

New Xylariaceae taxa from Brazil

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Taxonomic studies of xylariaceous fungi from Brazil revealed the following new taxa: *Kretzschmaria aspinifera* sp. nov., *Stilbohypoxyton quisquiliarum* var. *microsporium* var. nov., and *Xylaria papulis* var. *microspora* var. nov.

Keywords: *Kretzschmaria*, *Stilbohypoxyton*, *Xylaria*.

The latest taxonomic studies of *Kretzschmaria*, *Stilbohypoxyton* and *Xylaria* including Brazilian species were published by Rogers & Ju (1997, 1998), Petrini (2004), Pereira *et al.* (2008), and Trierveiller-Pereira *et al.* (2009).

In this work we present a contribution to the knowledge of Brazilian Xylariaceae, proposing one new species and two new varieties.

Materials and Methods

Between 2007 to 2009, specimens of xylariaceous fungi were collected in areas of Atlantic Rain Forest in States of Bahia and Pernambuco, Brazil. The teleomorphs were analyzed according to Ju & Rogers (1999) and Rogers & Ju (1997, 1998). The types were deposited in herbarium WSP and the descriptions registered in the MycoBank.

Taxonomy

Kretzschmaria aspinifera Jad. Pereira, J. D. Rogers & J. L. Bezerra, sp. nov. – Figs. 1–3.

MycoBank no.: MB 515353

Stromata superficialia, erumpentia, solitaria, capitulis globosa, constipata, 2–2.5 mm diam; stipites 2 mm longi, 1.5 mm crassi, ramosus vel non ramosus; superficies rimulosa, brunnea cum textura alba, peritheciis cingentibus; texture carbonacea. Perithecia spherica, 2–4 per capitulum, 0.8–1 mm diam. Ostiola leviter papilla-

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ta. Asci octospori, 247–252 μm longitudine tota, 9 μm crassi ubi uniseriati et 12 μm ubi biseriati, partibus sporiferis 147–153 μm longitudine, annulo apicali in liquore iodato Melzeri cyanescente, urniformi, 5.5–6 μm alto, 4.5–5 μm lato. Ascosporae brunneae, naviculiformales cum apicibus angustatis, levis, 26.5–31 \times 6.5–8 μm (n = 20), rima germinativa minus quam spora integra.

A *Kretzschmaria micropodi* differt in dimensione ascosporarum 26.5–31 \times 6.5–8 μm et in spinis destitutis et a *K. argentinensi* et *K. orientali* in dimensionibus ascosporarum.

Stromata superficial, erumpent, solitary or gregarious, with globose head, crowded, 2–2.5 mm diam; stipes 2 mm long \times 0.5–1.5 mm thick, branched or not; surface finely cracked, brown with white tissue surrounding perithecial layer; texture carbonaceous. Perithecia spherical, 2–4 per head, 0.8–1 mm diam. Ostioles slightly papillate. Asci 8-spored, 247–252 μm total length \times 9 μm broad where uniseriate and 12 μm where biseriate, spore-bearing part 147–153 μm long, with the apical ring bluing in Melzer's iodine reagent, urn-shaped, 5.5–6 μm high, 4.5–5 μm broad. Ascospores brown, navicular with narrow ends, smooth, 26.5–31 \times 6.5–8 μm (n = 20), with straight germ slit shorter than spore-length.

Etymology. – From the stroma that lacks spines.

Habitat or Host plant. – On decayed unidentified dicotyledonous wood.

Distribution. – Known only from type location in Brazil.

Material examined. – BRAZIL, Bahia, Una, Una Ecopark, (15°10'12"S and 39°03'12"W, 59m alt.), on unidentified dead tree, 16 Aug 2008, *leg.* Jad. Pereira, det. Jad. Pereira & J. D. Rogers, WSP 71637, holotype.

Kretzschmaria aspinifera differs from other stipitate species by its globose stromata, by its ascospore size (26.5–31 \times 6.5–8 μm) and by lacking spines and conical ostioles, as in *K. micropus* (Fr.) Sacc. It likewise resembles *K. argentinensis* A.I. Hladki & A.I. Romero, but differs primarily in its smaller ascospores. It also seems close to *K. orientalis* L.N. Vasilyeva, differing in narrower ascospores and larger asci (Vasilyeva, personal communication).

Stilbohypoxyton quisquiliarum (Mont.) J. D. Rogers & Y.-M. Ju **var. microsporum** Jad. Pereira, J. D. Rogers & J. L. Bezerra, **var. nov.** – Figs. 4–6.

MycoBank no.: MB 515354

A varietate typica differt in dimensione ascosporarum 20–25 \times 8–10.5 (11) μm .

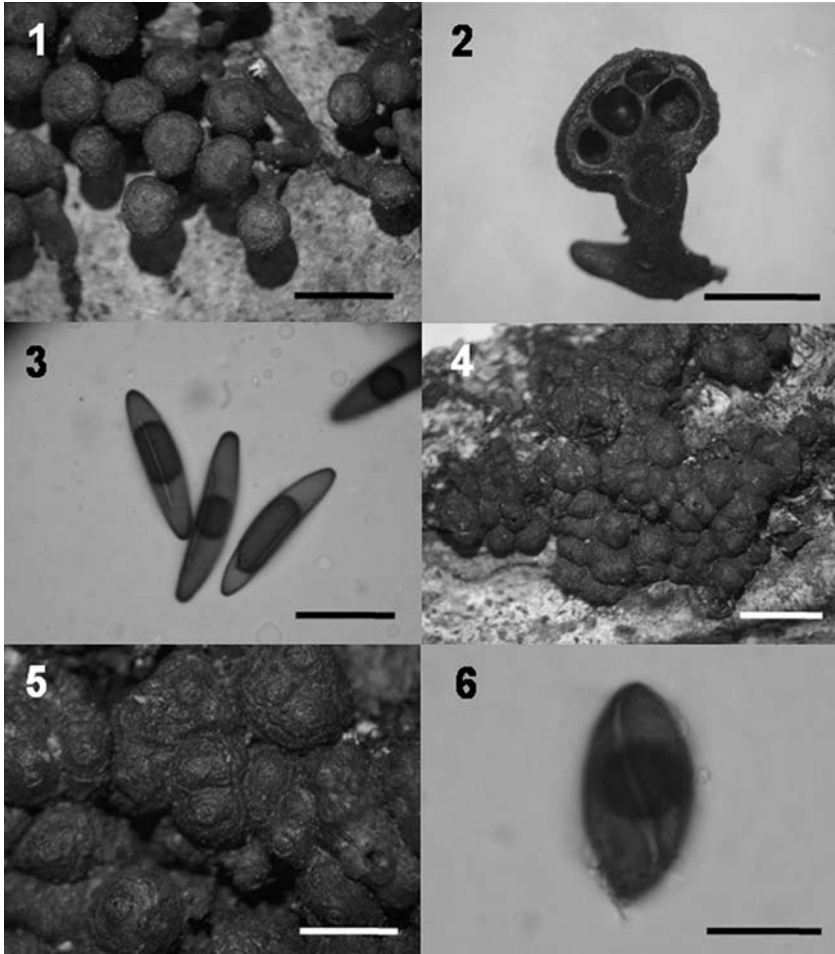
Stromata perithecioid, globose to semiglobose, 0.8–1.4 mm diam, isolated or gregarious, erumpent from bark, with surface rugose to sulcate, carbonaceous; surface brown to dark brown at maturity, inside black; base of stromata white. Perithecia black, spherical to subglobose, 0.6–0.8 mm diam, 1 to 8 per stroma. Ostioles papillate, eventually

with ostiolar discs on upper surface. Asci not observed. Ascospores brown to dark brown, unicellular, ellipsoid-inequilateral, with narrowly rounded ends, $20\text{--}25 \times 8\text{--}10.5$ (-11) μm ($n = 20$), with conspicuous spiral germ slit on more flattened side. Anamorph unknown.

Etymology.—Referring to the smaller ascospores.

Habitat or Host plant.—On decayed unidentified dicotyledonous wood.

Distribution.—Known only from type location in Brazil.



Figs. 1–6. *Kretzschmaria aspinifera* and *Stilbohypoxylon quisquiliarum* var. *microsporum*: 1–3. *Kretzschmaria aspinifera*. 1. Stromata (upper view). 2. Vertical section of stroma showing perithecia. 3. Ascospores with a conspicuous straight germ slit shorter than spore-length. 4–6. *Stilbohypoxylon quisquiliarum* var. *microsporum*. 4. Stromata. 5. View of perithecia in stroma. 6. Ascospore with spiral germ slit. Bars: 1: 5 mm; 2, 4: 2 mm; 3: 20 μm ; 5: 1 mm; 6: 10 μm .

Material examined. – BRAZIL, Bahia, Jussari, Particular Reservation of Natural Patrimony “Serra do Teimoso”, (15°09'19”S and 39°31'40”W, 275m alt.), in bark of dead wood, 07 Nov 2006, leg. Jad. Pereira, det. Jad. Pereira & J. D. Rogers, WSP 71636, holotype.

Stilbohypoxyton quisquiliarum var. *microsporum* differs from its type variety by having smaller ascospores (20–25 × 8–11 µm), and by having more perithecia in each stroma (up to eight). Miller (1961) examined *S. quisquiliarum* specimens from Brazil (as *Hypoxyton chionostomum* Speg.), but not from the Northeastern region. These specimens had larger ascospores (25–33 × 13–17 µm).

Xylaria papulis* Lloyd var. *microspora Jad. Pereira, J. D. Rogers & J. L. Bezerra, var. nov. – Figs. 7–10.
Mycobank no.: MB 515355

A varietate typica differt in dimensione ascosporarum 7–9 × 4–4.5 µm.

Stromata upright, clavate on short concolorous stipe, up to 3 cm high × 6 mm broad, unbranched; texture brittle; surface dull black, hollow; interior cream, desintegrating at maturity. Perithecia black, spherical to obovoid, 0.3–0.6 mm diam × 0.3–0.7 mm high. Ostioles papillate within small shallow discs. Asci with eight ascospores arranged in uniseriate manner, cylindrical, 125 µm total length by 8 µm broad, the spore-bearing parts 56–59 µm long, the stipes 65–70 µm long, with the apical ring staining blue in Melzer’s iodine reagent, 0.8–1 mm high × 1–1.5 mm broad. Ascospores dark brown, unicellular, inequilateral to broad fusoid (football-shaped), 7–9 × 4–4.5 µm (n = 20), with a germ slit indistinct, probably long; epispore smooth.

Etymology.—Referring to the smaller ascospores.

Habitat or Host plant. – On decayed unidentified dicotyledonous wood.

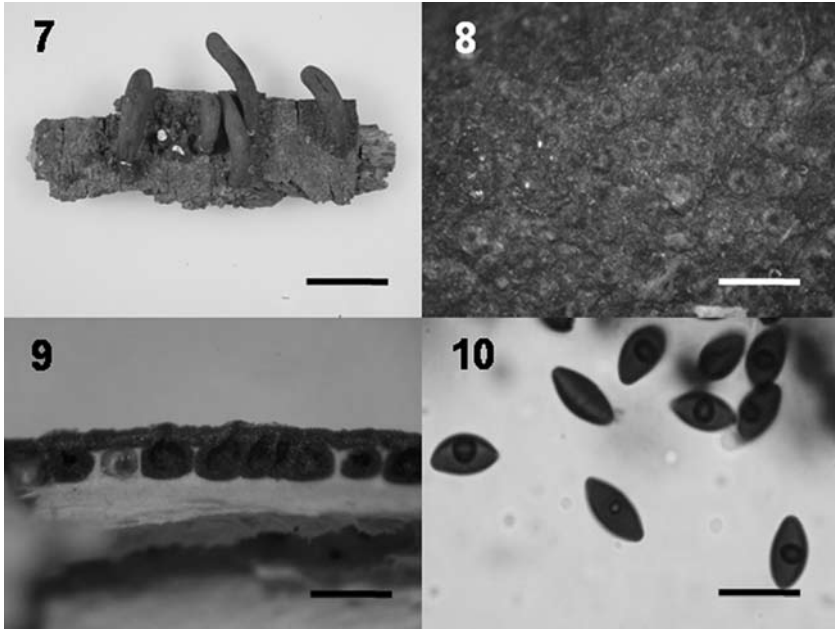
Distribution. – Known only from type location in Brazil.

Material examined. – BRAZIL, Pernambuco, Moreno, Particular Reservation of Natural Patrimony “Fazenda Santa Beatriz do Carnijó”, (08°08'39”S and 35°04'35”W, 120m alt.), in dead wood, 13 May 2008, leg. Jad. Pereira, det. Jad. Pereira & J. D. Rogers, WSP 71635, holotype.

Xylaria papulis var. *microspora* differs from the type variety by its smaller ascospores (7–9 × 4–4.5 µm). It seems to be related to *X. adscendens* (Fr.) Fr. due to its smooth surface with ostioles in the center of shallow discs. Unfortunately, it could not be cultured.

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Figs. 7–10. *Xylaria papulis* var. *microspora*. **7.** Stromata on wood. **8.** Stromatal surface showing papillate ostioles at the center of small discs. **9.** Perithecia in vertical section of stroma. **10.** Ascospores with an indistinct germ slit. Bars: 7: 20 mm; 8: 0.2 mm; 9: 1 mm; 10: 10 μ m.

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