

ON THE OCCURRENCE OF *SOLANUM KHASIANUM* CLARKE
VAR. *CHATTERJEEANUM* SEN GUPTA IN BIHAR

Solanum khasianum Clarke var. ***chatterjeeanum*** Sen Gupta (*Bull. bot. Surv. India* 3: 411, 1961), has been reported from different parts of Eastern India and the Nilgiris but not reported from Bihar. We, during our collection trips in different parts of North Bihar, collected this plant from Madanpur-Bhainsalotan forests. As this is reported for the first time from Bihar and it has tremendous probabilities as a potential source for steroid hormone in India [Maity in *J. Bombay nat. Hist. Soc.* 63(2): 324, 1965], a list of places of collections of this variety, deposited in Herb. CAL is noted below:

BIHAR: Bhainsalotan, bushy prickly shrub on sandy soil, fairly common, flowers white (11.8.64), *Banerjee & Banerjee* 93; also from Bhainsalotan-Nepal border, *Banerjee & Banerjee* 617; Kotraha, *Banerjee & Banerjee* 571; Madanpur, *Banerjee & Banerjee* 481.

ACKNOWLEDGEMENT

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TWO NEW TAXA OF FERNS FROM EASTERN HIMALAYAS

Polystichum levingei N. C. Nair sp. nov.

Affine *Polysticho stimulantii* Presl. et *P. setifera* (Forsk.) Woyнар. Differt a primo magnitudine minore totius plantae, natura et incissionibus pinnarum, pagina inferiore pinnarum fibrillosa, squamis stipitis paucis et minoribus, et distributione et directione sororum. Ab altero vero differt lamina pinnata, incissionibus pinnarum, distributione et directi one sororum et stipite et frondibus minoribus, squamis nonnullis dispersis.

Rhizoma breve et parvum, intextum radicibus longis fibrosis, supportans caespitem arctum stipitum multorum; stipes pallidus, gracilis, ca 6 mm longus, squamis linearibus vel lineari-lanceolatis dispersis ornatus, .5-.6 mm latis ad basin, 1-4 mm longis apice acuminato, margine integro. Lamina 15-22 mm longa, 2-2.5 cm lata, angusta gradatim versus apicem, subcoriacea, pinnata. Rachis nitens, nonnullis nitentibus squamis dispersis. Pinnae ad 70 numero, alternae, haud distantes et fere contiguae, maxima ca 1 cm longa, et .5 cm lata ad medium, basi truncato-auriculata supra setacea vel in spinam desinente et angustissime cuneata infra, marginibus superioribus crenatis, parte distali marginis inferioris dentata, apice spinuloso, superficie superiore glabra, inferiore vero squamosa squamis dispersis lanceolatis brunneolis vel triangularibus. Nervi indistincti. Singulae pinnae supportant 1-4 soros, in latere acroscopico; sorus rarius in latere basiscopo invenitur. Indusium peltatum, 1 mm diam., deciduum.

Holotypus *Sen-Gupta* 436 lectus ad Dochula in Bhutania ad altit. 3250 m (10420') die 22 septembris

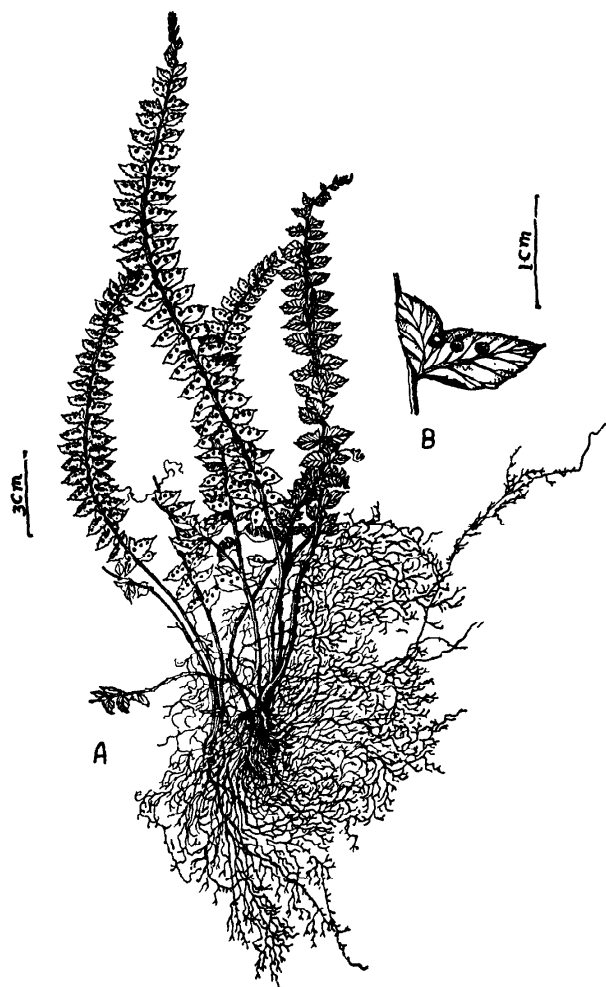
anni 1964, et positus in herbario cryptogamico Bot. Surv. Calc. Paratypus *Levinge* 14593 lectus ad Koongma, in Bhutania ad altit. 3750 m (12000'), *Levinge* 14594-14596 lectus 15 octobris 1880 ad Darjeeling et *Levinge* sine numero et 8541 lectus ad Phullot in Bhutania ad altit. 3437 m (11000') in CAL. Species in honorem beauti H. C. Levinge, qui primo taxon legit.

Polystichum levingei N. C. Nair sp. nov.

Allied to *Polystichum stimulantii* Presl. and *P. setiferum* (Forsk.) Woyнар. It differs from the former in the smaller size of the plant, nature and cutting of the pinnae, fibrillose lower surface of the pinnae, few and smaller scales of the stipe and distribution and orientation of the sori. It differs from the latter in the pinnate nature of the lamina, cutting of the pinnae, distribution and orientation of the sori and smaller stipes and fronds with few small scattered scales.

Stock short and small enmeshed in the long fibrous roots, bearing a close tuft of numerous stipes; stipes pale, slender, to about 6 mm long, bearing scattered linear or linear-lanceolate scales .5-6 mm broad at the base and 1-4 mm long with acuminate tip and entire margin. Lamina 15-22 mm long and 2-2.5 cm wide narrowed gradually to the apex, subcoriaceous, pinnate. Rachis shining with few scattered narrow scales. Pinnae up to 70, alternate, not spaced and almost touching, largest pinnae about 1 cm long and .5 cm wide in the middle, base truncate auriculate above setaceous or spine-tipped and very narrowly cuneate below, upper edge crenate

and the distal part of the lower edge dentate, teeth spinulose, upper surface glabrous, lower with



Polystichum levingei Nair A. Entire plant.
B. Pinnule with sori.

scattered brownish lanceolate or triangular scales. Veins indistinct. Each pinnae bears 1-4 sori on the acroscopic side rarely a sorus may be found on the basiscopic side. Indusium peltate 1 mm across, deciduous.

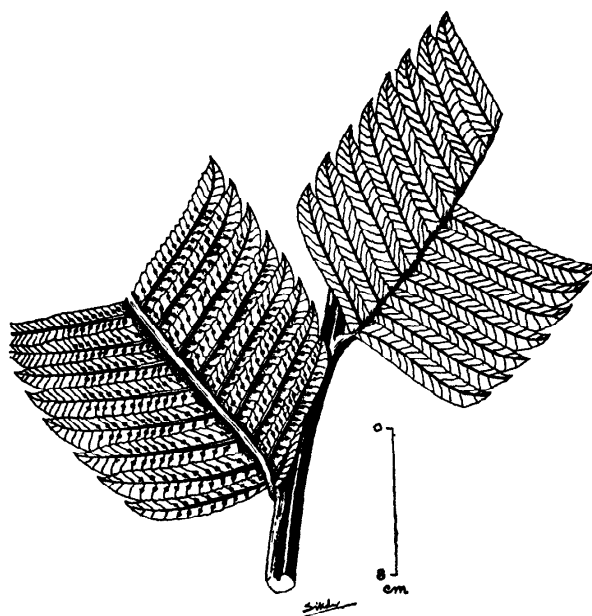
The holotype of this species (*Sen Gupta* 436) has been collected from Dochula in Bhutan, alt. about 3250 m (10,420') on 22-9-1964 and is in the Cryptogamic Unit of the Botanical Survey of India, Calcutta. The paratypes *Levinge* 14593 (without date) collected from Koongma, Bhutan, alt. 3750 m (12000'), *Levinge* 14594, 14595, 14596 collected on October 15, 1880 from Darjeeling and *Levinge* s.n. & 8541 (without date) collected from Phullot (Bhutan), alt. 3437 m (11000') are in the Central

National Herbarium, Calcutta. The specific epithet is given in honour of H. C. Levinge who first collected the taxon and indicated on one of his sheets that this may be new taxon.

Thelypteris multilineata (Wall. ex Hook.) Morton var. ***bhutanica*** N. C. Nair var. nov.

Differt a var. typica nervo medio, costa et nervis glabris in pagina inferiore, rachide et nervo medio laminae hispidis in pagina superiore.

Holotypus *Deb* 179 lectus in Bhutan mense novembre 1964 et positus herbario cryptogamico Bot. Surv. Calc.



Thelypteris multilineata var. *bhutanica* Nair—part of leaf.

Thelypteris multilineata (Wall. ex Hook.) Morton var. ***bhutanica*** N. C. Nair var. nov.

This differs from the typical *T. multilineata* in (1) mid rib, costa and veins glabrous on the lower surface; (2) rachis and midrib of lamina hispid on the upper surface.

Holotype *Deb* 179 collected from Bhutan in November 1964 is deposited in the Cryptogamic Unit of the Botanical Survey of India, Calcutta.

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