

Short Note

Dendrobium hirsutum Griff. (Orchidaceae), a New Recorded Species from Northeastern Thailand

APIRADA SATHAPATTAYANON^{1,2}, TOSAK SEELANAN^{1,2*} AND TOMOHISA YUKAWA³

¹Biological Science Program, Faculty of Science, Chulalongkorn University, Bangkok 10330, Thailand

²Department of Botany, Faculty of Science, Chulalongkorn University, Bangkok 10330, Thailand

³Tsukuba Botanical Garden, National Museum of Nature and Science, 1-1, Amakubo 4, Tsukuba 305-0005, Japan

***Dendrobium hirsutum* Griff. was collected from Phu Luang Wildlife Sanctuary, Loei Province, northeastern Thailand. This is the first record for the country and the species is described and illustrated. This finding increases the taxonomic data for the Orchids Flora of Thailand Project.**

Dendrobium Sw. section *Formosae* (Benth. & Hook. f.) Hook. f. is comprised of about 55 species and occurs from the Himalayas to the Philippines and Sulawesi (Sathapattayanon, Yukawa and Seelanan, unpublished). Seventeen species of the section were enumerated from Thailand¹. It is believed that section *Formosae*, formerly called section *Nigrohirsutae* (Lindl.) Schltr., can be distinguished from the other *Dendrobium* sections by the presence of blackish hairs on the leaf blades and leaf sheaths. However, several species from the Philippines and Borneo do not present this character. In fact, only the hard-textured flowers with white, greenish or yellow perianth lobes characterize the section². Phylogenetic analyses of *Dendrobium* based on molecular data also indicated the

polyphyly of section *Formosae*³.

In the course of revisionary work of the *Dendrobium* section *Formosae* for the Orchids Flora of Thailand Project, we found that three *Dendrobium* specimens, from northeastern Thailand, were similar to *D. longicornu* Lindl⁴., although there is no previous record of this species from Thailand^{1,5}.

This study was based on three specimens collected from the Phu Luang Wildlife Sanctuary, Loei Province, northeastern Thailand. Determinations of identification were made with the help of the keys to species of the *Dendrobium* section *Formosae* by Seidenfaden^{1,6} and Pradhan⁷. The original descriptions of relevant species were reviewed for further identification. For comparison, we also examined herbarium materials deposited at AAU, BCU, BM, BR, C, E, K, L, P, TNS and W⁸.

SYSTEMATICS

All morphological characters of the *Dendrobium* specimens from Phu Luang roughly matched with those of *D. longicornu* in the keys provided by Seidenfaden (1992)⁶ and Pradhan (1979)⁷. However, several features are different from

*Corresponding author:
E-mail: tosak.s@chula.ac.th

the protologue and type specimens of *D. longicornu*. We found that the Thai specimens agree very well with the original description and type specimen of *D. hirsutum* Griff.^{9,10} described from Assam, India. Previously *D. hirsutum* has been interpreted as a synonym of *D. longicornu* because they have a similar floral morphology. The flowers are white with yellowish orange or yellow veins on the labellums and the mentums are narrowly conical. However, *D. hirsutum* is characterized by its widely obovate petals, transversely oblong and serrate mid-lobe of the labellum, whilst *D. longicornu* has lanceolate petals, ovate and fimbriate mid-lobe of the labellum. A taxonomic revision of this latter species complex will be published elsewhere (Sathapattayanon, Yukawa and Seelanan, in preparation).

We thus confirm that *Dendrobium hirsutum* Griff. is newly recorded for Thailand and the description, based on these Thai materials, is given below.

***Dendrobium hirsutum* Griff.**

(Fig. 1)

Dendrobium hirsutum Griff., Not. Pl. Asiat. 3: 318, 1851; Icon. Pl. Asiat. 3: t. 305, 1851; Rchb.f., Gard. Chorn. 18: 488, 1884. Type: India, Assam, Khasia Mountain, Churra Ponjee, Griffith s.n. (holotype K-LINDL!) — *Dendrobium longicornu* var. *hirsuta* (Griff.) Hook.f., Fl. Brit. India 5(2): 720, 1890.

Flowering shoots erect, slender, cylindrical, green or light green, 31-48 cm long, internodes 2.9-4.4 cm long, 0.4-0.7 cm in diameter, more or less sulcate, leafy at the upper part of stem. *Foliage leaves* distichous, thinly coriaceous, spreading or slightly recurved, green or dull green,

lanceolate or narrowly elliptic, 7.5-8.2 cm long, 1.2-1.8 cm wide, apex unequally bilobed, each lobe acute, mid-vein grooved above and ribbed below, young leaves covered with dense, black, hirsute hairs, adaxial surface of mature leaf becoming glabrous, more or less waxy, abaxial surface sparsely with short, black, hirsute hairs, becoming glabrous with age; leaf-sheaths 2.5-3.8 cm long, covered with caducous black hairs. *Inflorescences* abbreviated, solitary or 2-flowered, subterminal on leafy stem, raising from the base of leaf-sheaths opposite the blades; peduncle and rachis light green, 0.3-0.5 cm long, glabrous; floral bracts greenish brown or brown, oblong or elliptic-oblong, concave, 0.5-0.6 cm long, 0.3-0.4 cm wide, apex acuminate, abaxial surface covered with scattered black hairs, 3- to 5-veined. *Flowers* papery, resupinate, unscented, up to 2.3-3.1 cm in diameter, veins obscured, visible when aged. *Sepals* white, spreading, slightly recurved at distal part, margin entire, abaxial surface waxy with distinct keel, wing-like at apex; dorsal sepal ovate or oblong-ovate, 1.5-1.9 cm long, 0.9-1.0 cm wide, apex acuminate, 6- to 7-nerved; lateral sepals obliquely oblong-triangular, posterior margin 1.9-2.1 cm long, anterior margin 3.5-4.3 cm long, 1.0-1.1 cm wide at base, apex acuminate, 7- to 8-nerved. *Mentum* white or pale orangish white from outside, narrowly conical, straight, 2.4-2.7 cm long, 0.3-0.5 cm in diameter at base, 0.2-0.4 cm in diameter at apical part, apex obtuse. *Petals* white, obovate or widely obovate or elliptic, spreading, slightly recurved, 1.8-2.0 cm long, 0.9-1.3 cm wide, apex obtuse, margin entire, 10- to 12-nerved. *Labellum* 3-lobed, 4.0-4.4 cm long, 2.6-3.0 cm wide across side lobes; claw orange, narrowly triangular, 1.4-1.6 cm long; side lobes white with creamy or yellowish orange or yellow

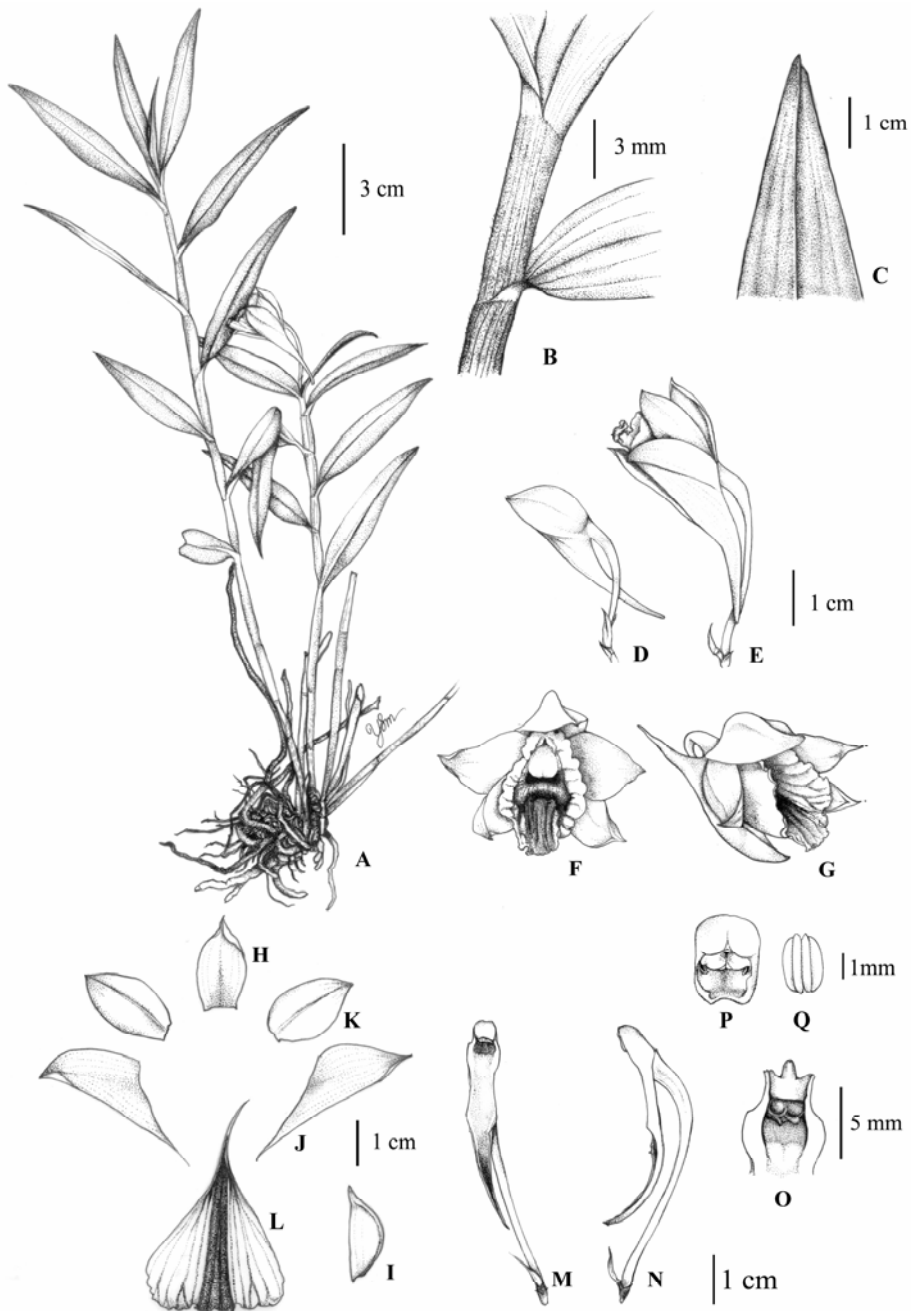


FIGURE 1. *Dendrobium hirsutum* Griff. **A.** Whole plant; **B.** Blackish hairs on leaf blades and leaf sheaths; **C.** Leaf apex; **D.** Unopened flower, side view; **E.** Flower, side view; **F.** Flower, front view; **G.** Flower, oblique view; **H.** Dorsal sepal; **I.** Side view of dorsal sepal, note the abaxial keel on surface; **J.** Lateral sepal; **K.** Petal; **L.** Labellum; **M.** Column and column foot, from below; **N.** Column and column foot, side view; **O.** Apical part of column, anther cap excised; **P.** Anther cap; **Q.** Pollinia. All line drawings were drawn by Mr. Yotsawate Sirichamorn from W. Wichainsin *et al. s.n.*

veins on adaxial surface, obliquely ovate or

obliquely elliptic, apex obtuse, margin crenate and slightly undulate, 6- to 7-slightly elevated veins running along each side lobe, each vein covered with short hair-like callus along distal half; disc thickening, narrowly oblong, smooth, becoming 3-keeled with hair-like callus at distal end; mid-lobe white or yellowish orange, transversely oblong, 0.3-0.5 cm long, 0.6-0.9 cm wide, apex 2-lobed or indistinctly 2-lobed, margin serrate or irregularly lobed, 2 to 4 yellowish orange veins, bearing hair-like callus, continuing from side lobes and 3 yellowish orange keels, bearing hair-like callus, continuing from disc. *Column* white or very pale orange, 3.5-4.0 mm long, 3.0-4.0 mm wide; foot orange or yellowish orange, slightly concave, tapering downwards to narrowly conical mentum, 8.8-9.2 mm long, minutely papillose; stigmatic cavity white or ivory white, elliptic; stelidia triangular; connective narrowly triangular; anther cap white, obovate, 2.5-3.0 mm long, 2.2-2.7 mm wide, apex rounded or truncate, basal margin ciliate, surface very minutely papillose, adaxial surface sulcate; pollinia 4, yellow, each pollinium narrowly elliptic, without caudicle and visidium. *Pedicellate ovary* white or greenish white, narrowly clavate, curved, 3.0-3.3 cm long, glabrous, somewhat waxy with 6-grooves. *Capsule* not seen.

Thailand.— NORTHEASTERN: Loei [Phu Luang Wildlife Sanctuary, 12 Nov. 1998, *W. Wichainsin s.n.* (transparency slides, BCU); Phu Luang Wildlife Sanctuary, 29 Oct. 1999, *W. Wichainsin et al. s.n.* (spirit specimen, BCU); Phu Luang Wildlife Sanctuary, 20-28 Oct. 2000, *W. Wichainsin s.n.* (spirit specimen, BCU)].

Distribution.— China, India, Myanmar, Laos and Vietnam.

Ecology.— The plants grow on muddy rocks near Huay Loei Nga Stream, in lower montane coniferous forest, at an altitude of 1,200-1,300 m a.m.s.l. Flowering period: October to November.

Note.— *Dendrobium hirsutum* was first discovered and described by William Griffith⁹. On the basis of data from herbarium specimens, the species is widely distributed from India through southern China, Myanmar, Laos to northern Vietnam. This orchid species occurs from 1,000 to 1,800 m above mean sea level. Therefore, the distribution of *D. hirsutum* in northeastern Thailand is not surprising, but it seems likely that this species is rare and only three specimens were collected from the same location.

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