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A NOTE ON *PITYROGRAMMA CALOMELANOS* IN INDIA

Pityrogramma calomelanos (L.) [Link Handb. Gew. 3. 20. 1833 (= *Acrostichum calomelanos* L., Spec. Plant., 2. 1702, 1753)] is a tropical American fern which has run wild within quite recent times in the tropics and the subtropics of the whole world. During the past few decades this fern has been reported to occur in a wild state from a number of places in India. Chandra (1963) in his taxonomic account of the genus *Pityrogramma* in India has emphasised that the first published and authentic record of the species dated back to 1934 by Mehra from Sikkim and 1935 by d'Almeida from Bombay; and probably Beddome (1892) reported the species as *Pellaea calomelanos* Link from N. W. Himalayas, near Almora. Recently Nayar (1964, p. 203) has clearly mentioned that "among early workers, Hooker (1868—under *Pteris*) and Beddome (1892—under *Pellaea*) have reported *P. calomelanos* in India." This note is intended to comment on the above mentioned recent works with reference to the oldest known record, taxonomy and distribution of *Pityrogramma calomelanos*.

If one was to locate the earliest published record of the fern from India, Blatter and d'Almeida in 1922 (p. 176) had very clearly indicated its occurrence (under *Gymnogramme*) from Bombay Presidency and Nilgiris, with the comments "run wild in and around Bombay". In the Bombay Presidency these authors collected the fern from Khadala and Kampoli; Dango forest (Surat); Bombay Island, Malabar Hill, Sewrie, Rowli Hill, Sion Wood. From the Himalayan range the first published record is by Mehra in 1932 and not 1934 as cited by Chandra (1963) and Nayar (1964).

There is no mention of *Pityrogramma calo-*

melanos in the earlier classic works on Indian ferns by Clarke (1880) and Beddome (1883, 1892). The contention of Chandra (1963) as well as of Nayar (1964) that Beddome (1892) had mentioned the species under *Pellaea* and of Nayar (1964) that Hooker had placed it under *Pteris* is erroneous. *Pellaea calomelanos* (Sw.) Link (= *Pteris calomelanos* (Sw.)) is a widely different species met with in the N.W. Himalayas (cf. Clarke, 1880; Beddome, 1892) and shares with *Pityrogramma calomelanos* only the specific epithet. Further Hooker (in fact Hooker and Baker, 1865-1868, and 1874, p. 152) in the Synopsis Filicum referred from India to only *Pellaea calomelanos** and that too under the genus *Pellaea* and not *Pteris*. That Hooker had no inclination to consider it as *Pteris* is clear from Clarke (l.c.) who commented "Sir W. J. Hooker expresses great surprise that Kunze supposed this species a *Pteris* rather than a *Pellaea*".

Hooker and Baker (1874, p. 385) did, however, include *Pityrogramma calomelanos* in the Synopsis Filicum under the genus *Gymnogramme*, but not from India. It may be added that *Pellaea calomelanos* is characterized by the ultimate segments naked on both surfaces, and the sori in a broad marginal line soon hiding the narrow membranaceous involucre, whereas *Pityrogramma calomelanos* is characterized by white ceraceous covering on the undersurface, and the sporangia are distributed all over the veinlets without an indusium.

Apart from the earliest published record of the

* *Pellaea calomelanos* (Sw.) Link is known in literature as *P. hastata* (Thbg.) Prantl (cf. Christensen, 1906, p. 479, 480) with *Pteris hastata* Thbg. (non Sw.) & *P. calomelanos* Sw. as synonyms. (cf. Hooker & Baker, 1874 ; p. 152 and Beddome, 1892, p. 104). *Pteris hastata* Thbg. is not synonymous with *Adiantum hastatum* L.f. (cf. Schelpe, 1963).

species in 1922, the fern had been collected earlier too from Indian localities. In the Central National Herbarium, Sibpur, (Howrah, India) there are lying at least three sheets of *Pityrogramma calomelanos*, one from Peninsular India and two from Eastern Himalayas. The peninsular specimen was collected by Mr. H. F. Blanford in 1886 at Mercara, Coorg with the insertion "cultivated and naturalized". One of the sheet from the E. Himalayas bears the label: Herb. Hort. Bot. Calcuttensis, Flora of Sikkim, Loc. Mungpoo, 2000 ft alt. dated 17.11.1908, W. G. Craib, no. 146 (introduced?). It becomes clear that at least as early as 1886, *P. calomelanos* was collected from S. India and in 1908 from Sikkim. One of the probable reasons for the non-inclusion of this fern in the 1892 supplement to the ferns of British India by Beddome may be because the species was taken to be introduced rather than native.

In India, the species is reported to occur from a number of places in the foot hills of N. E. India generally rising upto 900 m altitude and west coast of S. India. The statement of Chandra (1963, p. 1) that "*P. calomelanos* occurs throughout India

in the plains" is unjustified. In N. India, the species occurs in the foothills of Eastern Himalayas and is particularly abundant in bright, open, sunny and comparatively drier slopes where the vegetation is denuded or the sites have been exposed through land slides or recent cuttings. At Teesta and along roads from Teesta to Gangtok, Kalimpong and Manjitar (Darjeeling and Sikkim Himalayas) the fern is fairly abundant and very often is associated with *Onychium siliculosum* (Desv.) C. Chr. and *Pteris vittata* L. Chandra (1963) has reported its occurrence as high as Gangtok (1500 m alt.) supported by his collection, Chandra 69426 (NBG, Lucknow).

From Western Himalayas there is as yet no report of the species, although Chandra (1963, p. 3) did mention under the distribution "Terai regions of North U. P." He did not cite any collection and if his insertion is based on the occurrence of *Pellaea calomelanos* near Almora (N. W. Himalayas), it may be deleted.

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A NEW SPECIES OF SCHEFFLERA J. R. & G. FORST., FROM BHUTAN

Schefflera bhutanica R. N. Banerjee sp. nov.

Accedit ad *S. venulosam* (Wt. & Arn.) Harms, a que tamen differt bracteis et bracteolis persistentibus, floribus maioribus in umbellas tomentosas maioresque dispositis, calyce stellato-pubescente, petalis uni-nervis, filamentis quam petalis longioribus in alabastro incurvis.

A small(?) tree. Stem terete, glabrous, bark

hard. Leaves alternate, stipulate, digitately 7-foliate, petiolate ; petioles glabrous, terete 25-30 cm long ; leaflets petiolulate, dorsal surface shiny, ventral surface smooth, ovate elliptic, 5.5-11.5 cm long, 2-4.5 cm wide, acuminate, base rounded, entire, unicastate reticulate, lateral nerves more than 10 on each side ; nerves distinct on ventral surface ; petiolules 0.5-2 cm long, lateral ones shorter than the