



## Research Article

**Two new records of Trypetheliaceae (Lichenized Fungi) from India.**

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**Abstract:** Two lichen species namely, *Astrobelium interjectum* R.C. Harris and *Trypethelium xanthoplatystomum* Flakus & Aptroot of the family Trypetheliaceae are reported here as new distributional records for India.

**Keywords:** *Astrobelium*, Kandhamal, Lichenized Ascomycota, Odisha, *Trypethelium*

**Introduction**

As part of the studies on Odisha lichens, the lichen specimens from Odisha state housed at CAL were studied by the author. Critical study resulted in identification of two species of Trypetheliaceae viz., *Astrobelium interjectum* R.C. Harris and *Trypethelium xanthoplatystomum* Flakus & Aptroot, which were not hitherto reported from India. Therefore, the two species are reported here as new distributional records for the country. The descriptions and illustrations are given to facilitate their identification.

Trypetheliaceae is a highly diverse family of crustose lichens. The family comprises 418 species spread over 15 genera (Aptroot & Lücking, 2016), which mostly occur in the tropics.

In the Indian context, the family Trypetheliaceae is one of the largest families of lichenized fungi found in India. A total of 68 species in 10 genera have been reported from the country by Awasthi, 1965;

Upreti & Singh, 1987; Makhija & Patwardhan 1988, 1990, 1993; Jagadeesh Ram *et al.*, 2005; Upreti & Nayaka, 2006; Lücking *et al.*, 2016; Ingle *et al.*, 2017; Niranjana & Sarma, 2018.

**Materials and Methods**

Morphological examination of the specimen was carried out under a stereo zoom microscope (Nikon SMZ 1500), while anatomical characters were examined under a compound microscope (Magnus MLX-Tr). The lichen chemicals were investigated with Thin Layer Chromatography (TLC) in solvent system A, following White & James (1985). The spot tests were performed with the usual chemical reagents Kand P. The lichen specimen was also examined under UV light (365 nm).

**New Records**

*Astrobelium interjectum* R.C. Harris, Acta Amazon., Supl. 14(1-2): 61 (1986) [1984]. (Fig. 1)

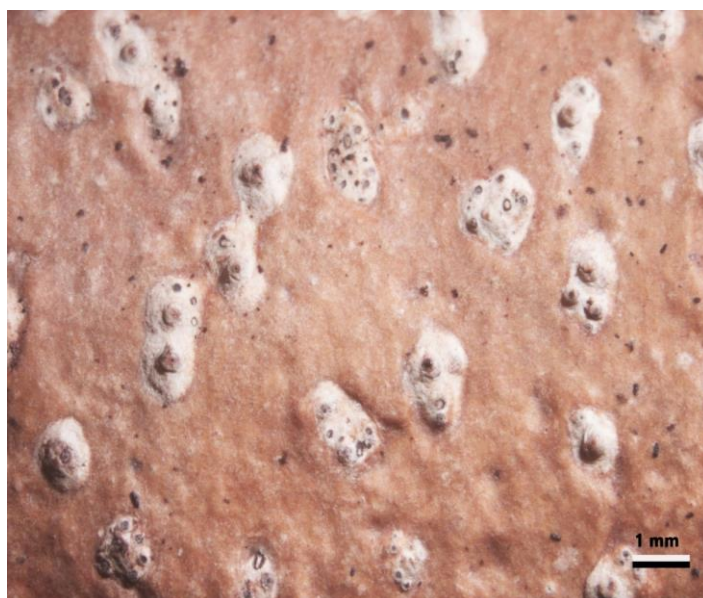


Figure 1. *Astrobelium interjectum*

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**Description:** Thallus corticolous, corticate, fawn to pale brown, smooth to uneven. Ascomata perithecia, fused, immersed in pseudostroma. Ostioles fused, eccentric. Pseudostromata creamy, 1–5 mm diam., globose to irregular, raised above

the thallus. Hamathecium hyaline, clear. Ascospores 8 per ascus, ellipsoid-oblong, transversely 3 septate, lumina diamond shaped, 22–28 × 6–10 µm, hyaline, I–.

**Chemistry:** Thallus K–, P–, UV–; pseudostromata UV+ yellow; lichexanthone detected by TLC.

**Distribution:** This species was previously reported from Brazil, Costa Rica, Colombia, Guyana, Papua New Guinea. It is reported here from India.

**Specimen examined:** India, Odisha, Kandhamal district, Oct. 1997, *Probal Baske* 71390 (CAL).

*Trypethelium xanthoplatystomum* Flakus & Aptroot, in Flakus, Kukwa & Aptroot, *Lichenologist* 48(6): 686 (2016). (Fig. 2)



Figure 2. *Trypethelium xanthoplatystomum*

**Description:** Thallus corticolous, corticate, fawn to reddish brown, glossy, uneven, continuous. Ascomata perithecia, aggregated, immersed in pseudostroma. Ostiole apical, not fused, black. Pseudostromata raised above the thallus, golden yellow, irregular, 1.5–6 × 1–5 mm. Hamathecium hyaline, clear. Ascospores 8 per ascus, fusiform, rounded at ends, transversely 7–14 septate, 36–60 × 7–12 µm, hyaline, I–.

**Chemistry:** Thallus K–, P–, UV+ yellow; pseudostromata UV+ dark yellow - orange, K+ reddish purple; lichexanthone, parietin and brownish grey spot (Rf class 4.1) detected by TLC.

**Distribution:** This species was previously known from Bolivia. It is now reported here from India.

**Specimen examined:** India, Odisha, Kandhamal district, Guma PRF, Manapur village, 20 Oct. 1997, *Probal Baske* 71339 (CAL).

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