

4. Fraser-Jenkins, C. R. and Khullar, S. P., *Indian Fern J.*, 1985, 2, 9.
5. Ching, R. C. and Wu, S. K., *Flora Xizangica*, 1983, 1, 239.

A NEW SPECIES OF *ASPLENIUM* L. (ASPLENIACEAE) FROM JAVADI HILLS OF NORTH ARCOT DISTRICT, TAMIL NADU, INDIA

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DURING a floristic study of the North Arcot District of Tamil Nadu under the District Flora Scheme of the Botanical Survey of India, a fern species was collected from the Javadi hills. On scrutiny, it was found to be a new taxon since it could not be matched with specimens available either in the Madras Herbarium (MH), Coimbatore or at the Central National Herbarium (CAL), Calcutta. The specimen was therefore sent to the Kew Herbarium and its identity was confirmed as an undescribed new species of *Asplenium* L.

Asplenium lakshmananii Viswanathan sp. nov.

Rhizomes long creeping, in rock crevices, horizontal, clothed with fibrous roots, bearing a tuft of stipes. Scales many, appressed on rhizome, linear to linear-lanceolate, hair-pointed at apex, 2.5–3 mm long, 0.5–1 mm wide, dark brown, consisting of 4–10 rows of longitudinal latticed cells. Stipes 12–20 cm long, 0.8–1.2 mm thick, dark brown, dorsally grooved, glabrous. Rachis dark brown, similar to stipe, dorsally grooved. Lamina bipinnate, or rarely

tripinnatilobed at base, lanceolate or oblong-lanceolate, 8.5–20 cm long, 2.4–7.6 cm wide; pinnae 9–13 pairs with up to 1.2 mm long stalks; the pinnae above the lowest 1 or 2, the largest up to 4 cm long, 2.2 cm wide, lanceolate, with 2 or 3 pinnules on each side; upper pinnae well separated and lobed at apex. Pinnules few, ovate or obovate, posterior base cut down to the midrib or above the middle, cuneate at base, entire at margin, irregularly toothed and rounded or truncate at apex, toothed to 1.5 mm; veins prominent, once forked, ending in a tooth. Sori brown, elongate, placed along and on one side of the veins, opening towards midrib; indusium linear, attached to the vein. Sporangium 160–424 μ long, 80–160 μ wide, globose with 1 row of thick-walled cells of annulus; stalk consisting of 1 row of cells. Spores many, brown, 24–32 μ long, 24 μ wide, plano-convex; perispore winged, undulate, many-folded.

Asplenium lakshmananii Viswanathan sp. nov.

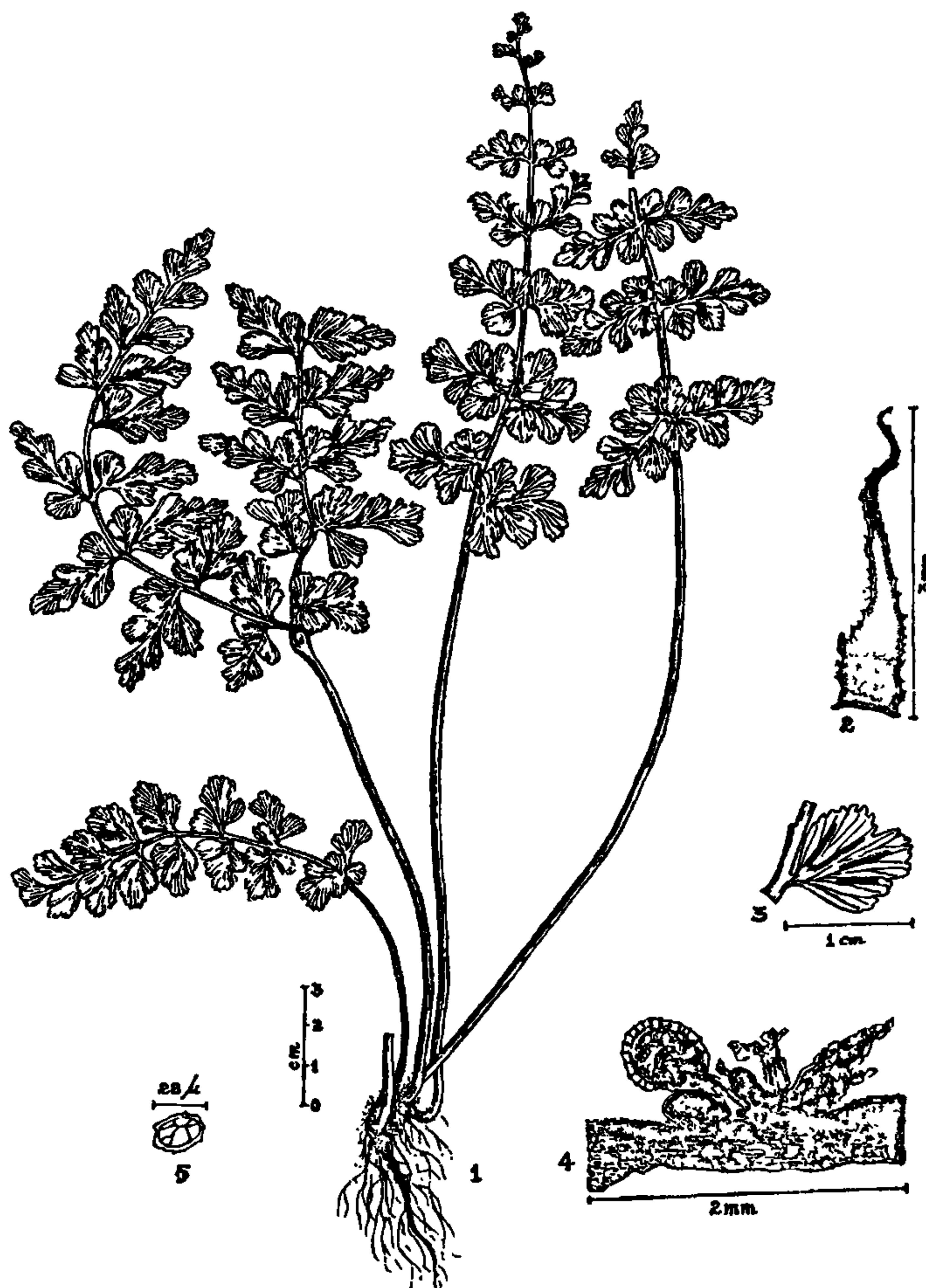
Asplenium affine Sw. affinis, sed laminis irregulariter pinnatis; pinnis ad apicem acutis vel obtusis; pinnis superis profunde separatis et ad apicem lobatis; pinnis stipibus curtis, c. 1.2 mm longis; pinnulis basalibus 3-lobatis; pinnulis angustiore dentatis, ad apicem truncatis vel obtusis, 14–20-dentatis; veins ad medium et prope dentem furcatis; sporis parvis, 24–32 μ longis, differt.

Asplenium lakshmananii sp. nov. is allied to *Asplenium affine* Sw. but can easily be distinguished by the characters given in table 1.

The Holotype M. B. Viswanathan 1270 and Isotypes M. B. Viswanathan 1270 were collected at an altitude of 1,100 m from Melpet of Javadi hills, North Arcot District, Tamil Nadu on 12.11.1986. Holotype is deposited in CAL. The isotypes are deposited in K, MH and Herbarium, Bharathiar University, Coimbatore.

Table 1 Comparative differences between the two species

<i>Asplenium affine</i> Sw.	<i>Asplenium lakshmananii</i> sp. nov.
Lamina regularly pinnate, acuminate at apex	Lamina irregularly pinnate, acute or obtuse at apex
Pinnae round and bluntly toothed at apex	Pinnae acute or obtuse at apex
Upper pinnae gradually smaller and merging into the deeply lobed apex	Upper pinnae well separated and lobed at apex
Stalk of pinnae up to 4 mm long	Stalk of pinnae up to 1.2 mm long
Basal pinnules 1-lobed or not	Basal pinnules 3-lobed
Pinnules acutely toothed, rounded at apex	Pinnules narrowly toothed, truncate or obtuse at apex
Each pinnule with 6–12 teeth	Each pinnule with 14–20 teeth
Veins forked at middle of pinnae, rarely near tooth	Veins forked at middle and near tooth
Spores 39–54 μ long	Spores 24–32 μ long



Figures 1-5. *Asplenium lakshmananii* Viswanathan sp. nov. 1. Habit; 2. Rhizome scale; 3. Pinnule with sori; 4. LS of the pinnule to show the sorus, and 5. Spore.

The specific epithet is given in honour of the present author's guide Dr K. K. Lakshmanan.

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