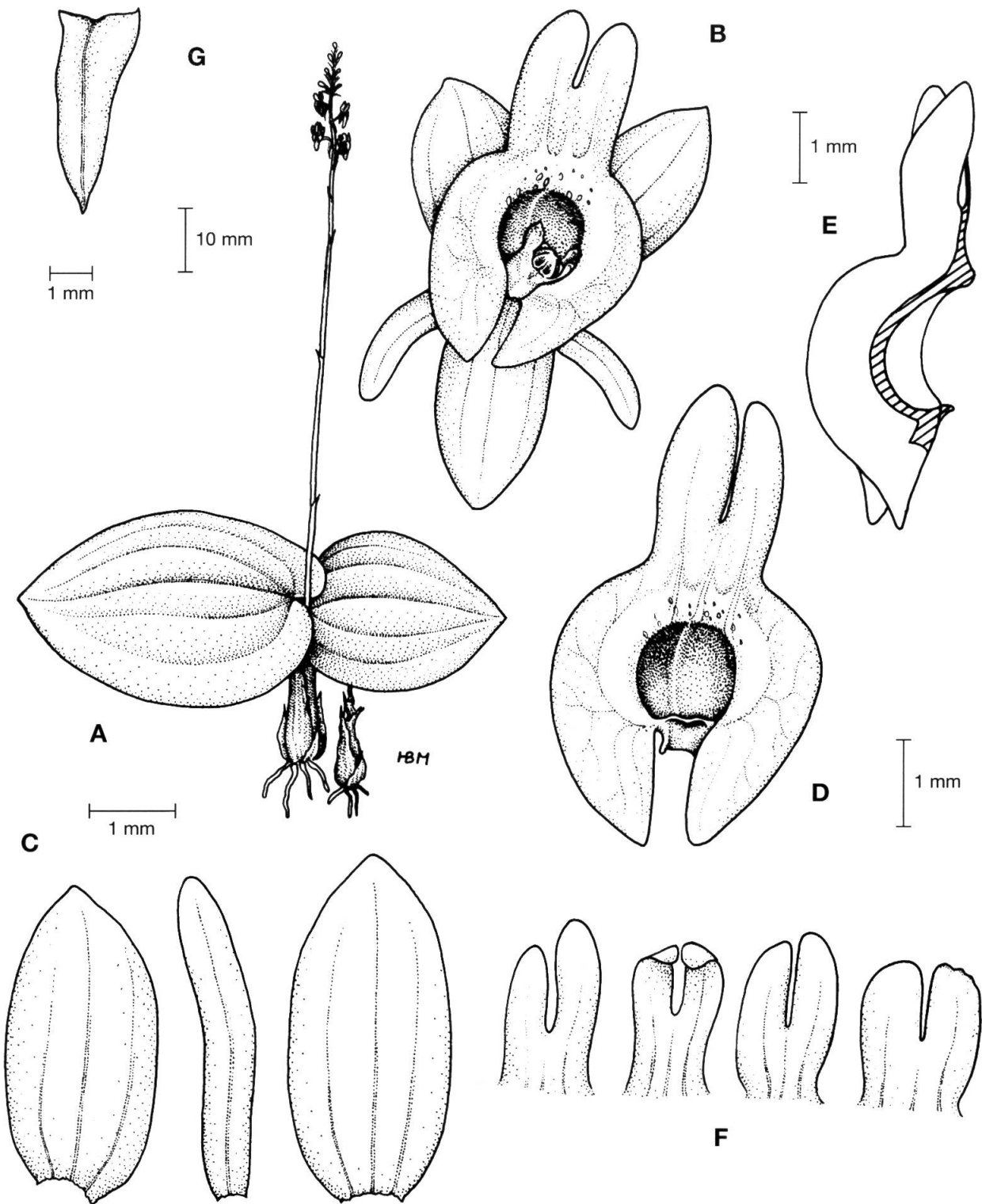


Fig. 2. – *Crepidium mackinnonii* (Duthie) Szlach. **A**. Flowering plant; **B**. Flower; **C**. Tepals; **D**. Lip; **E**. Longitudinal section of the lip; **F**. Different forms of the lip mid-lobe from the same inflorescence; **G**. Floral bract.

[*P. W. Mackinnon 25429, K, holotype*] (drawn by the author)

