

Xylaria (Xylariaceae,
Ascomycota) in the Parque Estadual de São Camilo,
Paraná, Brazil

Xylaria (Xylariaceae,
Ascomycota) no Parque Estadual de São Camilo,
Paraná, Brasil

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Xylaria is the type genus of *Xylariaceae* (STADLER *et al.*, 2013). *Xylaria* species produce dark carbonaceous stromata, perithecial ascomata, cylindrical asci with an apical ring and pigmented ascospores with a germ slit (ROGERS & SAMUELS, 1986). Members of *Xylaria* grow mainly on wood, but also on litter, fruits, dead palm leaves, seeds, dung and even on ant nests (HSIEH *et al.*, 2010; ROGERS *et al.*, 2005).

Xylaria species are widely distributed in tropical, subtropical and also in temperate zones (ROGERS *et al.*, 2005). In Brazil, many taxa has been described or reported – for an historical summary of the knowledge about *Xylaria* in Brazil see TRIERVEILER-PEREIRA *et al.* (2009). From the State of Paraná 22 species of *Xylaria* were reported by (MEIJER, 2006) especially in Curitiba and Coastal regions of the State.

In order to improve the knowledge about *Xylariaceae* from Western region of Paraná State, a survey of the family was carried (CRUZ & CORTEZ, 2015), and in this contribution are presented the results dealing with the genus *Xylaria*.

MATERIAL AND METHODS

Specimens were gathered from April/2013 and March/2014, in the São Camilo State Park (abbreviated as PESC), municipality of Palotina, Western region of Paraná State, South Brazil. PESC is situated between

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coordinates 24°18'00"-24°19'30" S and 53°53'30"-53°55'30" W, comprising 385.34 ha belonging seasonal semi-deciduous forest (IAP, 2006; VELOSO *et al.*, 1991).

Specimens were examined following standard procedures for xylariaceous fungi. Micromorphological features were measured based on distilled water preparations; asci were observed in Cotton Blue, except for the apical ring, examined on Melzer's reagent. Ascospores were analyzed under scanning electron microscopy (SEM) Jeol JSM-6360LV, at the Center of Electron Microscopy (CME) of the Paraná University, following Suwannasai *et al.* (2012). All specimens are preserved at the Herbarium of Palotina Campus (HCP) and holotype at the Herbarium of the National Botanic Department of the Paraná University (UPCB).

RESULTS AND DISCUSSION

Xylaria cubensis (Mont.) Fr.

N. Acta R. Soc. Sci. Upsal. 1: 126, 1851.

(Figs. 1a–b, 4a)

Stromata unbranched, cylindric-clavate, sometimes flattened, with rounded fertile apex, 10–50 mm total length, fertile portion 12–35 × 3–20 mm, stipe from reddish tomentose base or simple, 5–25 × 2–9 mm. Texture hard to soft. Surface smooth to slightly rough, externally brown to dark brown, entostroma white, becoming hollow. Perithecia subglobose, 0.5–0.8 mm diam. Ostioles conic-papillate. Asci cylindrical, 113–217 × 7–10 µm, spore-bearing parts 67–87 µm, stipes 47–126 µm; apical ring amyloid, rectangular, 1–2.3 × 1.4–1.8 µm. Ascospores brown to dark brown, obliquely to ellipsoid-inequilateral, 8–10.5 × 4–5 µm, usually without germ slit; surface smooth under SEM.

EXAMINED MATERIAL — Brazil, PARANÁ: Palotina, PESC, 13/VI/2013, K.S. Cruz 89, 83, 93 (HCP 546, 547, 548); 02/VII/2013, K.S. Cruz 125, 123 (HCP 549, 550); 20/I/2014, K.S. Cruz 189 (HCP 551).

GEOGRAPHICAL DISTRIBUTION — Americas (BEUG *et al.*, 2014; HLADKI & ROMERO, 2010), Asia, Africa, and Oceania (STADLER *et al.*, 2008; VAN DER GUCHT, 1995).

NOTES — *Xylaria cubensis* has typical smooth stromata and small, dark brown ascospores without a germ slit (ROGERS, 1984). HAMME & GUERRERO (2002) noted differences in the cultured mycelium of some Brazilian specimens and discussed taxonomic problems in the *X. cubensis* complex. It causes a white rot of wood, but can be associated with an endophyte tropical palms (ROGERS, 1984). The studied specimens were growing on rotting wood.

Xylaria curta Fr.

N. Acta R. Soc. Sci. Upsal. 1: 126, 1851.

(Figs. 1c–d, 4b)

Stromata unbranched, cylindrical-clavate, with rounded fertile apex, 21–29 mm total length, fertile portion 15–27 × 5–7 mm, stipes 2–6 × 2 mm. Texture hard. Surface rough, with whitish to yellowish squamules, externally brown to dark brown, entostroma white, becoming hollow in mature. Perithecia subglobose, 0.3–0.5 mm diam. Ostioles papillate, surrounded by a black disc. Asci cylindrical, 123–189 × 5–7 µm, spore-bearing parts 66–83 µm, stipes 47–115 µm; apical ring amyloid, rectangular, 1.5–2 × 1.4–2 µm. Ascospores brown, oblique to ellipsoid-inequilateral, 7–10 × 3–4 µm, with a straight germ slit less than the spore-length; surface smooth under SEM.

EXAMINED MATERIAL—Brazil, PARANÁ: Palotina, PESC, 13/VI/2013, K.S. Cruz 90 (HCP 542); 10/IX/2013, K.S. Cruz 10 (HCP 543); 13/XII/2013, K.S. Cruz 177 (HCP 544); 25/III/2014, K.S. Cruz 226 (HCP 545).

GEOGRAPHICAL DISTRIBUTION — Americas (HAMME & GUERRERO 2002; HLADKI & ROMERO, 2010; STADLER *et al.*, 2008), Africa, Asia and Oceania (VAN DER GUCHT, 1995).

NOTES — According to HAMME & GUERRERO (2002), Brazilian specimens of *X. curta* are very variable in size and shape of the stroma, color and presence of whitish to yellowish squamules. DENNIS (1956) stated that this species has similar developmental stages to *X. feejeensis* and by this reason they are commonly get confused. *X. curta* has been collected on roots and trunks of rotting trees of *Luehea divaricata* Mart. (HAMME & GUERRERO, 2002). Our specimens were collected in rotting wood. This species is a new record from Paraná.

Xylaria feejeensis (Berk.) Fr.

N. Acta R. Soc. Sci. Upsal. 1: 128, 1851.

(Figs. 1e–f, 4c)

Stromata unbranched or branched, cylindrical-clavate, with rounded fertile apex, 60–135 mm total length, fertile portion 30–70 × 3–7 mm, stipes short to long, 20–65 × 3–6 mm, from reddish tomentose bases or simple. Texture cheesy to hard. Surface rough, externally dull black, often with brown tones, entostroma white, becoming hollow when very dried. Perithecia subglobose, 0.4–0.8 mm diam. Ostioles finely papillate, surrounded by a white disc. Asci cylindrical, 68–185 × 4–7 µm, spore-bearing parts 50–75 µm, stipes 20–122 µm; apical ring amyloid, rectangular, 0.9–2 × 1.1–2.1 µm. Ascospores brown, ellipsoid-inequilateral, 6.5–10 × 3–4.5 µm, with a straight germ slit spore-length; surface smooth under SEM.



Fig. 1. a, b. *Xylaria cubensis*: a, stroma; b, ascospores. c,d. *Xylaria curta*: c, stroma; d, ascospores. e,f. *Xylaria feejeensis*: e, stroma; f, ascospores.

EXAMINED MATERIAL — Brazil, PARANÁ: Palotina, PES, 16/VI/2013, K.S. Cruz 007a (HCP 537); 13/VI/2013, K.S. Cruz 87 (HCP 538); 02/VII/2013 K.S. Cruz 122 (HCP 539).

GEOGRAPHICAL DISTRIBUTION — Americas, Africa, Oceania and Asia (GUZMÁN & PIEPENBRING, 2011; VAN DER GUCHT, 1995).

NOTES — According to DENNIS (1956) and VAN DER GUCHT (1995), *X. feejeensis* is a complex taxon. In Brazil, it was reported as *X. obtusissima* Sacc. and *X. feejeensis* var. *polymorphoides* Rehm (DENNIS, 1956). Our specimens were collected in decaying wood, some with hair at the base, according to the material described by (DENNIS, 1956).

Xylaria grammica (Mont.) Mont.

An. Sci. Nat. Bot. 3: 108, 1855.

(Figs. 2a–b, 4d)

Stromata unbranched or rarely branched, cylindrical-fusoid, with rounded fertile apices, 60–120 mm total length, fertile portion 30–60 × 5–16 mm, stipes short or long, 15–80 × 3–6 mm. Texture hard. Surface smooth, with longitudinal black lines, externally gray, entostroma white, becoming hollow when dried. Perithecia subglobose, 0.4–1 mm diam. Ostioles punctate in longitudinal black lines. Asci cylindrical, 170–254 × 7–9 µm, spore-bearing parts 70–84 µm, stipes 90–170 µm; apical ring amyloid, rectangular, 2.5–3 × 1.5–2 µm. Ascospores brown, ellipsoid-inequilateral, 10–12 × 3.5–5 µm, with a straight germ slit spore-length; surface smooth under SEM.

EXAMINED MATERIAL — Brazil, PARANÁ: Palotina, PESC, 16/II/2011, A.J. Ferreira & R.L. Dias 18-32 (HCP 565; 24/VI/2011, A.J. Ferreira & R.L. Dias 21-1 (HCP 566); 15/VI/2011, T.R. Hugen 019 (HCP 564); 16/V/2013, K.S. Cruz 007b (HCP 567); 13/VI/2013, K.S. Cruz 84, 92 (HCP 568, 569); 02/VII/2013, K.S. Cruz 119 (HCP 570); 20/I/2014, K.S. Cruz 191, 227 (HCP 573, 573); 25/III/2014, K.S. Cruz 009a (HCP 574).

GEOGRAPHICAL DISTRIBUTION – South America (HAMME & GUERRERO, 2002; HLADKI & ROMERO, 2010) Africa, Asia, and Oceania (VAN DER GUCHT, 1995).

NOTES — According to DENNIS (1956) *Xylaria grammica* is characterized by cracking in the stromatal crust and also rows of ostioles within the cracks. Due to these characteristics *X. grammica* is easily recognized in the field. In other species with regularly cracking crusts the cracks surround individual perithecia or form a network between them DENNIS (1956). Our specimens were collected in decaying wood. This species is a new record from Paraná.

Xylaria ianthinovelutina (Mont.) Fr.

Syll. Gen. Spec. Plant. Crypt.: 204, 1856.

(Figs. 2c–d, 4e)

Stromata unbranched or branched, cylindrical, with acute sterile apex, 30–40 mm total length, fertile portion 4–22 × 1–2 mm, stipes tomentose, 15–30 × 1–2 mm. Texture soft. Surface rough, covered by tomentum, externally reddish brown to black, entostroma white. Perithecia mammiform, 0.3–0.6 mm diam. Ostioles slightly papillate. Asci cylindrical, 94–104 × 4–6.5 µm, spore-bearing parts 52–74.5 µm, stipes 21–37.5 µm; apical ring amyloid, rectangular, 1.6–2.1 × 1.1–1.6 µm. Ascospores light

brown, ellipsoid-inequilateral to fusoid, $10\text{--}11 \times 3\text{--}4 \mu\text{m}$, with a straight germ slit spore-length; surface smooth under SEM.

EXAMINED MATERIAL — Brazil, PARANÁ: Palotina, PESC, 02/VII/2013, K.S. Cruz 117 (HCP 540).

GEOGRAPHICAL DISTRIBUTION — North and South America (HLADKI & ROMERO, 2010; TRIERVEILER-PEREIRA *et al.*, 2009).

NOTES — *Xylaria ianthinovelutina* occurs preferentially on fruits of *Fabaceae* Lindley (DENNIS, 1956; ROGERS *et al.*, 1988). South Brazilian collections recorded by THEISSEN (1909) and RICK (1935) were reported as growing on wood. *Xylaria magnoliae* J.D. Rogers is described by occurring only on fruits of *Magnoliaceae* with its ascospores ranging from $10\text{--}17 \times 3\text{--}6 \mu\text{m}$, navicular-crescentic or fusoid and yellowish with obscure germ slits (ROGERS, 1979). Our specimen from Paraná was growing on fruit of *Fabaceae*, as mentioned by DENNIS (1956) and ROGERS *et al.* (1988).

Xylaria multiplex (Fr.) Fr.

N. Acta R. Soc. Sci. Upsal. 1: 127, 1851.

(Figs. 2e–f, 4f)

Stromata unbranched or branched, cylindrical, with acute sterile apex, 10–35 mm total length, fertile portion $5\text{--}15 \times 1\text{--}3 \text{ mm}$, stipes short or long, tomentose, $5\text{--}20 \times 1\text{--}2 \text{ mm}$,. Texture hard. Surface smooth to nodulose, with longitudinal black lines, sometimes with scattered hairs, externally black, entostroma white. Perithecia subglobose, 0.3–0.6 mm diam. Ostioles more or less punctate. Asci cylindrical, $90\text{--}146 \times 5\text{--}7 \mu\text{m}$, spore-bearing parts 60–89 μm , stipes 24–60 μm ; apical ring amyloid, rectangular, $1.5\text{--}3 \times 1\text{--}2 \mu\text{m}$. Ascospores brown, ellipsoid-inequilateral, with narrowly rounded ends, $9\text{--}14 \times 3\text{--}5 \mu\text{m}$, with a straight germ slit spore-length; surface smooth under SEM.

EXAMINED MATERIAL — Brazil, PARANÁ: Palotina, PESC, 13/VI/2013, K.S. Cruz 86 (HCP 553); 02/VII/2013, K.S. Cruz 116 (HCP 554).

GEOGRAPHICAL DISTRIBUTION — Americas (GUZMÁN & PIEPENBRING, 2011; HLADKI & ROMERO, 2010), Africa, Asia, and Oceania (VAN DER GUCHT, 1995).

NOTES — *Xylaria multiplex* is another complex taxon within the genus (DENNIS, 1956). *Xylaria hypoxylon* has a similar stroma but differs from it by its ascospores size ($9\text{--}16 \times 5\text{--}6.5 \mu\text{m}$) with a straight germ slit slightly less than spore-length (ROGERS, 1986). Our specimens were collected in decaying wood. This species is a new record from Paraná.

R

Xylaria multiplex var. *microsperma* (Speg.) Dennis

Kew Bull. 11: 418, 1956.

(Figs. 2g–h)

Stromata unbranched, cylindrical, with rounded apex, 8–15 mm total length, fertile portion 6–12 × 1–2 mm, stipe short, 2–3 × 1–2 mm. Texture hard. Surface smooth to nodulose, with perithecial contours, externally black, white inside. Perithecia Asci cylindrical, 90–110 × 5–6.5 μm, spore-bearing parts 28–86 μm, stipes 28–57 μm; apical ring amyloid, rectangular, 1.5–2 × 1.2–1.7 μm. Ascospores brown, ellipsoid-inequilateral with

EXAMINED MATERIAL — Brazil, PARANÁ: Palotina, PESC, 02/VII/2013, K.S. Cruz 121 (HCP 552).

GEOGRAPHICAL DISTRIBUTION — Central and South America (DENNIS, 1956).

NOTES — *Xylaria multiplex* var. *microsperma* differs from typical variety on the basis of rounded apex of stroma, and smaller ascospores (DENNIS, 1956). Our specime was collected in decaying wood. *Xylaria multiplex* var. *microsperma* is a new record from Paraná and Brazil.

Xylaria poitei (Lev.) Fr.

N. Acta Reg. Soc. Sci. Upsal. 1: 125. 1851.

(Figs. 3a–b, 4g)

Stromata unbranched, cylindrical-clavate, acute apex to mucronate when immature, then rounded when mature, 90–250 mm total length, fertile portion 65–155 × 20–30 mm, stipes short and broad, occasionally branched near to the base, 20–65 × 5–25 mm. Texture hard to very hard. Surface rough, externally dull bronze to brown, entostroma cream, becoming hollow when dried. Perithecia subglobose, 0.5–1 mm diam. Ostioles slightly papillate, surrounded by a black a disc. Asci cylindrical, 164–284 × 6–8 μm, spore-bearing parts 129–150 μm, stipes 87–139 μm; apical ring amyloid, rectangular, 1.6–2.9 × 1.3–2 μm. Ascospores brown, ellipsoid-inequilateral, 12–15 × 4–6 μm, with a straight germ slit spore-length; smooth surface under SEM.

EXAMINED MATERIAL — Brazil, PARANÁ: Palotina, PESC, 16/V/2013, K.S. Cruz 002 (HCP 562); 13/XII/2013, K.S. Cruz 175 (HCP 563); 20/I/2014, K.S. Cruz 197 (HCP 564);

GEOGRAPHICAL DISTRIBUTION — Americas, Africa, and Oceania (GUZMÁN & PIEPENBRING, 2011; HLADKI & ROMERO, 2010; PATIL *et al.*, 2012; STADLER *et al.*, 2008; VAN DER GUCHT, 1995).

NOTES — *Xylaria poitei* exhibits critical morphological variations according to the developmental stage: when young and immature, the stromatic surface is pale brown, with acute to mucronate apex, and cream inside; when mature, the stromatic surface becomes shiny brown,

with a rounded fertile apex, and hollow (ROGERS, 1984). According to DENNIS (1956), *X. guyanensis* (Mont.) Fr. is similar to *X. poitei*, by producing produce large stromata (<100 mm long); however, the former having larger ascospores ($14-21 \times 5-8 \mu\text{m}$). The materials from PESC were collected on a fallen decomposing wood covered by lianas. This species was known in Brazil only in the state of Acre (FRIES, 1851; PEREIRA, 2015) and Paraíba (TRIERVEILER, 2014), with its first report to the State of Paraná.

Xylaria scruposa (Fr.) Berk.

N. Acta R. Soc. Sci. Upsal. 1: 127, 1851.

(Figs. 3c-d, 4h)

Stromata unbranched or rarely branched, cylindrical-clavate, with rounded fertile apex, 30–80 mm total length, fertile portion 10–40 \times 3–5 mm, stipes short or long, 10–40 \times 2–3 mm, sometimes tomentose. Texture cheesy to hard. Surface rough, externally dull black, entostroma white. Perithecia subglobose, 0.3–0.7 mm diam. Ostioles papillate, surrounded by a black disc. Asci cylindrical, 141–249 \times 7–9.5 μm , spore-bearing parts 88–123 μm , stipes 40–135 μm ; apical ring amyloid, urn-shaped, 3.5–10 \times 2.5–4.5 μm . Ascospores brown, ellipsoid-inequilateral, with rounded or narrowed ends, 13–21 \times 4.5–7 μm , with a short spiral germ slit to side; surface smooth under SEM.

EXAMINED MATERIAL — Brazil, PARANÁ: Palotina, PESC, 16/VI/2013, K.S. Cruz 003, 013 (HCP 556, 557); 13/VI/2013, K.S. Cruz 085 (HCP 555); 02/VII/2014, K.S. Cruz 120, 228, 229 (HCP 558, 559, 560).

GEOGRAPHICAL DISTRIBUTION — Americas, Africa, Asia and Oceania (GUZMÁN & PIEPENBRING, 2011; STADLER *et al.*, 2008; VAN DER GUCH, 1995).

NOTES — HAMME & GUERRERO (2002) found misidentified specimens in Rick's collection labelled as *X. polymorpha*. GONZALEZ & ROGERS (1989) discussed the taxonomic confusion in the *X. polymorpha* complex, which includes *X. scruposa*. According to DENNIS (1956) *X. feejeensis* and *X. longipes* are similar to *X. scruposa*, but has still larger ascospores, 16-22 \times 6-8 μm , but the latter shows larger ascospores and germ slit. In Brazil this species was recorded as typus of *X. subtorulosa* in Herb. Spegazzinii (DENNIS, 1956). Our specimens were collected in decaying wood.

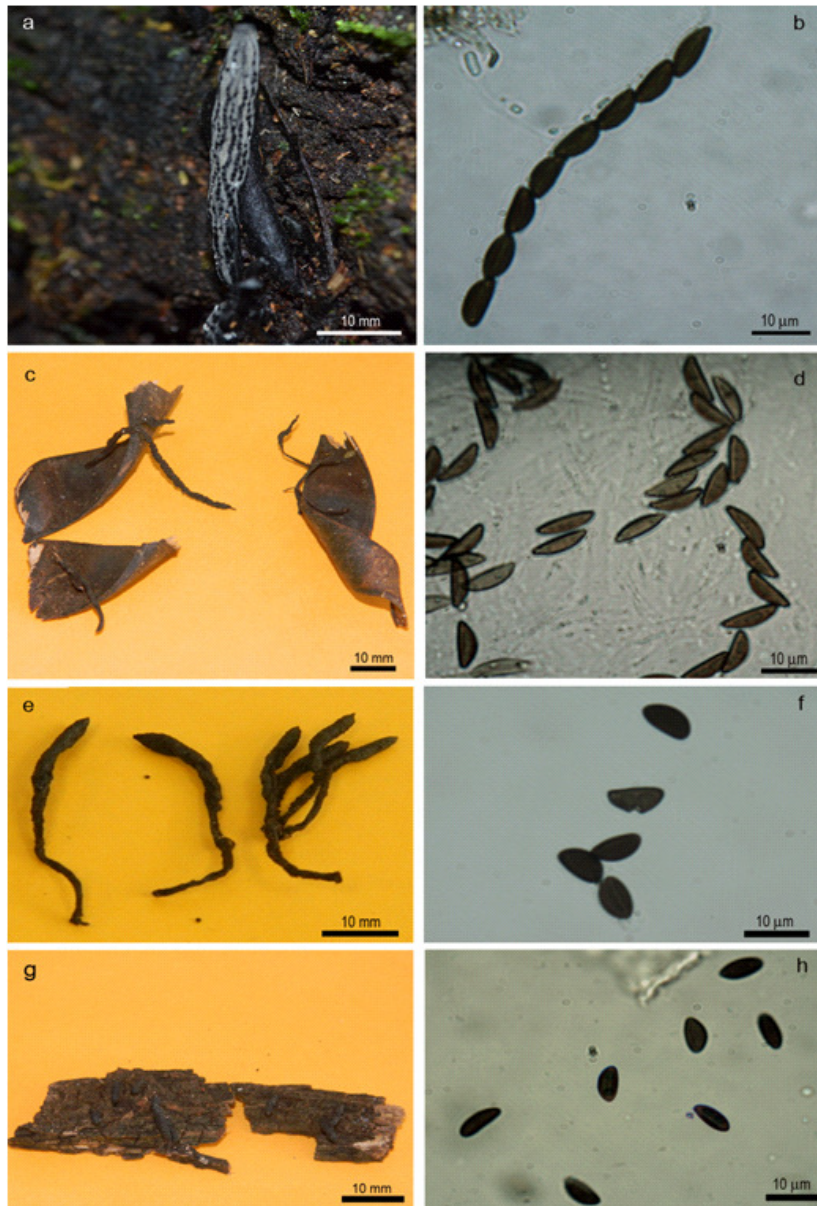


Fig. 2. a, b. *Xylaria grammica*: a, stroma; b, ascospores. c,d. *Xylaria ianthinovelutina*: c, stroma; d, ascospores. e,f. *Xylaria multiplex*: e, stroma; f, ascospores. g,h. *Xylaria multiplex* var. *microspora*: g, stroma; h, ascospores.

Xylaria telfairii (Berk.) Sacc.

Syll. Fung. 1: 320, 1882.

(Figs. 3e–f, 4i)

Stromata unbranched, cylindrical-clavate with rounded fertile apex, 45–140 mm total length, fertile portion 25–120 × 5–15 mm, stipes 10–35 × 5–11 mm. Texture hard. Surface smooth, brown to orange-brown, entostroma white, soon becoming hollow. Perithecia subglobose, 0.5–0.7 mm diam. Ostioles punctate, black. Asci collapsed, spore-bearing parts 126–134 µm, stipes 87–139 µm; apical ring amyloid, urn-shaped, 4–6 × 3–4 µm. Ascospores brown, ellipsoid-inequilateral or allantoid, with narrowed ends, 18–25 × 5.5–7.5 µm, with a germ slit straight to curving side short, 6.5–9 µm; surface smooth under SEM.

EXAMINED MATERIAL — Brazil, PARANÁ: Palotina, PESC, 16/II/2011, A.J. Ferreira & R.L. Dias 18-32 (HCP 566); 24/III/2011, A.J. Ferreira & R.L. Dias 21-1 (HCP 567); 16/V/2013, K.S. Cruz 012 (HCP 533); 13/VI/2013, K.S. Cruz 088 (HCP 534); 02/VII/2013, K.S. Cruz 118 (HCP 535); 13/XI/2013, K.S. Cruz 178 (HCP 536).

GEOGRAPHICAL DISTRIBUTION — Americas, Asia, Africa and Oceania (GUZMÁN & PIEPENBRING, 2011; STADLER *et al.*, 2008; VAN DER GUCHT, 1995).

NOTES — *Xylaria telfairii* is distinguished from other *Xylaria* species due to its brown to orange-brown stromata and entostroma hollow, the stroma often splits down the middle and the broken edges curl inwards (DENNIS, 1956). *Xylaria enterogena* (Mont.) Fr. looks like *X. telfairii*, by the brown stroma and ascospore size and shape, but has smaller stromata (<20 mm length), and umbilicate ostioles without exposed discs (DENNIS, 1956). By sharing many features, DENNIS (1956) considered *X. enterogena* as young stage of *X. telfairii*. HAMME & GUERRERO (2002) and ROGERS (1984) disagree and consider that *X. enterogena* has consistent features to consider it distinct from *X. telfairii*. Our specimens were collected in decaying wood.

Xylaria tuberoides Rehm*Hedwigia* 40: 146. 1901. (Figs. 3g–h)

Stromata unbranched, subglobose, with rounded fertile apex 38 mm total length, fertile portion 15 × 13 mm, stipe 22 × 3 mm. Texture very hard. Surface smooth, gray to brown, entostroma white, becoming hollow. Perithecia subglobose, 0.5–0.8 mm diam. Ostioles punctate. Asci collapsed, with apical ring amyloid, rectangular, 3.5–5.5 × 2–3 µm. Ascospores light brown, ellipsoid-inequilateral, 24–29 × 7–9 µm, with inconspicuous germ slit; surface smooth under SEM.

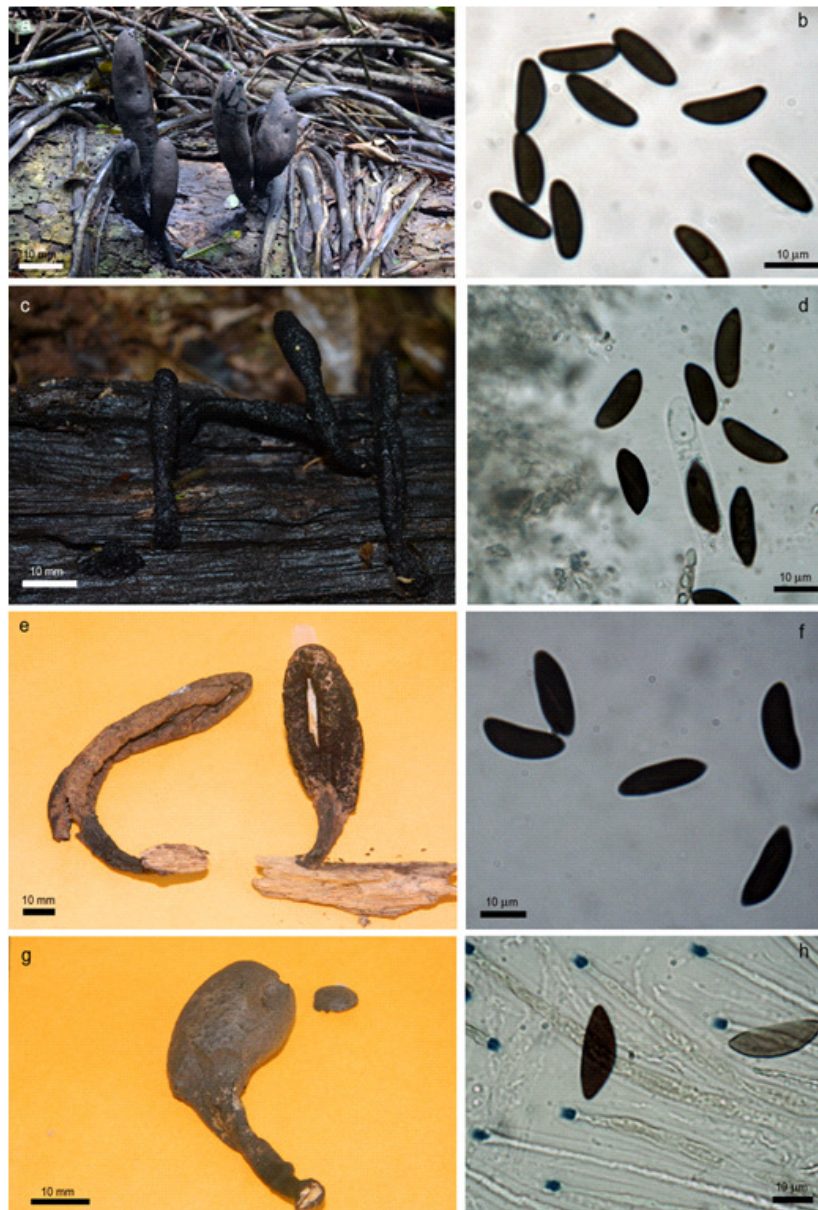


Fig. 3. a,c. *Xylaria poitei*: a, stroma; b, ascospores. c,d. *Xylaria scruposa*: c, stroma; d, ascospores. e,f. *Xylaria telfairii*: e, stroma; f, ascospores. g,h. *Xylaria tuberoides*: g, stroma; h, ascospores and apical ring.

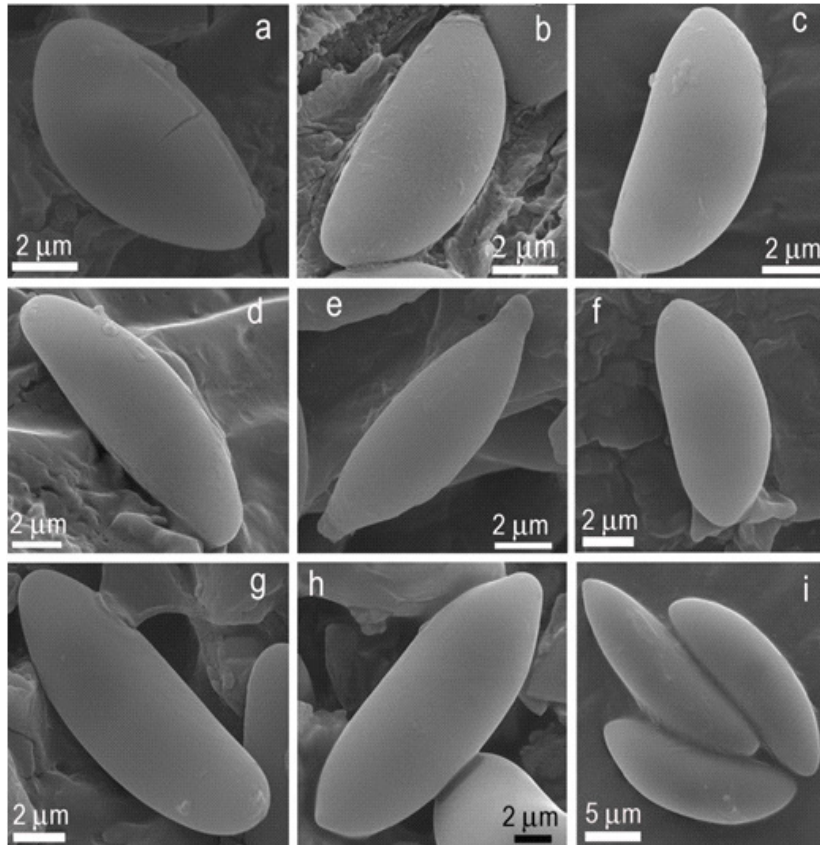


Fig. 4. SEM of *Xylaria* ascospores: a, *Xylaria cubensis*. b, *Xylaria curta*. c, *Xylaria feejeensis*. d, *Xylaria grammica*. e, *Xylaria ianthinovellutina*. f, *Xylaria multiplex*. g, *Xylaria poitei*. h, *Xylariascruposa*. i, *Xylaria telfairii*.

EXAMINED MATERIAL — Brazil. PARANÁ: Palotina, PESC, 02/VII/2013, K.S. Cruz 127 (HCP 541).

GEOGRAPHICAL DISTRIBUTION — Americas (GUZMÁN & PIEPENBRING, 2011; HAMME & GUERRERO, 2002; STADLER *et al.*, 2008).

NOTES — *Xylaria tuberoidea* is diagnosed by its subglobose stromata, smooth, and black punctuated ostioles. LOYD (1917) considered *X. obovata* was synonymous of *X. tuberoidea* (HAMME & GUERRERO, 2002); finally HSIEH *et al.* (2010) considered *X. tuberoidea* as the correct name for this American species. Our specimens was collected in decaying wood.

Key for identification of *Xylaria* species from PESC:

1. Stromata growing on fruits of *Fabaceae**X. ianthinovelutina*
1. Stromata growing in wood. 2
2. Stromatic surface smooth. 3
2. Stromatic surface rough. 8
3. Stromata subglobose, ascospores 24–29 × 7–9 µm. *X. tuberoides*
3. Stromata cylindrical, ascospores <24 µm. 4
4. Ascospores dark brown without germ slit. *X. cubensis*
4. Ascospores brown, with germ slit. 5
5. Ascospores with a germ slit straight to curving side short. *X. telfairii*
5. Ascospores with a germ slit straight spore-length. 6
6. Stromatic surface gray, with longitudinal black lines. *X. grammica*
6. Stromatic surface black, without longitudinal lines. 7
7. Stromatic surface with acute apex, ascospores 9–14 × 3–5 µm
. *X. multiplex*
7. Stromatic surface with rounded apex, ascospores 7–10 × 3–4 µm
. *X. multiplex* var. *microsperma*
8. Stromatic surface with whitish to yellowish squamules. *X. curta*
8. Stromatic surface without squamules. 9
9. Ascospores with a short spiral germ slit to side. *X. scruposa*
9. Ascospores with a germ slit straight spore-length. 10
10. Stromata 90–250 mm total length, ascospores 12–15 × 4–6 mm. . .
. *X. poitei*
10. Stromata 60–135 mm total length, ascospores 6.5–10 × 3–4.5 µ. . .
. *X. feejeensis*

SUMÁRIO

Durante a pesquisa no Parque Estadual de São Camilo, Palotina, Estado do Paraná, Sul do Brasil, foram coletados 42 espécimes do gênero *Xylaria*. Os quais representam onze táxons: *X. cubensis*, *X. curta*, *X. feejeensis*, *X. grammica*, *X. ianthinovelutina*, *X. multiplex*, *X. multiplex* var. *microsperma*, *X. poitei*, *X. scruposa*, *X. telfairii* e *X. tuberoides*. Destes táxons, cinco são novas ocorrências para o Paraná, *X. curta*, *X. grammica*, *X. multiplex*, *X. multiplex* var. *microsperma*, *X. poitei*. Todos os táxons são redescritos e ilustrados e uma chave de identificação é fornecida.

PALAVRAS-CHAVE: estroma; micobiota; fungos lignícolas; taxonomia

SUMMARY

During a survey of *Xylariaceae* in the Parque Estadual of São Camilo, Palotina, Paraná State, South Brazil. Were collected 42 specimens of the genus *Xylaria*. They represented eleven taxa: *X. cubensis*, *X. curta*, *X. feejeensis*, *X. grammica*, *X. ianthinovelutina*, *X. multiplex*, *X. multiplex* var. *microsperma*, *X. poitei*, *X. scruposa*, *X. telfairii*, and *X. tuberoides*. Among these, five are new records from the State of Paraná, *X. curta*, *X. grammica*, *X. multiplex*, *X. multiplex* var. *microsperma* and *X. poitei*. All taxa are described and illustrated and an identification key is presented.

KEY WORDS: stroma; lignicolous fungi; mycobiota; taxonomy

RÉSUMÉ

Les résultats proviennent d'un sondage mené en famille *Xylariaceae* dans le Parc d'Etat de Saint Camille, Palotina, Paraná, Brésil. Nous avons recueilli 42 spécimens de *Xylaria* répartis dans Ils représentaient onze taxa: *X. cubensis*, *X. curta*, *X. feejeensis*, *X. grammica*, *X. ianthinovelutina*, *X. multiplex*, *X. multiplex* var. *microsperma*, *X. poitei*, *X. scruposa*, *X. telfairii*, and *X. tuberoides*. Ces taxa, cinq sont de nouveaux records de l'État du Paraná, *X. curta*, *X. grammica*, *X. multiplex*, *X. multiplex* var. *microsperma* et *X. poitei* Tous les taxons sont décrits et illustrés et une clé d'identification est fourni.

MOTS-CLÉS: strome; champignons lignicoles; mycobiote; taxonomie

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