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Black mildew disease on the neotropical forest species *Aspidosperma polyneuron* in Brazil, caused by *Meliola aspidospermatis*

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Abstract. A black mildew disease caused by *Meliola aspidospermatis* (Meliolales) was observed on leaves of the neotropical forest species *Aspidosperma polyneuron* in a commercial nursery in the state of Minas Gerais, Brazil. This is the first record of this fungus in Brazil, previously known only from Argentina.

Aspidosperma polyneuron (local name: peroba-rosa) is a neotropical forest species belonging to the Apocynaceae. Its wood is employed in general building and produces an essential oil that is considered to have some medicinal properties. Due to its commercial value, this species is considered as threatened in Brazil. In February 2008, seedlings of *A. polyneuron* were found colonised by a black mildew (Fig. 1)

Fig. 1. *Meliola aspidospermatis* ex *Aspidosperma polyneuron* (VIC 30612). Detail of black mildew symptoms on herborised (*a*) abaxial and (*b*) adaxial leaf surfaces.

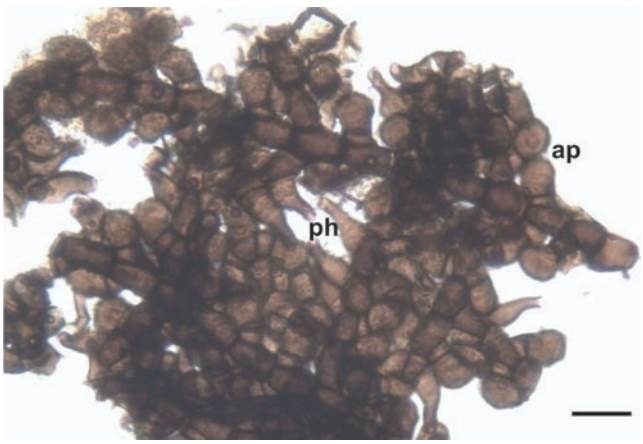

Fig. 2. External hyphae bearing ampulliform phialides (ph) and cuneate rounded appressoria (ap). Bar = 20 µm.

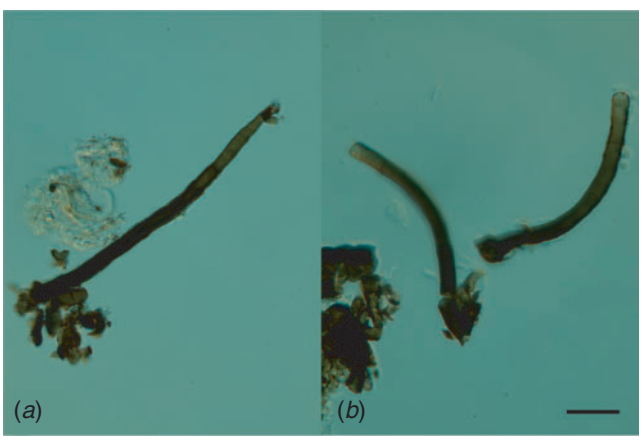

Fig. 3. Mycelial setae: (*a*) straight with acute apex and (*b*) curved with rounded apex. Bar = 20 µm.

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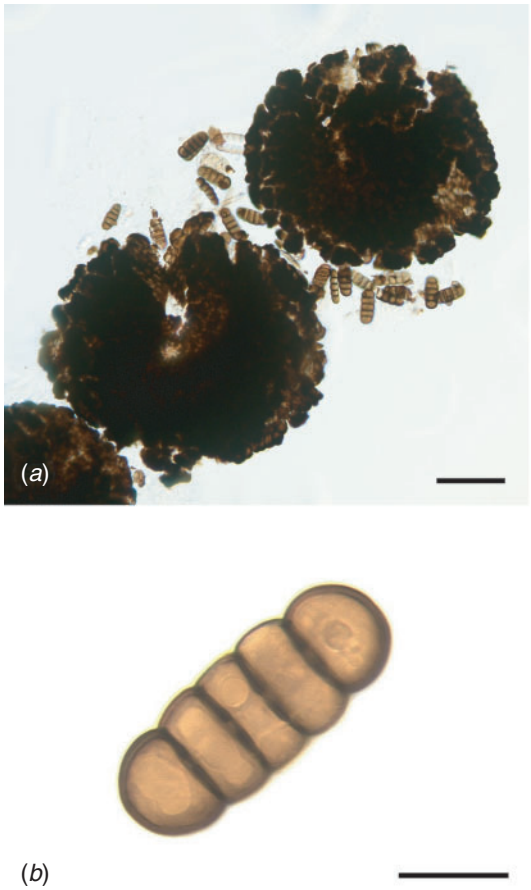

Fig. 4. *Meliola aspidospermatis* ex *Aspidosperma polyneuron*. (*a*) Globose ostiolate black perithecia releasing asci and ascospores. (*b*) Narrowly elliptic, 4-septate, constricted ascospore. Bars = 100 µm (*a*) and 15 µm (*b*).

in a commercial nursery in Viçosa, state of Minas Gerais, Brazil. All 200 seedlings were colonised by the fungus. Samples of infected leaves were collected, photographed, dried in a plant press and deposited at the Herbarium VIC (Universidade Federal de Viçosa, Viçosa, MG, Brazil). The fungal samples were examined with a light microscope (Motic BA 300) fitted with a digital camera.

A description of the fungus on host tissue follows. *Colonies* on living leaves, amphigenous, mostly epiphyllous, black, confluent, sometimes covering the entire leaf surfaces. *Internal mycelium* intercellular, colonising epidermal cells, forming haustoria. *External mycelium* amphigenous, net-forming, branching opposite at an acute to wide angle, composed of dark brown, thick walled, septate hyphae, producing both appressoria and phialides (Fig. 2). *Appressoria* unicellular, alternate, dark brown, cuneate, rounded, 12.5–16.0 × 10.0–12.5 µm. *Phialides* ampulliform, alternate, brown, mixed with appressoria, 17.5–20.0 × 7.5–8.5 µm. *Mycelial setae* present, straight with acute apex or curved with rounded apex (Fig. 3), septate, dark brown, 117.5–205.0 × 7.0–7.5 µm. *Perithecia* black, ostiolate, globose, with crenate to crenulate surfaces (Fig. 4*a*), 243–318 µm diam. *Asci* unitunicate, evanescent. *Ascospores* dark brown, elliptic, obtuse, 4-septate, constricted at septa (Fig. 4*b*), 43.0–50.0 × 13.0–20.0 µm. Material examined: VIC 30612, on leaves of *Aspidosperma polyneuron*, Viçosa, State of Minas Gerais, Brazil, O.L. Pereira, 15 Feb. 2008.

The fungus matched the description of *Meliola aspidospermatis* Speg., a pathogenic fungus originally reported on *A. polyneuron* in Argentina by Spegazzini (1924). Later, Stevens (1927) transferred the species to *Irenina* and subsequently Hansford (1961) transferred the species to the genus *Asteridiella*. However, due to the presence of setae on the external mycelium, this fungus clearly belongs to the Meliolaceae genus *Meliola*.

Acknowledgements

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