

STUDIES ON SOUTH INDIAN FERNS—III: NOTES ON TWO RARE AND LITTLE KNOWN TAXA

1. **Microsorium hymenodes** (Kunze) Ching in Bull. Fam. Mem. Inst. Biol. 4: 295. 1933 & Ic. Fil. Sinicarum 2. Pl. 84. 1934; Bir & Trikha in Bull. bot. Surv. India 10 (2): 133-148. 1968. (POLYPODIACEAE). *Polypodium hymenodes* Kunze in Linnaea 23: 279. 1850; C. Chr. Index Fil. Suppl. 1. 54. 1917. *P. superficiale* var. *semilinearis* Clarke in Trans. Linn. Soc. Lond. II Bot. 1: 558. 1880.

A very rare specimen so far reported only from Himalayas (Bhutan, Nepal and other parts of N. India). *Subramanyam* 10558 collected from Karain Shola, Nilgiri Dt., was misidentified as *Microsorium zippellii* Bl. A critical study revealed it to be *Microsorium hymenodes* (Kunze) Ching and thus this turns out to be a new record for South India. For a detailed description etc. refer Bir & Trikha l.c.

Specimens examined: Karian Shola, Nilgiri Dt., Tamil Nadu, 1300 m, 24th July 1960, K. Subramanyam 10558 (MH).

2. **Doodia dives** Kunze, Bot. Zeit. 144. 1848; Bedd. Ferns S. India t. 229. 1863 & Handb. Ferns Brit. India 137. 1883; C. Chr. Index Fil. 242. 1906. (BLECHNACEAE).

Beddome (1883) reports its occurrence from "Ceylon Hackgalla and the Central

provinces above 4000 ft. elevation also in Java" But subsequently this species was collected from Coonoor and Upper Tiger Shola in the Nilgiris. Apparently, this has not been reported from India and hence its occurrence in South India is of phytogeographical interest.

This fern may be mistaken for some species of *Nephrolepis* in general appearance. However, the lunate sori arranged serially on either side of the costa are very characteristic of this species.

Specimens examined: Coonoor, Nilgiri Dt., Tamil Nadu, 1733 m, 21st January 1957, K. M. Sebastine 2150; Upper Tiger Shola, Nilgiri Dt., Tamil Nadu, 2000 m, 8th December 1957, K. M. Sebastine & A. N. Henry 4836.

ACKNOWLEDGEMENTS

Grateful thanks are due to Dr. J. Joseph, Regional Botanist, Botanical Survey of India, Coimbatore for encouragement and facilities, to Dr. A. N. Henry, Systematic Botanist for helpful suggestions and to Dr. S. S. Bir for confirming the identity of *Microsorium hymenodes* (Kunze) Ching.

P. BHARGAVAN

Botanical Survey of India, Coimbatore

ZYGNEMATACEAE OF EASTERN HIMALAYA—I: SPIROGYRA

During the systematic survey of the algae of Eastern Himalaya, four species of *Spirogyra* have been recorded of which three are new to the Indian subcontinent. The materials were collected from streams and temporary water reserves of Darjeeling and its adjoining areas.

1. **Spirogyra hunanensis** Jao in Sinensia. 11: 297, Pl. 4, Figs. 4-5. 1940.

Vegetative cells $90-100 \times 190-205 \mu$ with plane end walls; chloroplasts 8-10, nearly straight or slightly spiralled; conjugation scalariform, conjugation tubes formed by both gametangia; receptive gametangia $120-130 \mu$ inflated on the conjugating side; zygospore ellipsoidal, $90-100 \times 120-145 \mu$, spore pale yellow, wall reticulate (Figs. 1 & 2).

Specimen no. D/Sp-1.