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Xylomyces acerosisporus sp. nov. from submerged leaves from Brazil

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Abstract — A new species, *Xylomyces acerosisporus*, collected on submerged decaying leaves in a river in the Brazilian Atlantic Forest, is described and illustrated. It is distinguished by filiform to acerose, 7–15-septate, brown, catenate, smooth chlamydospores.

Key words — freshwater fungi, asexual fungi, taxonomy

Introduction

Xylomyces Goos et al. (Goos et al. 1977, Castañeda-Ruiz & Kendrick 1990, Goh et al 1997, Kohlmeyer & Volkmann-Kohlmeyer 1998, Hyde & Goh 1999) is distinguished by multiseptate, cylindrical to fusiform, solitary or catenate, intercalary or terminal, brown to dark brown chlamydospores that resemble phragmoconidia but in which the conidial ontogeny is neither blastic nor thallic-arthric (Kendrick 1971). A fungus found on decaying leaves submerged in a river in Brazil is described here as a new species of *Xylomyces*.

Materials & methods

During an expedition in November 2014 through "Rio Formoso, Reserva Biologica de Saltinho," Pernambuco State, in the Atlantic Forest of Brazil, samples of submerged decaying leaves were stored in sterile glass jars with water from the site, taken to the

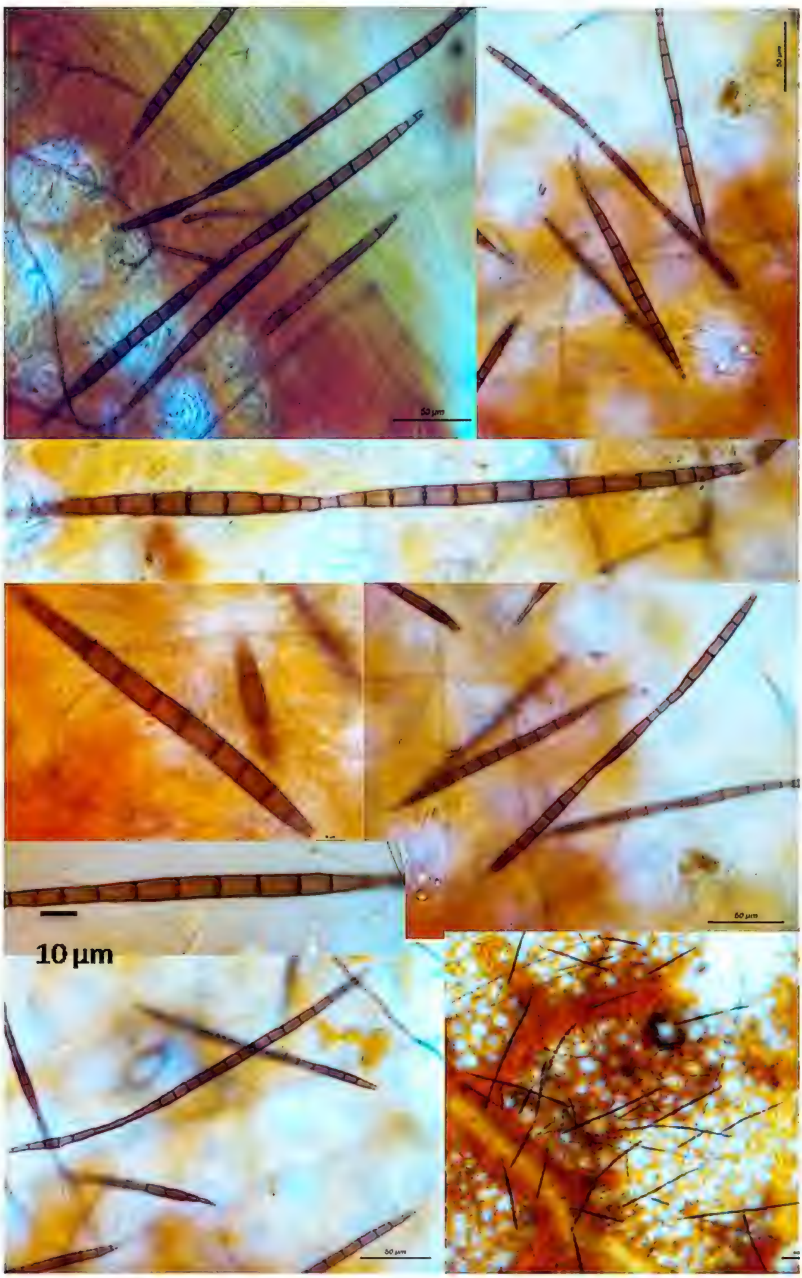

Fig.1. *Xylomyces acerosisporus* (ex holotype, URM 87587).
Colonies and chlamydospores on the natural substrate.

laboratory and treated according to Ingold (1975) and Schoenlein-Crusius & Milanez (1989). The colonized leaves were sectioned by hand with ophthalmic micro-surgical blades (Shreeji Micro Systems Inc., Indiamar Company), washed with 4% KOH for 5–10 min., then washed twice with sterile distilled water. Mounts were prepared in PVL (polyvinyl alcohol and lactic acid) and measurements made at a magnification of ×1000. Photomicrographs were obtained with a Nikon microscope with bright field optics. The holotype was deposited in the Herbarium of Universidade Federal de Pernambuco, Recife, Brazil (URM).

Taxonomy

Xylomyces acerosisporus M.S. Oliveira, Malosso & R.F. Castañeda, **sp. nov.** Fig. 1

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Differs from *Xylomyces giganteus* and *X. rhizophorae* by its smaller chlamydospores with fewer septa and from *X. foliicola* by its cylindrical to acerose (occasionally narrowly fusiform) chlamydospores that tend to have more septa.

Type: Brazil, Pernambuco, Rio Formoso, Reserva Biologica de Saltinho, 8°43′S 35°11′W, on submerged decaying leaves of an unidentified plant in the Formoso River, 13 November 2014, coll. M.S. Oliveira (**Holotype**: URM87587).

Etymology: Latin, *acerosus* (acerose; needle-like, with tapering ends) + *sporus* (spore), referring to the chlamydospore shape..

Colonies on the natural substrate spreading, amphigenous, funiculose, brown. Mycelium superficial, composed of septate, branched, brown to dark brown, smooth hyphae, 2–3.5µm diam. Chlamydospores filiform to acerose, occasionally narrowly fusiform straight, intercalary and terminal, catenate, rarely solitary, unbranched, 7–15-septate, brown, dark brown at the septa, 95–180 × 8–10 µm, smooth.

Note: *Xylomyces acerosisporus* is superficially similar to *X. foliicola* W.B. Kendr. & R.F. Castañeda, *X. giganteus* Goh et al., and *X. rhizophorae* Kohlm. & Volkm.-Kohlm. However, *X. foliicola* has intercalary, fusiform, 4–11-septate (mostly 11-) concolorous brown chlamydospores, 126–152 × 7–9 µm (Castañeda-Ruiz & Kendrick 1990); *X. giganteus* has 6–26-septate, yellowish brown to medium brown straight or curved chlamydospores (constricted at the septa and with irregular longitudinal striations), 140–575 × 25–50 µm (Goh et al 1997); and *X. rhizophorae* has straight or curved, concolorous dark brown chlamydospores that are 11–43(–64)-septate (rarely with longitudinal or oblique septa, mostly widest at the tips and tapered toward the base, constricted at some septa), 95–370(–500) × 9–16 µm (Kohlmeyer &Volkmann-Kohlmeyer 1998).

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