
Thelenella terricola, a new saprobic ascomycete from upland Papua New Guinea

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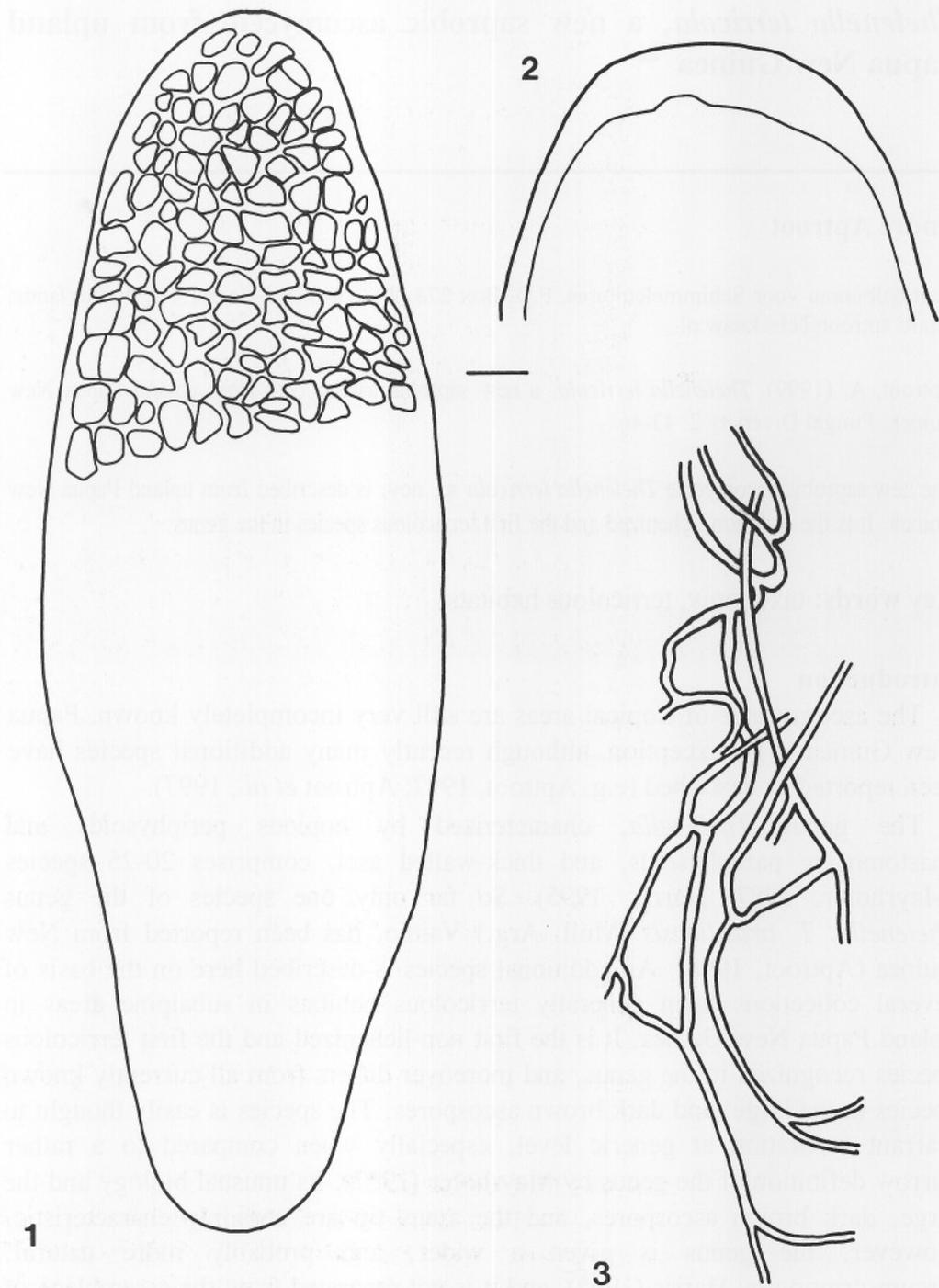
The new saprobic ascomycete *Thelenella terricola* sp. nov. is described from upland Papua New Guinea. It is the first non-lichenized and the first terricolous species in the genus.

Key words: taxonomy, terricolous habitats.

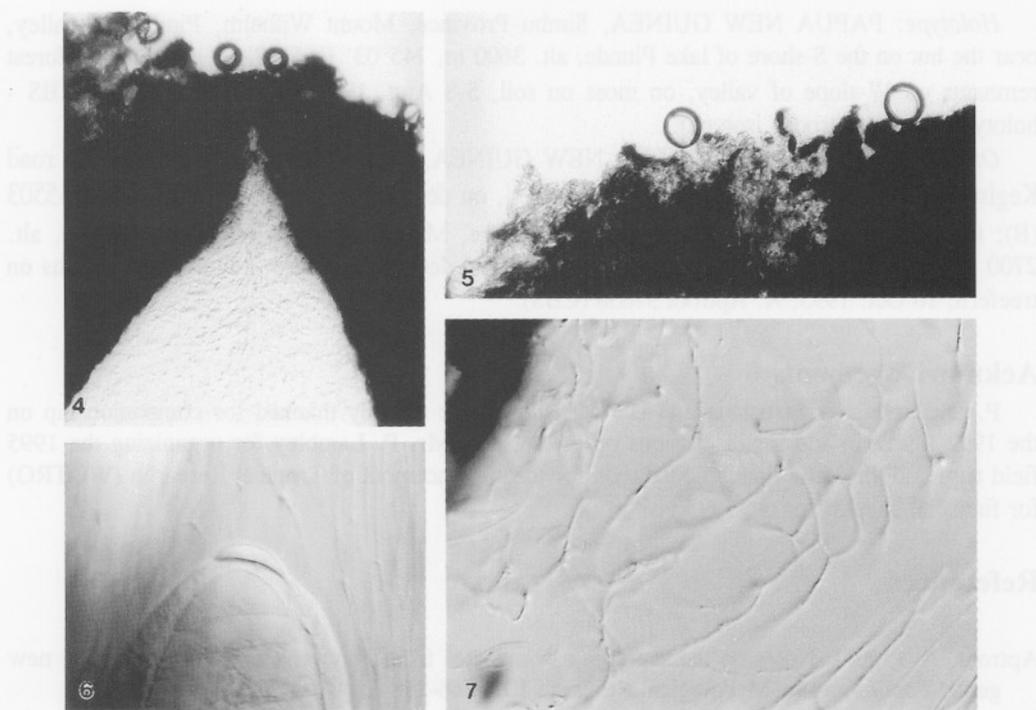
Introduction

The ascomycetes of tropical areas are still very incompletely known. Papua New Guinea is no exception, although recently many additional species have been reported or described (e.g. Aptroot, 1997; Aptroot *et al.*, 1997).

The genus *Thelenella*, characterized by copious periphysoids and anastomosing paraphysoids, and thick-walled asci, comprises 20-25 species (Mayrhofer, 1987; Harris, 1995). So far only one species of the genus *Thelenella*, *T. brasiliensis* (Müll. Arg.) Vainio, has been reported from New Guinea (Aptroot, 1998). An additional species is described here on the basis of several collections from generally terricolous habitats in subalpine areas in upland Papua New Guinea. It is the first non-lichenized and the first terricolous species recognized in the genus, and moreover differs from all currently known species in the large, and dark brown ascospores. The species is easily thought to warrant separation at generic level, especially when compared to a rather narrow definition of the genus by Mayrhofer (1987). Its unusual biology and the large, dark brown ascospores, and the ascus tip are certainly characteristic. However, the genus is given a wider, and probably more natural, circumscription by Harris (1995), and it is not separated from the assemblage of species treated by him by even one hard character.



Figs. 1-3. *Thelenella terricola* (from holotype). 1. Ascospore. 2. Ascus tip. 3. Paraphysoids. Bar = 10 μ m.



Figs. 4-7. *Thelenella terricola* (Aptroot 37658). 4. Ostiole with periphysoids. 5. Thallus with cartilaginous upper layer. 6. Young ascus tip with immature ascospore. 7. Paraphysoids. Bars: 4-6 = 40 μm , 7 = 10 μm .

Taxonomy

Thelenella terricola Aptroot, sp. nov.

(Figs. 1-7)

Thallus albido-cinereus, non lichenisatus, supra cartilaginea, hypothallo cinereo circumcincta. *Ascomata* perithecioida, immersa, nigra. *Asci* monospori. *Ascospores* muriformae, brunneae, juveniliter amyloideis.

Thallus always present, continuous, whitish grey, not lichenized, at least not constantly associated with one algal species, rather saprobic on algae and/or mosses and/or detritus, covered by a hyaline, cartilaginous layer, with dark grey hypothallus. *Ascomata* perithecioid, 0.4-0.7 mm, immersed in the substratum, black but mostly covered by the cartilaginous layer of the thallus, globose to pyriform. *Ascoma* wall carbonized, 0.1 mm thick, without involucrellum, without IKI- or KOH-reactions. *Ostiole* erumpent, black, with periphysoids and paraphysoids. *Hamathecium* not inspersed, paraphysoids anastomosing, 1 μm thick, without IKI- or KOH-reactions. *Asci* dextrinoid (IKI+ redbrown), with 15 μm thick wall. *Ascospores* 1/ascus, muriform, distoseptate, young colourless and IKI+ blue, old dark brown, 175-230 \times 55-70 μm .

Holotype: PAPUA NEW GUINEA, Simbu Province, Mount Wilhelm, Pindaunde valley, near the hut on the S-shore of lake Piunde, alt. 3600 m, 145°03' E, 5°47' S, in subalpine forest remnants on W-slope of valley, on moss on soil, 5-8 Aug. 1992, A. Aptroot 32649 (CBS - holotype; herb. Aptroot - isotype).

Other materials examined: PAPUA NEW GUINEA, Simbu Province, Bundi Gap on road Keglsugl-Bundi, alt. 2800 m' 145°09' E, 5°48' S, on detritus, 4 Aug. 1992, H. Sipman 35503 (B); *ibid.*, Northern Province, Owen Stanley Range, Myola, ca 3 km NE of guesthouse, alt. 2700 m, 147°47' E, 9°08' S, in treefern grassland in deep valley (frost hollow), on detritus on treefern, 16 Oct. 1995, A. Aptroot 37658 (CBS).

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References

- Aptroot, A. (1997). Notes on the saprobic ascomycetes from Papua New Guinea, with the new genus *Papilionovela*. *Mycological Research* 101: 266-268.
- Aptroot, A. (1998). New lichens and lichen records from Papua New Guinea, with the description of *Crustospathula*, a new genus in the Bacidiaceae. *Tropical Bryology* 14: 25-34.
- Aptroot, A., Diederich, P., Sérusiaux E. and Sipman, H.J.M. (1997). Lichens and lichenicolous fungi from New Guinea. *Bibliotheca Lichenologica* 64: 1-239.
- Harris, R.C. (1995). *More Florida lichens*. New York, published by the author.
- Mayrhofer, H. (1987). Monographie der Flechtengattung *Thelenella*. *Bibliotheca Lichenologica* 26: 1-106.