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.](image1)

**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.
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. 4a), 243-318 μm diam. Asci unitunicate, evanescent. Ascospores dark brown, elliptic, obtuse, 4-septate, constricted at septa (Fig. 4b), 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 Sp., 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.

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References

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