

## NOTES ON TWO SPECIES OF *LINDSAEA* DRYAN. FROM THE ANDAMAN AND NICOBAR ISLANDS, INDIA

During the course of identification of the sheets of the genus *Lindsaea* Dryan. housed in the Central National Herbarium, Howrah (CAL), we came across number of interesting old and new collections especially from Andaman and Nicobar Islands. The critical examination of such sheets with the help of literature and specimens from Malay Ptninsula and Islands together with authentic determinations made by Prof. Kramer during his visit to CAL in 1977, it is evident that *L. tenera* Dryan. is a common species in the region and is endemic in the Andaman and Nicobar Islands, India. Kramer (1972) considered it as an insufficiently known species. *L. tetragona* Kramer is reported as new record for the Nicobar Islands, India.

Detailed descriptions of these species are furnished here to help in their identifications.

***Lindsaea tenera*** Dryan., Trans. Linn. Soc. 3: 42, t. 10. 1797 (non Kaulf. 1824, nov. of later authors).

*Schizoloma tenerum* (Dryan.) Holtt. Rev. Fl. Mal. 2: 348. 1954 (as to the type only).

*Type*: "Habitat in India Orientali: Missionarii Societatis unitatio Fratrum" (BM).

Rhizome slender, 1-2 mm in diam., creeping; scales 1-2 × 0.5-1 mm, pale to dark brown, fragile, ovate-lanceolate, ending in terminal gland and soon shed off from the rhizome. Stipes usually shining stramineous to medium brown; lamina broadly ovate-lanceolate, 10-20 cm long, pale green when dry, herbaceous, tripinnatifid in the basal region (rarely tripinnate), pinnatifid in apical part and with 3-8 pinnae to a side. Pinnae shortly petiolate, ovate to oblong-lanceolate, 4-7 × 2-2.8 cm, normally broadest at the base, ascending, 2-5 cm apart in the basal part, pinnules ascending, rounded-rhombic, 7-15 × 7-10 mm, with the incisions

of very irregular depth, the upper pinnules very little incised, the terminal segments broader and more obtuse. Venation lax, veins free, furcate. Sori interrupted in incised pinnules, continuous in apical segments; indusium pale brown, 0.3 mm wide, entire, almost reaching the margin. Spores yellowish, verruculose, trilete, 25-27  $\mu$  m (Figs. 1-2).

*Specimens examined*: ANDAMAN ISLANDS: South Andaman, between phoenix bay and Aberdeen, Kurz s. n., Accession no. 5400 (CAL); Gwjan forest ridge, Rutland Island, 48 m, 20. 3. 1904. Rogers 137, Accession nos. 7288, 7289, 7290, 7291, 7292, 7293, 7294, 7295 (CAL). Andamans, April, 1858, s. n., Accession no. 5399 (CAL). Little Andaman, Hut Bay,  $\pm$  20 m, 8. 1. 1976, Bhargava 3363 (ANC, CAL). NICOBAR ISLANDS: North Nicobar: Katchal Islands, sea level, 25.4.1974, Chakraborty 1211 (ANC, CAL); South Nicobar, 30 km on East West Road, 175 m, 20.7.1976. Balakrishnan 3891 (ANC, CAL).

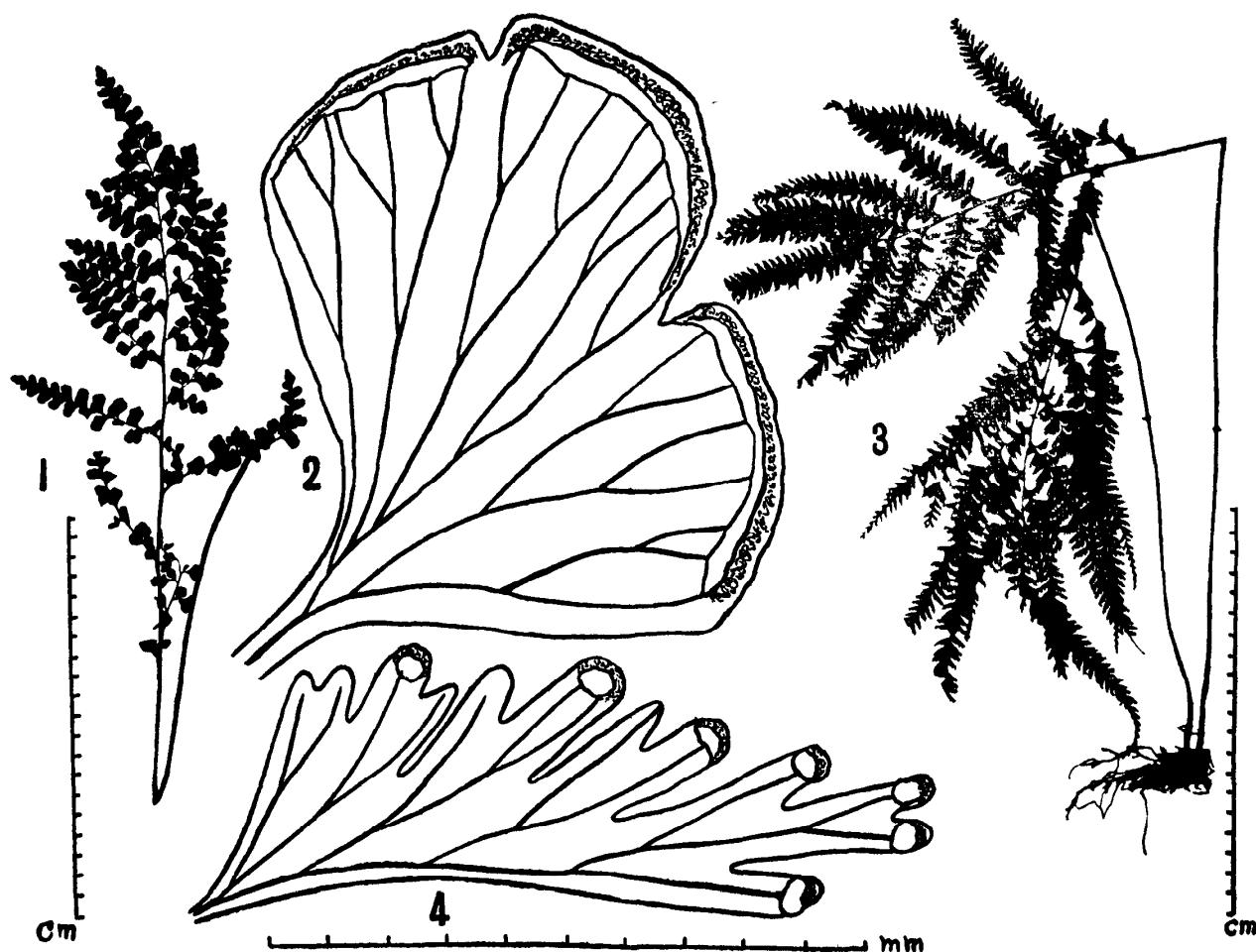
*Earlier records*: Insufficiently known from Andaman and Nicobar Islands (cf. Kramer, 1972).

Endemic.

***L. tetragona*** Kramer, *Blumea* 15 (2): 564, 564, 1967 var. ***tetragona***

*Type*: *Binnendijk* 160, Ambon (U).

Rhizome slender, 1-1.5 mm in diam., creeping; scales 1-2 × 0.3-0.5 mm, dark brown, linear-lanceolate, fragile, ending in terminal gland and soon shed off from the rhizome. Fronds tufted; stipes 11-34.5 cm, stramineous to pale brown, abaxially biangular and in transverse section it is tetragonus; lamina broadly ovate-lanceolate, 18.25 cm long, pale green, chartaceous bipinnate, with 5-7 pinnae to a side, pinnae 1-2 cm apart subsessile, oblong-lanceolate 9-13 × 1.5-2 cm, pinnules 8-10 × 2-3 mm, deeply incised, usually in to bilobed segments.



Figs. 1-2. *Lindsaea tenera* Dryan: 1. Habit. 2. A pinnule, Rogers 137. Figs. 3-4. *L. tetragona* Kramer: 3. Habit. 4. A pinnule, Chakraborty 3208.

Veins free, furcate. Sori marginal extending to the terminal segments, interrupted by the incisions of the margin, normally uninnervate, rarely with two vein ends; indusium brownish, wavy, not reaching the margins. Spores yellowish, verrucose, trilete,  $15-18 \mu\text{m}$ . (Figs. 3-4).

*Specimens examined*: NICOBAR ISLANDS—South Nicobar: 6 km on East West Road,  $\pm 75 \text{ m}$ , 19. 8. 1975, Balakrishnan 2967 (ANC, CAL). Great Nicobar: Harmind nagar, sea level, 29. 11. '1975, Chakraborty 3208 (ANC, CAL). SAMOA ISLANDS—Samoa, May 1885, Powell s. n., Accession no. 5007 (CAL); Herb. Royal Gardens Kew. 263, Accession no. 5006 (CAL).

*Earlier records*: Minanda, Celebes, Moluccas, Louisiades, Solomon Islands, Fiji, Tahiti (cf. Kramer, 1967).

New record for Nicobar Islands, India.

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