

NEW ADDITIONS TO FERN FLORA OF TAMIL NADU, INDIA

P. Vijayakanth^{1*}, S. Sahaya Sathish¹ and J. Mazumdar²

¹Centre for Cryptogamic Studies (CCS), Department of Botany, St. Joseph's College (Autonomous),
Tiruchirappalli-620002 Tamil Nadu, India

²Department of Biological Sciences, Burdwan Town School, Burdwan-71301, West
Bengal, India.

*Corresponding author email: apvijayakanth@gmail.com

Abstract

Two ferns *Athyrium parasnathense* (Athuriaceae) and *Leptochilus metallicus* (Polypodiaceae) first time reported from Tamil Nadu, India. Lectotype is selected for *Athyrium parasnathense*.

Keywords: *Athyrium parasnathense*, Ferns, Lectotype, *Leptochilus metallicus*, new record, Tamil Nadu.

Introduction

Fern flora of India is very rich and more than 1000 species are expected to occur in India. However, correct distributions of many species are poorly understood. During taxonomic study of fern flora of Kolli hills, Tamil Nadu we found two species as new addition to fern flora of Tamil Nadu.

1. *Athyrium parasnathense* (C.B.Clarke) Ching ex Mehra & Bir, Res. Bull. Panjab Univ., Sci. 15: 141. 1964. (Athuriaceae)

Asplenium filix-femina (L.) Bernh. var. *parasnathensis* C.B.Clarke, Tr. Linn. Soc. II, 1: 493, t. 61, C 2 1880. *Athyrium filix-femina* (L.) Roth. var. *parasnathensis* (C.B.Clarke) Bedd., Handb. Ferns Brit. India 170. 1883.

Lectotype (designated here): India. Jharkhand: Parasnath Hills ["Parasnath, Chota Nagpore"], 4000 ft, 17 Nov 1874, C.B. Clarke 24756 (K001089341 image seen; Isolectotypes K001089342, K001089343 images seen).

Additional specimen examined: Tamil Nadu: Kolli Hills, Kuzhivalavu, 1596 m, 9.10.2016, P. Vijayakanth CCSH 549.

Note: *Athyrium parasnathense* (C.B.Clarke) Ching ex Mehra & Bir is an endemic fern of India. It can be distinguished by following features: rhizome short creeping, scaly; scales lanceolate, brown; frond pinnate to sub-bipinnate; stipe scaly at base almost glabrous above,

stramineous on drying; pinnae about 13 pairs, deeply lobed and margin dentate; sori oblong to hooked, in two rows; spores brown, bilateral, perispore winged (Fig. 1).

It is reported to occur in Bihar (Clarke, 1880), Sikkim (Mehra & Bir, 1964; Bir, 1964), Uttarakhand (Khullar, 2000), Rajasthan (Chadha et al., 2008), Karnataka (Rajagopal & Bhat, 2016) and Maharashtra (Patil et al., 2016). This report is first time from Kolli Hills, Tamil Nadu.

Clarke (1880) first distinguished this species as variety and later elevated at the rank of species by Ching (in Mehra & Bir, 1964). The authors of this report selected a sheet in K (Kew Herbarium) with three fronds as lectotype.

2. *Leptochilus metallicus* (Bedd.) C.Chr., Index Filic. 386. 1906. (Polypodiaceae)

Gymnopteris metallica Bedd. Suppl. Ferns S. India.26 (t. 390). 1876.

Lectotype (designated by Nooteboom, 1997 as “Type”): Sri Lanka. Haycock Hill, R.H. Beddome s.n. (K000959715 image seen).

Additional specimen examined: Tamil Nadu: Kolli Hills, Solakkadu, 1200 m, 22.1.2016, P. Vijayakanth CCSH 360.

Note: *Leptochilus metallicus* (Bedd.) C.Chr. is an endemic species in South India and Sri Lanka; and reported to occur in Kerala (Nampy & Madhusoodanan, 1998). This is the first time report from Kolli Hills, Tamil Nadu.

It shows: long creeping, scaly rhizome; scales lanceolate, dark brown, clathrate; stipe short or absent; fronds dimorphic; sterile frond simple, glabrous, narrow ovate to lanceolate, apex rounded to sub-acute, margin entire, veins anastomosing; fertile frond linear, with long stipe; sori acrostichoid, covering whole lamina except midvein; uniseriate paraphyses present among sporangia (Fig. 2).

It can be easily distinguished from *Leptochilus decurrens* Blume and *Leptochilus thwaitesianus* Fee by uniseriate paraphyses among sporangia. *Leptochilus lanceolatus* Fee also has paraphyses among sporangia (see Nayar et al., 1985). *Leptochilus metallicus* may be a small growth form or variety of *Leptochilus lanceolatus* as indicated by Beddome (1876: 26) and additional data are needed to clarify their relationship.

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Fig. 1: *Athyrium parasnathense* (C.B.Clarke) Ching ex Mehra & Bir from Kollihills, Tamil Nadu.



Fig. 2: *Leptochilus metallicus* (Bedd.) C.Chr. from Kollihills, Tamil Nadu.