

LICHENS NEW TO INDIAN FLORA-II

This study adds two more species *Heterodermia lutescens* and *Parmelia spathulata*, collected from Arunachal Pradesh. They are new records for the Indian lichen flora (SINGH, 1980).

Heterodermia lutescens (Kuro.) Follm. *Phillippia*, 2 : 73. 1974.

Anaptychia lutescens Kuro. *J. Jap. Bot.*, 1961, 36, p. 54.

Thallus grey, foliose, lacinate; laciniae elongate, dichotomously branched, ascending; upper surface uneven; lower surface noncorticate, sorediate near the tips of laciniae, partially yellow to pink due to presence of a pigment K-; rhizinae simple and black. Medulla K+yellowish, C-; KC-, P-; TLC- atranorin, zeorin and unidentified substance present, pigmented lower surface K+yellow. Apothecia not seen.

H. lutescens is characterized by the linear elongated laciniae with a yellowish pigment on the lower surface with K- reaction. A closely allied species is *H. usambarensis* (Kuro.) Swins. *et* Krog contains brown-reddish pigment on underside with K- reaction. The species is distributed in tropical and subtropical regions of the world but appears to be scarce in India. It grows in the form of small patches, especially on the nodes of the twigs of shrubs and trees in shady places. It is common at an alt. from 1500-1800 m on hedge material erected for protection of paddy fields along the roadside in Arunachal Pradesh.

Specimen examined—Arunachal Pradesh, Lower Subansiri district, Hapoli-Old Zero road, Singh 473 (ASSAM).

Parmelia spathulata Kurok. *in* Hale & Kurok. *contrib. U. S. Nat. Herb.* 36 : 133. 1964.

Thallus corticolous, occurring in small patches, 1-3 cm in diam., whitish grey, foliose, lobate; lobes adnate, sublinear with small marginal cilia, 1-2 mm wide, isidiate; isidia cylindrical to branched and finally becoming lobulate; upper side plane; lower side black, rhizinate, rhizinae simple. Medulla K-, C+rose, KC+rose, P-; TLC- atranorin and gyrophoric acid present. Apothecia not observed.

P. spathulata is characteristic in its sublinear lobes with lobulate isidia and presence of gyrophoric acid. *Parmelia dissecta* Nyl. is close to this taxon but can be distinguished by its cylindrical isidia which never become lobulate. The occurrence of this South African taxon in Indian region is of great phytogeographical interest. In India it appears to be rare and grows at an alt. ca 1500-1800 m.

Specimen examined—Arunachal Pradesh, Lower Subansiri district. On way to Tazang, 2 Km. from Zero. Singh 598 (ASSAM).

The authors are thankful to the Director and Deputy Director, Botanical Survey of India, Shillong for encouragement and facilities.

REFERENCES

SINGH, K. P. (1980). Lichens new to Indian flora I. *Geophytology*, **10**(2) : 272-274.

K. P. SINGH AND J. NONGKYNRIH
Botanical Survey of India, Shillong-3