**N E L U M B O** 51 : 223-224. 2009

# ON THE CORRECT IDENTITY OF WESTERN HIMALAYAN *PLAGIOGYRIA* (KUNZE) METT.

B. S. Kholia

*Botanical Survey of India, Sikkim Himalayan Regional Centre, Gangtok 737 103*

*Plagiogyria* (Kunze) Mett., the only genus of family Plagiogyriaceae (Pteridophyta), is represented by about 15 species (Smith & al., 2006) which are mainly confined to China and neighboring countries in S. E. Asia, with one species reported from America (Hooker 1860, Zhang and Nooteboom 1998). There is no general consent about the number of species in India. Beddome (1883) described only four species of this monophyletic genus (Korall & al. 2006) from India, but during course of time, the number of Indian species raised up to sixteen (Dixit 1984, Chandra 2000, Dixit & Das 1981, Ghosh & al. 2004). However, recently Fraser Jenkins (1997, 2008) retained the number of species to only four following Beddome (1883) and Zhang & Nooteboom (1998). The three species *i.e. P. pycnophylla* (Kunze) Mett., *P. adnata* (Blume) Beddome and *P. glauca* Mett., were well described by Beddome (1883), where he correctly mentioned the paripinnate lamina apex. Besides that, he also separated them with diagnostic features as *P. adnata* with adnate pinnae and winged rachis and *P. glauca* with white glaucous lamina undersurface. But he did not mention the imparipinnate character of fourth species *i.e. P. euphlebia* (Kunze) Mett.; Nevertheless this character of distinction between *P. euphlebia* and *P. pycnophylla* was clearly mentioned by Hooker (1860) and Iwatsuki (1988) for the Himalayan plants.

Based on the collection of Dr. H. C. Pande, Khullar (1994) reported *Plagiogyria scandens* from Kumaon and the same name was also followed by Pande and Pande (2002, 2003). At present in Kumaon the plant is found growing in only two small stream gullies below District Institute of Education and Training (DIET) to Hat village in Didihat town of Pithoragarh district, Uttarakhand, from where few more interesting and rare ferns of Western Himalaya *viz*. *Diplazium subsinuatum*, *Colysis insignis*, *Arachniodes aristata, Dennstaedtia scabra, Microlepia platyphylla, Christella papilio, Osmunda japonica* along with dozens of common ferns are collected by the present author ( Kholia and Punetha 2002, 2003). The silhouette published by Khullar was without apical pinnae but on the careful observation in field as well as on the basis of literature trawl on Kumaon plant, it is concluded that the plant growing in Didihat (Pithoragarh, Below Normal School, 27.09.1998, 29°47´38"N, 80°15´41"E, *B.S. Kholia*-19984, 19986, 19987, deposited in Kumaon Univ. Harbarium) is *Plagiogyria euphlebia* (**Fig. 1**) with imparipinnate lamina apex instead of *Plagiogyria scandens* which is a synonym of common Wastern Himalaya peripinnate fern *Plagiogyria pycnophylla*.



**Fig. 1**. *Plagiogyria euphlebia* (Kunze) Mett. growing at Didihat.

Date of publication : 31st December, 2009
© Botanical Survey of India, 2009

## REFERENCES


Beddome, R. H. 1883. A Handbook to the Ferns of British India. Ceylon and Malay Peninsula. Thacker Spink & Co. Calcutta. (With supplement 1892).

Chandra, S. 2000. The ferns of India (Enumeration, Synonyms and Distribution). International Book Distributors. Dehradun.

Dixit, R. D. 1984. A Census of the Indian Pteridophytes. Botanical Survey of India. Howrah.

Dixit, R.D. and S. Das. 1981. The family Plagiogyriaceae Bower in India. *Proc. Ind. Acad. Sci. (Plant Sci.)* 90 : 371-390.

Fraser-Jenkins, C. R. 1997. New species Syndrome in Indian Pteridology and the Ferns of Nepal. International Book Distributors. Dehradun.

Fraser-Jenkins, C. R. 2008. Taxonomic revision of three hundred Indian subcontinent Pteridophytes. B.S.M.P.S. Dehradun.

Ghosh, S.R., A. Ghosh, A. Biswas and R.K. Ghosh. 2004. The Pteridophytic flora of Eastern India Vol.1. Botanical Survey of India. Kolkata.

Hooker, W. J. 1860. Species Filicum, Vol. 3 : Lubrecht & Cramer. London. (Reprinted in India 1974).

Iwastsuki, K. 1988. An enumeration of the Pteridophytes of Nepal. In: E. Ohaba & Malla (ed.) The Himalayan Plants. Tokyo. 1: 231-339.

Kholia, B.S. and N. Punetha. 2002. *Diplazium subsinuatum* (Wall. ex Hook. & Grev.) Tag. in Central Himalaya. *Phytotaxonomy*. 2: 163-165.

Kholia, B.S. and N. Punetha. 2003.The genus *Colysis* Presl, in Western Himalaya. *Phytotaxonomy*. 3: 119-123.

Khullar, S.P. 1994. An illustrated fern flora of West Himalaya. Vol. I. International Book Distributors. Dehradun.

Korall, P., K.M. Pryer, J.S. Metzgar, H. Schneider and D.S. Conant. 2006. Tree ferns: monophyletic groups and their relationships as revealed by four protein-coding plastid loci. *Molec. Phylog. Evol.* 39: 830–845.

Pande, H.C. and P.C. Pande. 2002 & 2003. An Illustrated Fern Flora of Kumaon Himalaya. Vols.1 & 2. B.S.M.P.S. Dehradun.

Smith, A.R., K. M. Pryer, E. Schuettpelze, H.P. Schneider and P.G. Wolf. 2006. A classification for extant ferns. *Taxon* 55 (3): 705–731.

Zhang, X.C. and H.P. Nooteboom. 1998. A taxonomic revision of Plagiogyriaceae (Pteridophyta). *Blumea* 43: 401–469.