A NEW SPECIES OF POLYMERIDİUM (TRYPETHELIACEÆ) NON-LİCHENİZED ASCOMYČETES FROM THE MACROSİSTEMA İBERÁ, CORRIENTES, ARGENTİNA

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Summary

The species *Polymeridium bambusicola* Aptroot & Ferraro (Trypetheliaceae) is described as new to science. It was collected on a woody grass (*Poaceae, Bambusoideae*) from the Macrosistema Iberá in Corrientes (Argentina). Although most species of the family *Trypetheliaceae* are lichens, this is a non-lichenized Ascomycete, as are several other species of *Polymeridium*.

Key words: *Polymeridium*, taxonomy, Macrosistema Iberá, Corrientes, Argentina, non-lichenized, *Trypetheliaceae*.

Introducción

The genus *Polymeridium* is a small genus of Ascomycetes in the family *Trypetheliaceae*. It was resurrected by Harris (in Tucker & Harris, 1980) and subsequently monographed by him (Harris, 1993), with 19 accepted species. Only one additional species has been described since, viz. *Polymeridium campylothelioides* Aptroot & Sipman (Aptroot et al., 1995). In contrast to the rest of the family, which comprises nearly only lichenized species, the genus *Polymeridium* accommodates lichenized and non-lichenized species.

In 1998, in the Macrosistema Iberá in the Corrientes province of Argentina, a non-lichenized fungus was found on the smooth stems of a woody grass (*Poaceae, Bambusoideae*). It was at first thought to belong to the genus *Blastodesmia*, but it was recognized as a species of the genus *Polymeridium*. The species is characterized by 2 µm wide, anastomosing para-physoids and distoseptate, hyaline, when mature 13-17-septate ascospores of c. 90 x 10 µm. As no species with these characters is currently known, the species is described as new to science below.

The descriptions of a new species to science stresses moreover the international importance of the Macrosistema Iberá. The Iberá system is
an extended sedimentary marshy area in the centre of Corrientes Province (Argentina) and spreads from NE to SE. It is periodically flooded. The estimated area is 8900 Km square. It is part of a large and complex water system with open water an interconnected waterlogged areas. The vegetation is predominantly aquatic. Communities of floating plants are present along the borders of lakes and ponds. On the islands there are Erythrina (Fabaceae) plants, tall grasses and riverine forest. The highest spots harbour forest and a kind of bamboo plants.

Mean annual rainfall is 1250 mm and potential evaporation is 1040 mm (Carnevali, 1994).

Material and methods

Type materials of the species has been preserved in ABL and CTES. Mounts in water have been observed with an OLYMPUS BX50 microscope.

Results

Polymeridium bambusicola Aptroot & Ferraro sp. nov.

Fungus non-lichenisatus ad genus Polymeridium (Trypetheliaceae) pertinens. Ascomata superficialia supra cortices Poaceae, Bambusoideae, paraphysoides anastomosantes continentes. Ascosporis 13-17-distoseptatis, 85-105 x 7-10 μm, clavatis.

Fig. 1. Polymeridium bambusicola. Del. L. I. Ferraro (Holotyпус). A, general habit; B, ascus with spores; C, mature spores.
Thallus non-lichenized, only indicated by a greyish stain on the cortex of the woody grass, undelimited, containing of a hyaline hyphal mat cathing assorted algae and fungal spores. Ascomata dispersed, superficial, glossy black, lens-shaped, 0.4-1.0 mm diam. wall densely carbonized. Ostiole central, depressed, 100-200 μm diam. brown to blackish. Hamathecium hyaline, paraphysoids copious, c. 2 μm wide, richly anastomosing, in gel. Ascii clavate, thick-walled, with a thickened apex and a tiny (c. 1-2 μm wide) ocular chamber, c. 120-150 x 20-30 μm, with 8 irregularly arranged ascospores. Ascospores distoseptate, hyaline to pale brownish (when old), 13-17-septate, 85-105 x 9-12.5 μm when mature, clavate to clavate-fusiform, with rounded lumina, usually with rounded upper ends and somewhat pointed lower ends, lumina broader than long, except for the lowermost lumina, without surrounding gelatinous sheath. Pycnidia present, dispersed among the ascomata, black, lens-shaped, wall distinctly bluish black. Conidia not observed.

Discussion

The new species fits the genus Polymeridium perfectly, because of the densely carbonized, robust ascomata with relatively wide, anastomosing paraphysoids and distoseptate, hyaline ascospores. No other genus in the lichenized or non-lichenized ascomycetes shares this combination of characters. The species differs, however, from all currently known species accepted in the genus by the many transverse septa in the ascospores. All other known species of Polymeridium have either a most 12 transverse septa (most species have only 3-septate spores), or longitudinal septa in addition to the transverse septa, with the resulting submuriform to muriform ascospores septation. The ascospores are also longer than any known in the genus: Polymeridium campylothelioides has the longest ascospores so far known in the genus (up to 80 μm), but these are muriform and much wider (17-25 μm), and therefore not clavate-fusiform, but rather ellipsoid.

References