

Heart of Borneo Series **8**

# Monograph of Expeditions

## LONG BANGA & ADJACENT AREA



**NOTES ON *MAPANIA LATIFOLIA* UITTIEN (CYPERACEAE)  
FROM LONG BANGA, SARAWAK**

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**Abstract**

*Cyperaceae is one of the largest family in the Monocotyledon plant group consisting of 106 genera and approximately 5600 species throughout the world. Mapania is among the important understory genus in this family. To-date about 40 species of Mapania have been recorded for Sarawak that includes 13 newly described species. Mapania latifolia is one of four species with foliaceous involucral bract recorded in Southeast Asia and its distributed in Peninsular Malaysia and Borneo. This species tends to show tremendous variations among the populations from different elevations and localities. This preliminary study is to investigate the variation of M. latifolia from Long Banga and to compare it with the collections from other places in the Heart of Borneo project areas.*

**Keywords:** *Mapania latifolia, Cyperaceae, Long Banga, Heart of Borneo, Sarawak, Borneo*

***Introduction***

The genus *Mapania* Aublet is an important element of the understory ecosystem in tropical rainforests of Borneo. Borneo represents higher diversity with 40 species recorded including 13 newly described species found in Sarawak (Miraadila, 2018). This genus is broadly

distributed in tropical regions, occurring in Central and South Amerika, Western and Central Africa, Seychelles, parts of tropical Asia, Malesia, the Pacific Islands and northern Australia (Simpson, 1992). Genus *Mapania* which comprises 86 species worldwide (Shabdin *et al.*, 2013; Govearts *et al.* 2007) belong to Cyperaceae, the sedges family.

*Mapania latifolia* was first described by Uittien in 1935 based upon the specimen collected by Richards from Mount Dulit, Long Kapa, Miri (Uittien, 1935). This species was unique among all the Sarawak's species by the only species that have leafy bract, was analysed and discussed in this paper.

### ***Materials and Methods***

The surveys were conducted along the transects and riverine of Sungai Buta.

### ***Results and Discussion***

A total of 20 specimens were collected from Long Banga areas that consisting of seven species including *M. latifolia* and one unidentified species (new species, closed to *M. palustris*).

### ***The Species***

#### ***Mapania latifolia* Uittien, Fig. 1**

*Rec. Trav. Bot. Neerl.* 32 (1935): 199. Type: MALAYSIA, Sarawak, Miri Division, near Long Kapa, Mount Dulit, 31 Aug 1932, *Richards 1556* (holo: K).

*Description:* Robust, stoloniferous. *Culm* solitary, erect, central, 20–42 cm x 1.8–4.2 mm, trigonous to subtriquetrous, angular, densely scabrid-pubescent particularly near apex, green. *Leaves* basal, up to 100 cm or more long; leaf-blade linear-oblong or oblong, 21–57 x 3–5.6 cm, apex abruptly narrowed, broadly obtuse to rounded, cuspidate, base abruptly narrowed into pseudopetiole, coriaceous, mid-green, 3-nerved, secondary nerves indistinct, flat in cross-section, indistinctly septate-nudulose when dry, margins entire to scabrid near apex; pseudopetiole 21–33 x 0.4–1 cm; sheath lanceolate, 8–11.5 x 1.7–2.4 cm, apex ± abruptly narrowed, coriaceous, dull reddish. *Involucral bracts* 3, foliaceous, linear-oblong or oblong, ovate-lanceolate to lanceolate, 2.5–22 (-102) x 1–6.8 cm, basal bracts longest, apex abruptly narrowed, cuspidate, spreading, coriaceous, mid-green, margins scabrid, the longest bracts with a pseudopetiole 6–6.5 x 1 cm. *Inflorescence* terminal, ± globose, 2.5–4 cm wide, dark brownish, with 9–30 or more spikes; spikes elliptic, 1.3–1.7 x 0.4 cm, acute, distinct; spicoid bracts oblong, 7–7.5 (-8) x 1.8–3.3 mm, obtuse to ± rounded, coriaceous, dark reddish-brown, fringed with short hairs around apex, nerves indistinct; floral bracts 6, free, lowest 2 bracts linear, 7–8 (-8.5) x 1–1.8 mm, acute or truncate, mid- to dark reddish brown, keel wingless, densely hispid, upper bracts linear, 7.2–8 (-8.5) x 0.5–0.8 mm, acute or truncate, glabrous, flat; staminate flowers 3 per spicoid, anthers linear-oblong, 1.4–2 mm long, cream, filaments up to 8.5 mm long; stigma branches 3; style 4–4.4 mm long, dark reddish-brown. *Fruit* ellipsoid to ovoid, 2.8–5 x 1.9–2.3 mm, apex apiculate, base stipitate; exocarp succulent, thin, without sculpturing, dull mid- to dark brown, costae absent.

*Ecology and Distribution:* undisturbed lowland mixed dipterocarp forest, frequently found in damp and wet places near to the streams or river banks. Endemic to Borneo, widely distributed in the island.

*Notes:* Without inflorescence, this species could be mistakenly identified as *Mapania cuspidata* as it also having petiolate leaves but with inflorescence, this species easily recognize because of the presence lower foliage bracts.

*Conservation status:* Not threatened, common in the primary lowland mixed dipterocarp forests.

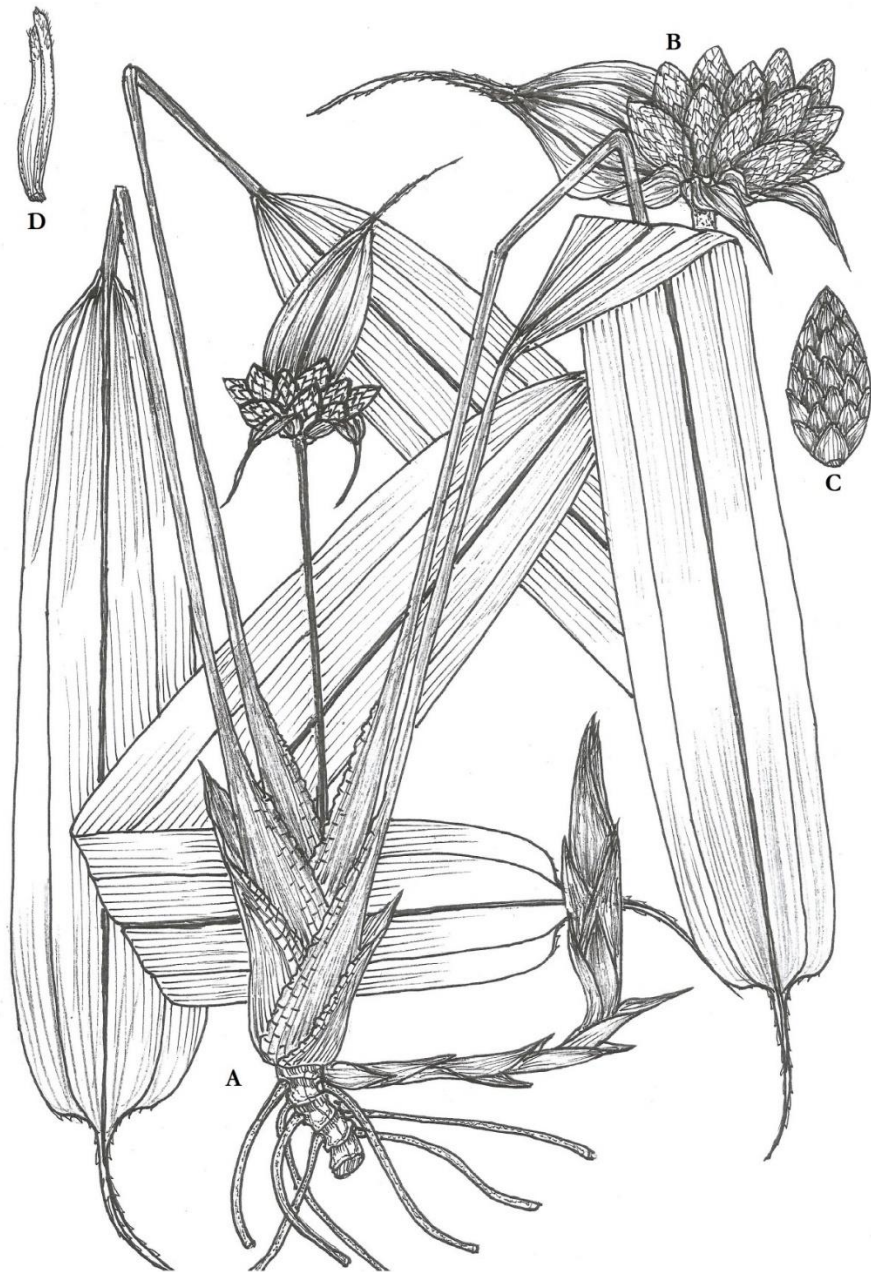
### ***Discussion***

Specimens of *M. latifolia* from various collection within the Heart of Borneo project (including in herbaria) were compared. Generally, the plant appearances, particularly the length of petiole and number of spikes per inflorescence showed significantly difference among the populations and locations. The specimens from a higher altitude (400 m above sea level) tend to have longer petioles (range 30 – 55 cm long) and high number of spikes per inflorescence (20 – 50, or more). For example, specimens collected from Sg. Buta (Long Banga) was the longest petiole among the specimens with an average length 50 cm long and great number of spikes, average 45 spikes per inflorescences.

Whereas, the plants from lower altitudes (below 400 m above sea level) having shorter petioles (c. 15 – 33 cm) and the low number of spikes per inflorescence (10 – 25). For instance, specimens collected from

Lanjak Entimau Wildlife Sanctuary were the shorter petioles with average 25 cm long and low number of spikes, average 18 spikes per inflorescences.

The intraspecific variations of *M. latifolia* need to be further investigated as many characteristics showed distinctive measurement, number and colouration. It is suggested that the study should be ing abroad as this species also occur in Peninsular Malaysia.



**Figure 1.** *Mapania latifolia* Uittien. **A:** whole plant and habit; **B:** inflorescence, capitate capitulum with foliage bract; **C:** spike; **D:** unopened spicoid [Drawing by Meekiong, K.].

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