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TWO NEW SPECIES OF *SELAGINELLA* P. BEAUV. FROM KERALA, INDIA

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ABSTRACT

Selaginella keralensis Dixit and *S. nayarii* Dixit have been described in detail with illustrations from the state of Kerala, as new to science.

In continuation of detailed taxonomic studies on the genus *Selaginella* P. Beauv on all India basis, the author came across a few more interesting specimens of *Selaginella* which on critical studies turned out to be as new in addition to earlier 6 new species (cf. Dixit, 1982, 1983). The two new species are : *Selaginella keralensis* and *S. nayarii* from Kerala state in India and are described in detail with illustrations.

Selaginella keralensis Dixit *sp. nov.* (Figs. 1A-G).

Differt a *Selaginella cataractro* Alston foliis margine laevibus ; foliis medianis ovatis, basi oblique-cordatis, apice acutis ; sporophylls minute denticulatis.

Holotypus : KERALA : Kuttikanam, 22.10. 68, *Nair* 40195 (BSA). Isotypus, *l.c.* (CAL).

Stems 1.5-3 cm, very slender, prostrate, stramineous on drying, usually simple to sometimes branched above, branches short. Rhizophores thread like forming bunch in the basal part only. Leaves heteromorphic throughout, charataceous, smooth in margins ; lateral leaves distant, ovate, subcordate, subobtuse ; inner half-leaf ovate, outer half-leaf semi-ovate ; axillary leaves ovate, minutely denticulate ; median leaves, ovate, cordate, oblique, acute.

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Strobili 2-5 × 1-1.5 mm ; sporophylls heteromorphic ; minutely denticulate, larger sporophylls ovate, obtuse, smooth to sparsely denticulate on proximal side ; smaller sporophylls ovate, acute to shortly acuminate ; megaspores 150-250 μm in diameter, yellow, smooth ; microspores not observed, probably shed away.

The present species can be easily distinguished from *S. cataractro* Alston by its leaves smooth in margins ; median leaves ovate, oblique, acute at apex.

Distribution : India-Kerala : Kuttikanam.

Ecology : Plants growing on wet rock boulders.

Etymology : The specific epithet has been given after state of collection of the plant material.

Selaginella nayarii Dixit *sp. nov.* (Figs. 2A-G).

Differt a *Selaginella rajasthanensis* Gena, Bharadwaja et Yadav, foliis lateralis prosume margine laevibus, vel minute denticulatis, foliis medianis margine laevibus ; sporophyllis dentatis vel denticulatis sed basi margine ciliatis, ciliis longis, flexuosis

Holotypus : KERALA : Kuttikanam, 2.1. 1971, *Nair* 818 (BSA) Isotypus : (CAL).

Stems slender 2.5-7 cm, prostrate, branched from the base, branches short. Rhizophores present throughout except apical 1/3rd, wiry,

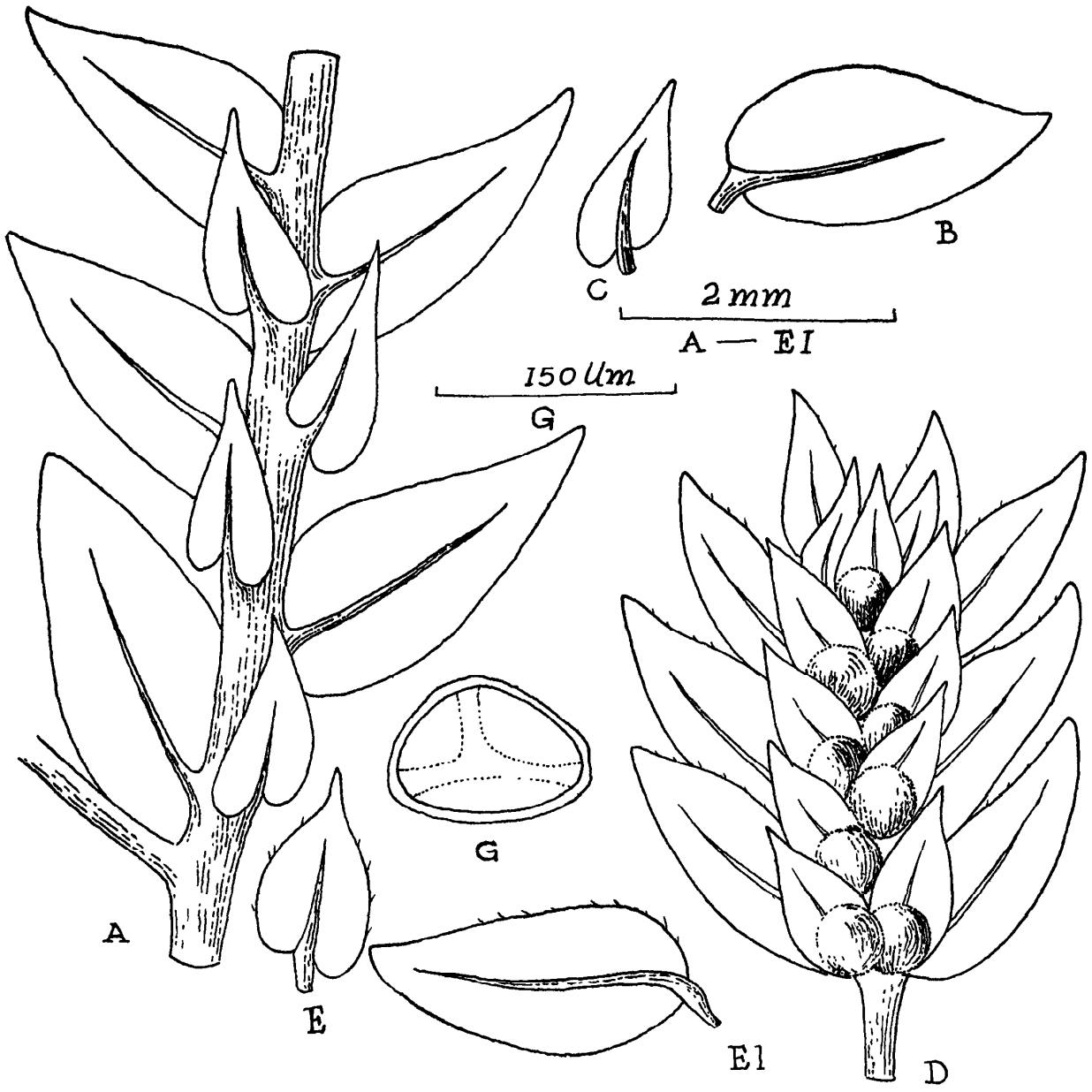


Plate I. *Selaginella keralensis* Dixit
Figs. A-G : A. Habit. B-C. Leaf. D. Sporophyll twig. E-E_1. Enlarged sporophylls. G. Spores.

stramineous on drying. Leaves heteromorphic throughout, membranous, distant on the main stem, contiguous on the branches. Lateral leaves ovate, cordate, subobtuse to subacute, smooth to denticulate on the proximal side, smooth on the distal side, inner half-leaf ovate, subacute, outer half-leaf lanceolate ; median leaves ovate, decurrent, subacute, smooth ; axillary leaves ± like lateral leaves, smooth to minutely denticulate. Srobili 2-5 × 1.5-2 mm, sporophylls heteromorphic, ciliate ; larger sporophylls ovate-oblong, obtuse, long ciliate at base, cilia flexuose, rest dentate to denticulate on proximal side, distal side smooth ; smaller sporophylls ovate, acute, acuminate, long ciliate in the basal region, cilia flexuose, rest dentate to denticulate ; microspores brick-red, trilete, 50-70 μm in diameter, reticulate ; megaspores yellow, tuberculate.

Distribution : India (Kerala).

Ecology : On rocks.

Etymology : The specific epithet has been given in the honour of Dr. M. P. Nayar, Director, Botanical Survey of India for pro-

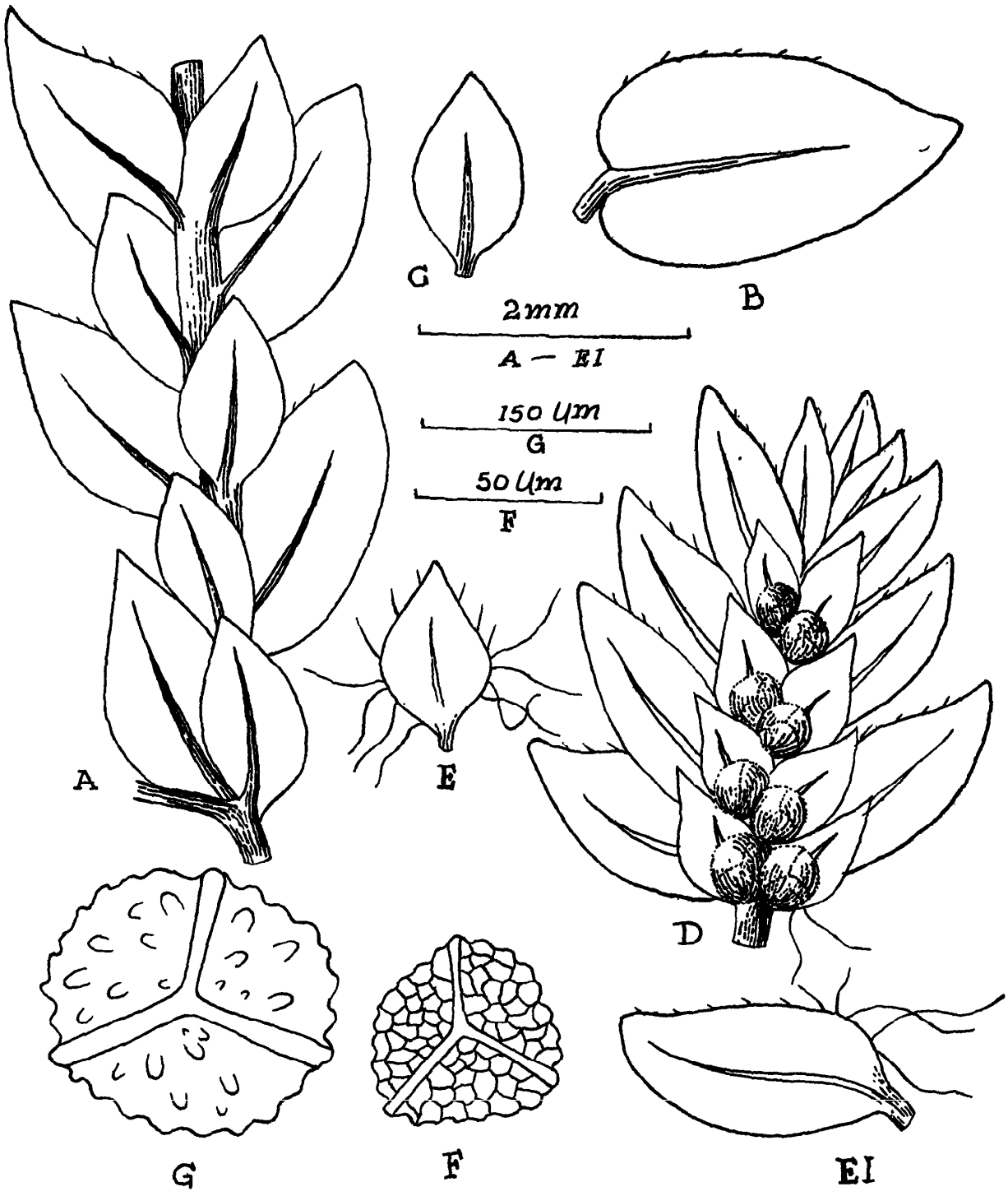


Plate II. *Selaginella nayarii* Dixit

Figs. A-G : A. Habit. B-C. Leaf. D. Sporophyll twig. E-E_1. Enlarged sporophylls. F-G. Spores.

moting the taxonomic studies on Pteridophytes in the Survey.

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