

## *Leptochilus minor* Fée (Polypodiaceae), a New Record for Thailand

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**ABSTRACT.**—In addition to the knowledge of Thai pteridophytes, a small microsoroid fern, *Leptochilus minor* Fée has been found in Ranong Province, peninsular Thailand. This newly recorded species is described and illustrated in this paper.

**KEY WORDS:** *Leptochilus minor*; microsoroid fern; Polypodiaceae; New Record; Thailand; Southeast Asia

### INTRODUCTION

The genus *Leptochilus* Kaulf. is belonged to the fern family Polypodiaceae. It is close to *Colysis* C. Presl. and differing from this genus only in the distinctly dimorphic fronds (Tagawa and Iwatsuki, 1989). Recently, Nootboom (1997) included *Leptochilus* Kaulf., *Microsorium* Link. and *Podosorus* Holttum into the microsoroid ferns. They are separated from other polypodiaceous ferns by the combination of (partly) clathrate rhizome scales and anastomosing, reticulate venation. So far, this genus consists of 10-12 species and is distributed from South, East, and Southeast Asia, Malesia, Australia (N Queensland), and Solomon Islands (Nootboom, 1997).

Two species namely *Leptochilus axillaris* (Cav.) Kaulf. and *L. decurrens* Blume are previously recorded from Thailand (Tagawa and Iwatsuki, 1989).

### MATERIALS AND METHODS

Herbarium specimens of a *Leptochilus* species (T. Boonkerd 1480) collected from Muang Chon in Ranong Province, peninsular Thailand was determined using keys to the species in Holttum (1954), Nootboom (1997) and Tagawa and Iwatsuki (1989). For comparisons, we examined herbarium specimens deposited at the following herbaria: BCU, BK, BKF, BM, K, L and P.

### RESULTS

The morphological characters of *Leptochilus*' specimens (T. Boonkerd 1480) are fitted well with key to the species and description of *L. minor* Fée in Holttum (1954) and Nootboom (1997). It is also matched well with the herbarium and type specimens, which deposited at Kew herbarium. Accordingly, *L. minor* Fée is newly recorded for Thailand. A description below is based on Thai materials.

***Leptochilus minor* Fée**, Mém. Foug. 2. Hist. Acrost. 87, pl.25, f. 3, 1845; Holtt., Rev. Fl. Malaya 2: 166. 1954; Nootboom, Blumea 42(2): 261-395, 1997. f.1 a-c.

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Rhizome creeping, 1.5-2 mm diam., not white waxy, roots densely set. Scales pseudopeltate, apically densely set, 1.5-2.5 mm long, 0.5-0.75 mm broad, narrowly ovate, margin entire to denticulate, apex acute, clathrate. Phyllopodia somewhat distinct, 5.0-9.5 mm apart. Fronds dimorphic. Sterile frond simple, narrowly elliptic to narrowly obovate, 1.8-7.4 cm long, 0.3-0.8 cm broad, base cuneate, margin entire, apex acute to obtuse; stipe very short or absent, lamina decurrent downwards to its base; midrib raised on both surfaces; lateral main veins indistinct, the other veins hardly visible,

forming copious aroels with forked or branched included free veinlets; green to dark green on upper surface in dried condition. Fertile fronds simple, lamina linear to narrowly ovate, 8-10 cm long, 0.2-0.4 cm broad; stipe distinct, 4-8 cm long, stramineous, wingless. Sori acrostichoid.

Thailand.-PENINSULAR: Ranong [Muang Chon, *T. Boonkerd* 1480 (BCU)].

Distribution.-India; Sri Lanka; Vietnam; Philippines [*Cuming* 326 (Holotype K, isotype UC); *A.D.E. Elmer* 16728; *M. Ramos & G. Edano* s.n.]; Sumatra; Borneo.

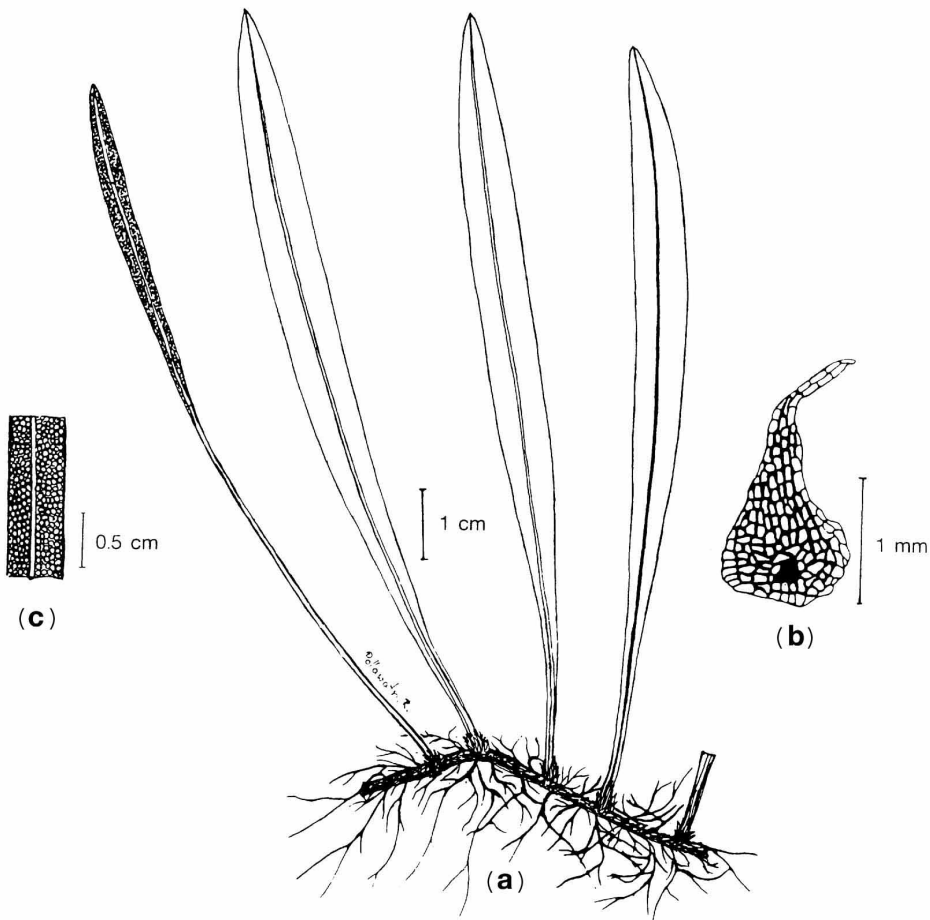


FIGURE 1. *Leptochilus minor* Fée. (a) habit; (b) rhizome scale; (c) fertile area. (a-c *T. Boonkerd* 1480, BCU).

Ecology.—Rheophytic fern on muddy rocks in streamlets in shady evergreen forests at 150 m altitude.

*L. minor* Fée is a small microsoroid fern, it can be separated from the two previous known species by using the following key.

#### Key to the Species

1. Lateral main veins distinct, sterile lamina oblong to oblong-lanceolate ..... 1. *L. decurrens*
1. Lateral main veins indistinct, or distinct near midrib only, sterile lamina narrowly elliptic, narrowly ovate or narrowly obovate.
  2. Epiphyte on base of tree-trunk, rarely epilithic; veins prominent and distinct ..... 2. *L. axillaris*
  2. Epilithic, rarely epiphytic; veins hardly visible ..... 3. *L. minor*

#### DISCUSSION

*L. minor* Fée has been found on muddy rocks in streamlets in shady Peninsular Wet Seasonal Evergreen forest. This species was first observed in Luzon, the Philippines in 1845 from specimen collected by Cuming. This new record is a small microsoroid fern; its occurrence in Ranong Province is in agreement with its present geographical distribution. It is one of the hardy-to-see species, probably due to its miniature plant and the shady habitat of stream-

lets in the peninsular Thailand. Hence this species was overlooked by plant collectors for sometimes. Holttum (1954) in his classic Ferns of Malaya, also noted that this small species has been collected only once on Pulau Tioman by Ridley in 1889.

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