

## ***Didymoplexiella trichechus* (Orchidaceae), a new species record for Thailand**

**PINPAWAN ROJCHANA-UMPAWAN<sup>1</sup> SAHUT CHANTANAORRAPINT<sup>2</sup>,  
SOMRAN SUDDEE<sup>3</sup> & AMONRAT CHANTANAORRAPINT<sup>4</sup>**

**ABSTRACT.** *Didymoplexiella trichechus* (J.J.Sm.) Gray, a mycoheterotrophic orchid, is newly recorded for Thailand. A key to the Thai species of *Didymoplexiella*, a description and illustrations are provided.

**KEY WORDS:** achlorophyllous, mycoheterotrophic.

### **INTRODUCTION**

*Didymoplexiella* Garay is a small orchid genus with ca. 8 species, distributed in Indonesia, extending to Malaysia, Thailand, China, Taiwan and Japan (Garay, 1954; Seidenfaden, 1978; Comber, 2001; Xiahua et al., 2004; Tsukaya et al., 2005). The genus is very similar to *Didymoplexis* Griff. in habit and flower appearance, however, the former differs in having long stelidia on the column apex and lacking a column-foot (Comber, 2001; Jin et al., 2004; Tsukaya et al., 2005).

In Thailand, Seidenfaden (1978) listed two species of *Didymoplexiella*, namely: *D. ornata* (Ridl.) Garay and *D. siamensis* (Rolfe) Seidenf. Based on herbarium specimens and field surveys in peninsular Thailand, we can here add *D. trichechus* (J.J.Sm.) Garay as a new record for the country. The description and illustrations below are based only on the Thai specimens cited.

### **DESCRIPTION**

***Didymoplexiella trichechus* (J.J.Sm.) Garay, Arch. Jard. Bot. Rio de Janeiro 13: 34. 1954; Comber, Orchids Sumatra: 111. 2001.—***Didymoplexis trichechus* J.J.Sm., Bull. Jard. Bot. Buitenzorg, sér. 3, 2: 19. 1920. Fig. 1.

Plant terrestrial, mycoheterotrophic, achlorophyllous. Rhizome horizontal, fleshy, tuberous, irregularly cylindrical to fusiform, gradually narrowed to apex, 4–7.3 cm long, 0.4–0.6 cm in diameter. Roots few, filiform, arising from neck at the top of rhizome. Flowering shoot erect, to 30 cm tall, dark brown, 2–4 mm in diameter at base, unbranched. Inflorescence glabrous; peduncle with 2–4 sheaths; sheaths brown, glabrous, tubular, 1–2 mm long, chartaceous, base amplexicaul; rachis 0.5–1.5 cm long, 3- to 10-flowered; floral bracts ovate-triangular, 0.5–1.5 mm long, glabrous, persistent; the flowers placed close together, opening in succession, usually only one flower at a time; pedicel and ovary 5–12 mm long, brown. Flowers resupinate, chocolate brown except for the labelum which is white with purplish center; sepals and petals adnate near their base, forming a bilobed short tube; upper lobe formed by dorsal sepal and petals, joined for approximately 2/5–1/2 their length; lower lobe formed by lateral sepals, joined for approximately 2/5 their length. Sepals glabrous, minutely tuberculate outside; dorsal sepal ovate, 6–8.5 by 3–4 mm, apex acute or obtuse; lateral sepals broad ovate-falcate, 6–7.5 by 3.5–5 mm, apex acute to rounded. Petals glabrous, oblique orbicular-ovate, much wider than dorsal sepal, obtuse to rounded apex, margins faintly erose,

<sup>1</sup> Department of Biology Faculty of Science Prince of Songkla University, Hat Yai, Songkhla, 90112, Thailand; e-mail: sahut.c@psu.ac.th

<sup>2</sup> Forest Herbarium, Department of National Parks, Wildlife and Plant Conservation, Chatuchak, Bangkok 10900, Thailand; e-mail: s.suddee@dnp.go.th

<sup>3</sup> Faculty of Natural Resources, Prince of Songkla University, Hat Yai, Songkhla 90112, Thailand; e-mail: amonrat.b@psu.ac.th

more or less reflexed. *Labellum* trilobed, 6–6.5 by 6.5–7 mm; side lobes obliquely quadrangular, 2.5–3 mm broad, white, apex irregularly denticulate, much longer than midlobe; midlobe suboblong, apex emarginate, with a conspicuous white to light purple 2-lobed callus below apex. *Column* slender, ca. 3–4 mm long, erect, with a pair of linear stelidia at apex; stelidia decurved, ca. 2.5 mm long, with a small tooth at their base; anther cap cucullate, smooth; pollinia 4, coarsely granulate; stigma rounded. *Fruit* a capsule, brown, oblong, 2.5–3 cm long, 2–3.5 mm in diameter.

Thailand.— PENINSULAR: Nakhon Si Thammarat [Khao Luang National Park, Krung Ching, 24 Sept. 2010, *Middleton, Lindsay, Suddee, Karaket & Phutthai* 5525 (**BKF**, spirit)]; Songkhla [Ton Nga Chang waterfall, 06°56' 41.31"N, 100°13' 06.56"E, 350–500 m alt, 27 May 1985, *Maxwell* 85-543 (**PSU**, spirit); 19 July 2006,

*Chantanaorrapint* 1212 (**BKF**, spirit); 29 Jan. 2011, *Phutthai* s.n. (**BKF**, spirit); 25 Jan. 2014, *Rojchana-umpawan* 107 (**PSU**, spirit)].

**Distribution.**— Sumatra (type).

**Ecology.**— The Thai specimens were found growing with other mycoheterotrophic plants such as *Lecanorchis malaccensis* Ridl. and *Thismia alba* Holttum ex Jonker, in sandy soil covered by leaf litter, under shade in primary lowland evergreen forest, at ca. 150–500 m alt. Flowering and fruiting from January to September.

**Notes.**— *Didymoplexiella trichechus* is easily distinguished from all other Thai species of *Didymoplexiella* in having a trilobed labellum with emarginate midlobe and denticulate side lobes. At present, three species of *Didymoplexiella* are known from Thailand. Based on comparative data, a key to the species is provided below.

#### KEY TO THE SPECIES OF DIDYMOPLEXIELLA IN THAILAND

1. Labellum entire or trilobed with the side lobes small and much shorter than midlobe	<b>D. siamensis</b>
1. Labellum trilobed, side lobes large, much longer than midlobe	
2. Labellum with yellowish callus near the basal part; side lobes entire, with smooth margins; midlobe oblong-lanceolate, apex acute	<b>D. ornata</b>
2. Labellum with purple callus near the apex; side lobes with irregularly denticulate margins at apex; midlobe suboblong, apex emarginate	<b>D. trichechus</b>

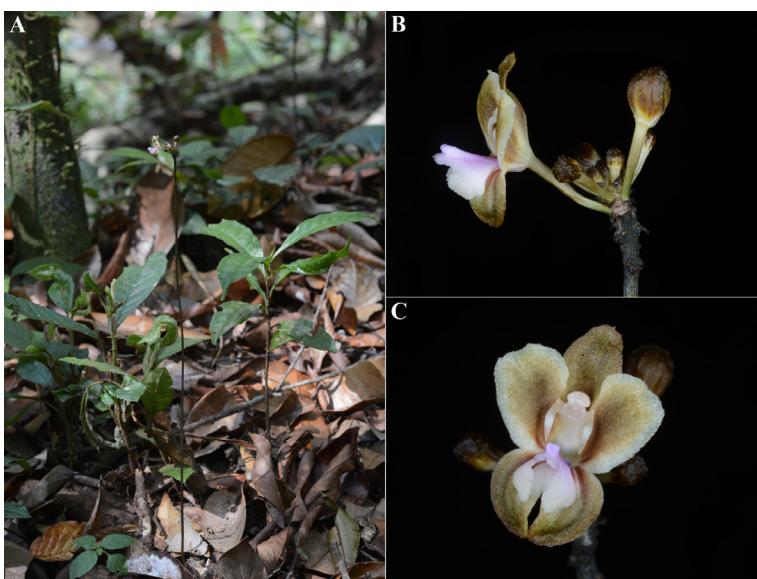


Figure 1. A. Habit and habitat; B. Inflorescence, shown side view of flower; C. Flower. Photographed by S. Chantanaorrapint.

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