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Paphiopedilum papilio-laoticus flower
lateral view



Contents:

● *Paphiopedilum papilio-laoticus* (Orchidaceae),
a new species from Laos

Page 1 – 21
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***Paphiopedilum papilio-laoticus* (Orchidaceae),
a new species from Laos**

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3

Summary: A new species of genus *Paphiopedilum* is described as *Paphiopedilum papilio-laoticus*

Key words: Laos, *Paphiopedilum papilio-laoticus*

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Paphiopedilum papilio-laoticus (Orchidaceae), a new species from Laos

André SCHUITEMAN, Sulivong LUANG APHAY & Shunsuke IIO

At present, 13 or 14 species of *Paphiopedilum* are known to occur in Laos: *Paphiopedilum appletonianum* (GOWER) ROLFE, *P. barbigerum* var. *sulivongii* SCHUIT. & P. BONNET, *P. bellatulum* (RCHB.F.) STEIN, *P. callosum* (RCHB.F.) STEIN, *P. canhii* AVER. & O. GRUSS, *P. concolor* (LINDL. ex BATEMAN) PFITZER, *P. dianthum* TANG & F.T. WANG, ? *P. exul* (RIDL.) ROLFE (requires confirmation), *P. gratrinxianum* ROLFE, Orchid Rev. **13**: 63 (1905), *P. hirsutissimum* var. *esquirolii* (SCHLTR.) K. KARAS. & K. SAITO, *P. parishii* (RCHB.F.) STEIN, *P. rungsuriyanum* O. GRUSS, RUNGRUANG, CHAISUR. & DIONISIO, *P. sukhakulii* SCHOSER & SENGHAS and *P. villosum* var. *annamense* ROLFE. Of these, only *P. barbigerum* var. *sulivongii* and the recently described *P. rungsuriyanum* (LEE et al., 2017) are endemic, if we discard a doubtful record of the former from North Thailand (AVERYANOV et al., 2017). Considering that most species of *Paphiopedilum* occur on limestone, often with highly restricted distribution areas, and that Laos has extensive and poorly studied limestone karst landscapes, it is to be expected that more endemic species of *Paphiopedilum* will be discovered here as the more inaccessible parts of the country are explored.

Unfortunately, commercial plant collectors rather than scientists may be the first to come across such new species, and these may end up in heaps of plants sold on local markets. The species described in this paper came to light in this way. In the interest of conservation, we refrain from disclosing locality and habitat information.

This showy and undoubtedly very rare species will hopefully be propagated from seed soon, and we urge orchid amateurs not to buy any plants of this species that could be wild-collected. In a few years' time it should become widely available as legally propagated plants that do not pose a threat to its continued existence in the wild.

Paphiopedilum papilio-laoticus
SCHUIT., LUANG APHAY & IIO, sp. nov.

Type: Laos, cult. Sulivong LUANG APHAY SL1281-01/06/2018 (holotype FOF).

Lithophyte. Shoots crowded, 4–5-leaved; roots thick, villose. Leaves pendent, mid-green, lighter green underneath, the sheath-

ing part very finely and densely spotted with purple, becoming almost solid purple to the base, linear, 29–37 × 3.8–4.6 cm, apex obtuse, shortly de-curved-apiculate. Inflorescence 1-flowered, patent; peduncle 22–32 cm long, 7.6 mm diam., very short purple-pubescent; floral bract light green, when flattened ligulate, 5.2 × 3.3 cm, glabrous. Pedicel-with-ovary light green, curved-fusiform, 4.5 cm long, 9.7 mm diam., very short-purple-pubescent.

Paphiopedilum papilio-laoticus
analysis





Paphiopedilum papilio-laoticus
plant habit

Flower c. 12 cm across; dorsal sepal white, more or less strongly flushed with light purple except along the margins, at the base with a bright yellow-

green blotch, in the basal half with bold, ring-shaped or U-shaped, deep red-purple spots with a lighter centre; synsepal light green; petals glossy light brown to light greenish brown, with much darker brown mid-vein, the other veins darker but less so than the mid-vein, with or without a few small dark brown dots in the basal half; lip white at the base, inside with purple hairs, the pouch glossy light brown, somewhat darker and more reddish brown than the petals; column white with purple hairs, the knob on the staminode bright deep yellow; pollen masses deep dull yellow. Dorsal sepal suborbicular, held almost flat upright, 8.4 × 8.6 cm, apex emarginate, mucronate. Synsepal narrowly ovate, 6.8 × 3.1 cm, subacute. Petals wide-spreading to somewhat incurved, narrowly oblanceolate, 7.7 × 1.8 cm, apex rounded, margins slightly undulate, at base below the mid-vein with a small patch of long hairs, at apex slightly pubescent. Lip 6.5 × 3.9 cm; claw 2.1 cm wide, inside in basal part coarsely pubescent; the pouch gradually tapering to the obtuse apex, 2.9 cm long from front rim to apex. Column finely pubescent, including both sides of the staminode, stigma glabrous, broadly



Paphiopedilum papilio-laoticus flower with more purple in the dorsal sepal

ovate, 1.2 × 1.0 cm; staminode broadly ovate-subcordate, 1.7 × 2.0 cm, apex (i.e., the side closest to the dorsal sepal) emarginate, base indistinctly 3-lobed, margins incurved except at the base.

Etymology: From the Latin *papilio*, butterfly, and *laoticus*, from Laos, referring both to the large dorsal se-



Paphiopedilum papilio-laoticus staminode

1 cm
4



Paphiopedilum papilio-laoticus

pal that resembles a butterfly wing and to the origin of the species (note that *laoticus* is an adjective of *papilio*, not of *Paphiopedilum*, so the epithet should not be spelled *papilio-laoticum*).

Notes: This species belongs to subgenus *Paphiopedilum* section *Paphiopedilum* (Cribb, 1998). *Paphiopedilum papilio-laoticus* seems most similar to the highly variable *P. gratixianum* (incl. *P. daoense* (Aver.) AVER. & O. GRUSS; AVERYANOV et al., 2017) but differs in the much larger flowers (dorsal sepal 8.6 cm wide versus 4.4–4.6 cm), the uniformly pubescent, white staminode with incurved margins (staminode only partly pubescent, brownish yellow, without incurved margins), and the eye-like purple spots on the dorsal sepal (solid maroon-purple spots in *P. gratixianum*). The only other species in sect. *Paphiopedilum* with a white staminode and the nearest in the size of the dorsal sepal is *P. charlesworthii*, but in that species the staminode is glabrous and the dorsal sepal is uniformly pinkish with darker veins, 4.7–6.6 cm wide (CRIBB, 1998). From all other species in the section it also differs in the much larger flowers, the white staminode, and in the

unique colours of the dorsal sepal: white flushed light purple with a yellow-green blotch at the base and with prominent purple spots that have a lighter centre, like the eye spots on the wings of certain butterflies.

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References

- AVERYANOV, L.V., GRUSS, O., NGUYEN, P.T. & NGUYEN, V.C. (2017). Die Vielfalt des *Paphiopedilum gratixianum* – *Paph. daoense* Komplexes in Indochina. Die Orchidee (Internet edition) **3**(6): 39–46.
- CRIBB, P.J. (1998). The Genus *Paphiopedilum* (Second Edition). Natural History Publications (Borneo), Kota Kinabalu & Royal Botanic Gardens, Kew. 427 pp.
- LEE, Y.-I., CHUNG, M.-C., SYDARA, K., SOULIYA, O. & LUANG APHAY, S. (2017). Taxonomic placement of *Paphiopedilum rungsuriyanum* (Cypripedioideae; Orchidaceae) based on morphological, cytological and molecular analyses. Botanical Studies **58**: art. 16.