

Phalaenopsis chibae (Orchidaceae) - A New Species from Vietnam

by

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遊川知久*: *Phalaenopsis chibae* - ベトナム産ラン科の一新種

Phalaenopsis chibae Yukawa, sp. nov. TYPE: VIETNAM. Vicinity of Dalat, 400-600m, May 1994, M. Chiba P-1795 (Holotype: TNS).

Affinis *P. deliciosae* Rchb. f., sed inflorescentia erecta et non ramificanti, florescentia simultanea, colore floris stramineo cum maculis castaneis, lobo intermedio transversaliter oblongo, callo basali subquadrato differt.

Stem short. Leaves fleshy, conduplicate, from a cuneate base either abruptly or gradually expanding into an oblong or obovate blade, obliquely notched at apex, dark green with a purple tint, up to 11 cm long x up to 4.5 cm wide. Inflorescence slender, erect, lateral, dull purple, 11 cm long, 13-flowered; peduncle 4 cm long, bearing two sheaths; rachis laxly flowered, non-recurrent flowering; fertile bracts cucullate, triangular, acute, up to 3 mm long. Flowers rather fleshy in texture, widely-opening, up to 12 mm in diameter, mustard yellow with chestnut brown markings, labellum callus whitish with purple markings; pedicel and ovary slender, pale olive-green, 14 mm long. Dorsal sepal oblong, cucullate, obtuse, 4.5 mm long x 3.5 mm wide. Lateral sepals obliquely subovate, obtuse, 6 mm long x 4.5 mm wide. Petals oblong-spatulate, obtuse, attached to the sides of the column foot, 5.5 mm long x 2.5 mm wide. Labellum attached to the end of column foot, trilobed, saccate between the lateral lobes and forming a spur, 6 mm long x 8.5 mm wide; lateral lobes triangular, acute, 1 mm long, adaxial surface with a fleshy keel, abaxial surface concave; midlobe transversely oblong, shallowly incurved at apex, densely pilosulous between the lateral lobes, 5 mm long x 8.5 mm wide; basal callus of the midlobe subquadrate, with raised edges, inconspicuous callus provided in front of the basal one. Column broad, fleshy, with the well-developed foot, 4 mm long; rostellum bifid; pollinia 4 in 2 pairs, each pair divided in unequal semiglobular free halves, yellow.

ETYMOLOGY: The specific epithet honours the late Mr Masaaki Chiba of Sakado City, Saitama Prefecture, Japan, who discovered this species.

Owing to their horticultural importance, species of genus *Phalaenopsis* have been paid much attention among taxonomists. As a result, Rolfe (1886) and Sweet (1968-1969) gave complete revisions of this genus, followed by a couple of monographs (Sweet 1980; Gruss and Wolff 1995). Furthermore, exploration and reevaluation in recent years have revealed new findings (e. g. Garay *et al.* 1995; Christenson and Whitten 1995). In this paper another new species, *Phalaenopsis chibae*, is

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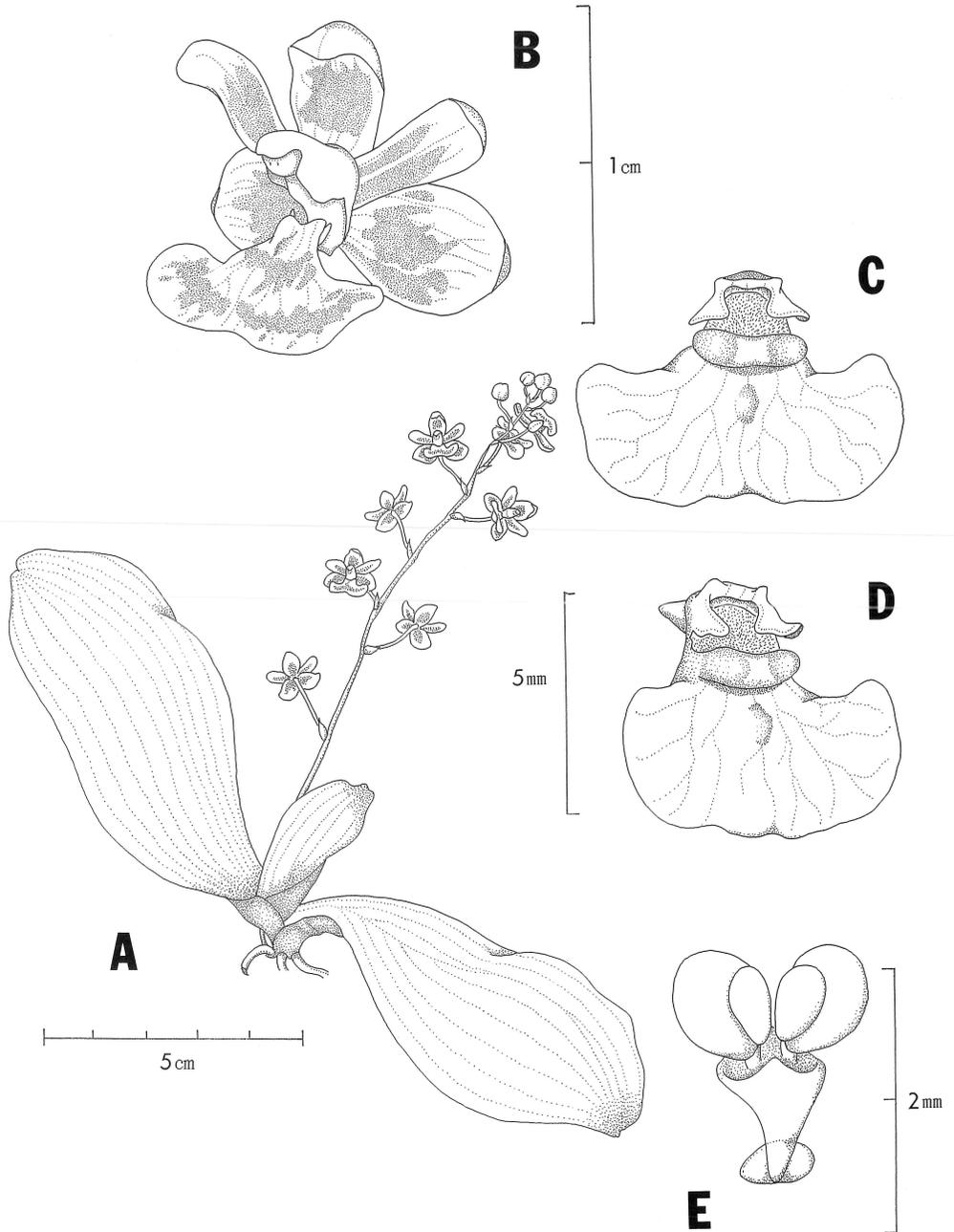


Fig. 1. *Phalaenopsis chibae* Yukawa. A. Habit; B. Flower; C. Labellum, front view; D. Labellum, side view; E. Pollinarium.

described from Vietnam.

Without a doubt, *Phalaenopsis chibae* belongs to section *Deliciosae* (Christenson 1986) because two diagnostic characters of this section, four pollinia and a spur formed by the labellum, are also represented by this species. *Phalaenopsis chibae* can be separated from the other species of this section



Fig. 2. *Phalaenopsis chibae* Yukawa in cultivation, \times ca. 1.
Photographed from the type stock.

by a combination of the following characters: an erect and branchless inflorescence; non-recurrent flowering; flowers in a lax inflorescence; flower colour of mustard yellow with chestnut brown markings; a transversely oblong midlobe and relatively small, triangular lateral lobes of the labellum; and a subquadrate callus with raised edges.

On the basis of the aforementioned features characterizing *Phalaenopsis* section *Deliciosae*, namely, four pollinia and a spur formed by the labellum, several authors prefer to use genus *Kingidium* instead of *Phalaenopsis* section *Deliciosae*. However, this treatment may result in para-/polyphyly because any characters that specifically unite the remaining sections of *Phalaenopsis* have not been found; in other words, it is not justifiable to recognize *Kingidium* unless any synapomorphic characters are found in the rest of *Phalaenopsis* sections. Hence there are no grounds to separate section *Deliciosae* from genus *Phalaenopsis*. Christenson (1986, 1995, 1996) also discussed taxonomic treatment on *Phalaenopsis* section *Deliciosae*.

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Summary

A new species of *Phalaenopsis* Blume (Orchidaceae) from Vietnam is described. Although this species shares features such as four pollinia and a spur formed by the labellum with the species of *Phalaenopsis* section *Deliciosae*, characteristics of inflorescence, flower colour, shape of labellum and its callus distinguish it from any other species in the section.

摘 要

ベトナムに自生するラン科の1新種、*Phalaenopsis chibae* Yukawaを記載する。

1994年5月、ベトナム、ダラット付近、海拔400-600mで故千葉雅亮氏が発見した植物の同定を依頼された。4個の花粉塊、唇弁が形成する距、これら2つの形質から、この植物が*Phalaenopsis* section *Deliciosae*に所属することは明らかである。しかし、分枝せず直立する花序、1花序上で開花を繰り返さない性質、花の間隔が疎であること、芥子黄色に栗色の斑紋の入る花色、横長楕円形の唇弁中裂片、小さな三角形の唇弁側裂片、ほぼ四角く両端が隆起する唇弁中裂片のカルス、以上の形質の組み合わせにより、これまで記載された*Phalaenopsis* section *Deliciosae*のいずれの種からも区別され、新種と判断した。

なお*Phalaenopsis* section *Deliciosae*を*Phalaenopsis*から分離し、*Kingidium*という別属を設ける見解もある。しかし、section *Deliciosae*を除く*Phalaenopsis*に共有派生形質を見出せないため、この処置は分類学的整合性を欠く可能性が高く、支持できない。

References

- Christenson, E. A., 1986. Nomenclatural changes in the Orchidaceae subtribe Sarcantithinae. *Selbyana* **9**: 167-170.
 ———, 1995. An overview of the genus *Phalaenopsis*. *Orchid Digest* **59**: 19-22.
 ———, 1996. *Phalaenopsis* taxonomy. *The Phalaenopsis Newsletter* **6**: 7-9.
 ——— and M. W. Whitten, 1995. *Phalaenopsis bellina* (Rchb. f.) Christenson, a segregate from *P. violacea* Witte (Orchidaceae: Aeridinae). *Brittonia* **47**: 57-60.
 Garay, L. A., F. Hamer and E. S. Siegerist, 1995. Inquilina orchidacea Orchidaceae plaurumque Levyanae. *Lindleyana* **10**: 174-182.
 Gruss, O. and M. Wolff, 1995. *Phalaenopsis*. Ulmer, Stuttgart.
 Rolfe, R. A., 1886. A revision of the genus *Phalaenopsis*. *Gardeners' Chronicle* n. s. **26**: 168-170, 212-213, 276-277, 372.
 Sweet, H. R., 1968-1969. A revision of the genus *Phalaenopsis* Blume. *Amer. Orchid Soc. Bull.* **37**: 867-877, 1089-1104; **38**: 33-43, 225-239, 321-336, 505-519, 681-694, 888-901.
 ———, 1980. The genus *Phalaenopsis*. *The Orchid Digest Inc.*, Pomona, California.