

Cymbidium wadae (Orchidaceae) – A New Species from Thailand

Tomohisa YUKAWA*

遊川知久* : *Cymbidium wadae* – タイ産ラン科の一新種

The genus *Cymbidium* Sw. comprises about 50 species. Geographic distribution extends from the northwestern Himalaya to Japan and south through Indochina and Malesia to northern and eastern Australia. In 1988, Du Puy & Cribb completed a thorough revision of the genus. Moreover, phylogenetic relationships in the genus were clarified by use of anatomical characters (Yukawa and Stern 2002) and macromolecular characters (Yukawa *et al.* 2002). On the other hand, investigation of Chinese material in recent years resulted in several new species such as *Cymbidium wenshanense* Y. S. Wu et F. Y. Liu (Wu and Liu 1990), *Cymbidium defoliatum* Y. S. Wu et S. C. Chen (Wu and Chen 1991), *Cymbidium nanulum* Y. S. Wu et S. C. Chen (Wu and Chen 1991), *Cymbidium rigidum* Z. J. Liu et S. C. Chen (Liu and Chen 2000), and *Cymbidium flavum* Z. J. Liu et J. Y. Zhang (Liu and Zhang 2002). In this study, a remarkable new species from the northern part of Thailand is described.

Cymbidium wadae Yukawa, *sp. nov.* TYPE: Thailand: northern part. Precise locality withheld for conservation of the habitat. Flowering in cultivation April 2002, *Hort. H. Wada s. n.* (Holotype: TNS). Figs. 1, 2.

Affine *Cymbidium eburneo* Lindl., sed caulibus valde elongatis, foliis numerosis, foliis brevioribus et amplioribus, tepaliis malvinis, et disco labelli bicarinato distinguendum.

Plant to 53 cm tall. **Roots** elongate, branching, thick, brownish grey, to 6 mm in diameter. **Stems** cane-like, clustered, erect-patent, growing indeterminately, bilaterally flattened, leafy throughout, tightly covered by persistent leaf sheaths, to 42 cm long, to 2.7 cm in diameter. **Leaves** many, bearing 11-19 fresh ones, distichous; blade conduplicate, suberect-patent, coriaceous, ligulate, apex unequally bilobed with a short mucro in sinus, abaxial surface costate, mid green, 6-23.5 cm long, 1.9-2.7 cm wide; sheaths clasping, brownish green, 3-5.3 cm long. **Inflorescences** erect, axillary on leafy parts of stems, emerging successively from a single stem for several years, 15-21 cm long; basal sheaths 4-6, entirely enclosing inflorescence, cylindrical below, cymbiform above, pale green, brownish when old, 2.9-11.7 cm long; rachis up to 4.4 cm long, with 1-2 flowers, floral bracts triangular, acute-acuminate, membranous, brownish, 3-8 mm long, sometimes shifting to basal sheaths. **Flowers** 8-8.5 cm in diameter, coriaceous, slightly scented; sepals and petals pale purplish pink, darker on margins; labellum white with pale purplish pink spots and a marginal stain on mid lobe, callus and centre of mid lobe orangish yellow; column white stained pale purplish, orangish yellow at base; operculum creamy white; pollinia orange; pedicellate ovary pale green. **Dorsal sepal** oblong-ob lanceolate, acute, mucronate, abaxial surface slightly costate, 71-72 mm long, 24-27 mm wide. **Lateral sepals** obliquely oblong, acute, mucronate, abaxial surface costate,

*Tsukuba Botanical Garden, National Science Museum, Tsukuba, 305-0005. 国立科学博物館 筑波研究資料センター 筑波実験植物園.

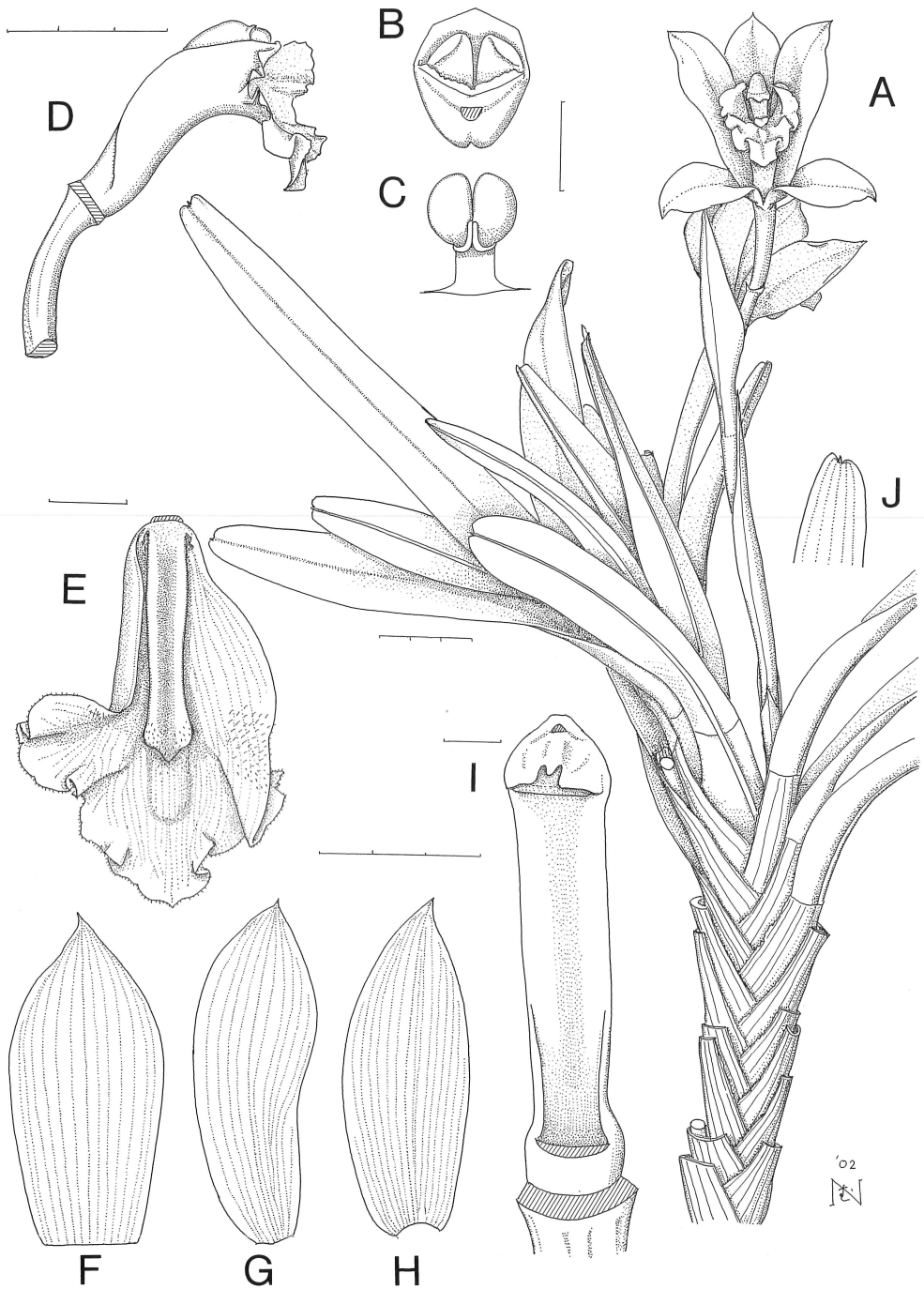


Fig. 1. *Cymbidium wadae* Yukawa. A: Habit; B: Operculum; C: Pollinium; D: Labellum and column, side view; E: Labellum; F: Dorsal sepal; G: Petal; H: Lateral sepal; I: Column and column foot, from below; J: Leaf tip. Drawn from holotype (*Hort. H. Wada s. n.*) by M. Nakajima. Scale bar = 3 cm (A, D, F-H, J), 5 mm (B, C, I), or 2 cm (E).



Fig. 2. Flowering individual of *Cymbidium wadae* Yukawa. Photograph from holotype (*Hort. H. Wada s. n.*).

64–65 mm long, 21–23 mm wide. **Petals** obliquely oblanceolate, acute, mucronate, 66–67 mm long, 21–24 mm wide. **Labellum** three-lobed, fused to base of column for 4 mm, 53–56 mm long, 38–39 mm wide; side lobes erect, subtriangular, obtuse, adaxial surface minutely hairy, 12 mm wide; mid lobe porrect, ovate-triangular, acute, undulate, ciliolate, adaxial surface papillose, 18–19 mm long, 21 mm wide; callus two-keeled between side lobes, becoming confluent and forming a raised triangular apex, papillose. **Column** slightly curved, concave, papillose, 46 mm long, 7 mm wide; operculum cucullate, subconical, 6 mm long, 5 mm wide; pollinia 2, deeply cleft, obliquely ovoid, 3 mm long; viscidium rectangular with hair-like processes from lower corners. **Pedicellate ovary** narrowly clavate, weakly sulcate, glabrous, 28–38 mm long.

ETYMOLOGY: The specific epithet honours Hiroshi Wada of Shimodate Orchid Society, who noticed the distinctiveness of this species.

Cymbidium wadae belongs to section *Eburnea* Seth & P. J. Cribb and is most similar to *Cymbidium eburneum* Lindl. but can be distinguished by the following characters: 1) elongate, cane-like stems; 2) a greater number of leaves; 3) much shorter and wider leaves; 4) pale purplish pink perianth lobes; 5) two, instead of three, keels on the labellum. The other closely related species is *Cymbidium parishii* Rchb. f., but the new species has 1) much longer stems; 2) numerous leaves; 3) shorter leaves; 4) pale purplish pink perianth lobes; 5) larger dimensions of flowers; 6) two, instead of three, keels on the labellum.

Cymbidium mastersii Griffith ex Lindl., a sole representative of section *Eburnea* so far known from Thailand (Seidenfaden 1983), is also easily discriminated from *C. wadae* by growth habit, flower colour, flower form, and structure of the callus on the labellum.

C. wadae produces long-lasting, graceful flowers successively from the axils of the leaves towards the top of the stem. This species undoubtedly deserves much attention from horticulturists and breeders.

Acknowledgements

I would like to thank Hiroshi Wada for providing the material and Mutsuko Nakajima for preparing the illustration. Hidekazu Negishi provided me with invaluable information on the material for which I am grateful. This study is partly supported by a Grant-in-Aid to Scientific Research from the Japan Society for the Promotion of Science (13640708).

Summary

A new species, *Cymbidium wadae*, is described from northern Thailand. The species is readily distinguished from *Cymbidium eburneum* Lindl. by having cane-like stems, a greater number of leaves, much shorter and wider leaves, pale purplish pink perianth lobes, and two keels on the labellum.

摘要

タイ北部に自生するラン科の新種, *Cymbidium wadae* Yukawa を記載する。本種は *Cymbidium eburneum* Lindl. に類似するが, 茎が長いこと, 葉数が多いこと, 葉が短く広いこと, 花色が淡紫桃であること, 唇弁の隆起が3本でなく2本であることで, よく区別できる。

References

- Du Puy, D. and P. J. Cribb, 1988. The Genus *Cymbidium*. Timber Press, Portland, USA.
- Liu, Z. J. and S. C. Chen, 2000. *Cymbidium rigidum* sp. nov., a new orchid from Yunnan, China. Acta Phytotax. Sin. **38**: 570-572.
- and J. Y. Zhang, 2002. *Cymbidium flavum*, eine neue Orchidee der Gattung *Cymbidium* aus China. Die Orchidee **53**: 94-96.
- Seidenfaden, G., 1983. Orchid genera in Thailand XI. Cymbidieae Pfitz. Opera Botanica **72**: 1-124.
- Wu, Y. S. and S. C. Chen, 1991. Two new species of *Cymbidium* from China. Acta Phytotax. Sin. **29**: 549-552.
- and F. Y. Liu, 1990. A new species of *Cymbidium* from Yunnan. Acta Bot. Yunnan **12**: 291-292.
- Yukawa, T. and W. L. Stern, 2002. Comparative vegetative anatomy and systematics of *Cymbidium* (Cymbidieae: Orchidaceae). Bot. J. Linn. Soc. **138**: 383-419.
- , K. Miyoshi and J. Yokoyama, 2002. Molecular phylogeny and character evolution of *Cymbidium* (Orchidaceae). Bull. Natn. Sci. Mus., Tokyo, Ser. B, **28**: 129-139.