CSIRO PUBLISHING
www.publish.csiro.au/journals/apdn *Australasian Plant Disease Notes*, 2008, **3**, 5–7

Natural infection of *Acalypha hispida* and *Jatropha podagrica* inflorescences by *Amphobotrys ricini* in Brazil

B. V. Lima[A], *D. J. Soares*[A,B], *O. L. Pereira*[A] *and R. W. Barreto*[A]

[A]Departamento de Fitopatologia, Universidade Federal de Viçosa, Viçosa, MG 36570-000, Brazil.
[B]Corresponding author. Email: dartjs@yahoo.com.br

Abstract. *Amphobotrys ricini* is recorded for the first time causing natural blight on inflorescences of the ornamental euphorbiaceous hosts *Acalypha hispida* and *Jatropha podagrica* in Brazil.

Acalypha hispida Willd., popularly known as 'red hot cat's tail' or 'chenille plant' is a semiherbaceous shrub that belongs to the Euphorbiaceae and is native to India and the South Pacific Islands. *Jatropha podagrica* Hook., popularly known as 'goutystalk nettlespurge' or 'Buddha belly plant', is a small shrub with a swollen stem near the base, which is native to Central America and Antilles and also belongs to the Euphorbiaceae. Both are widely used as ornamental plants in Brazil and abroad (Lorenzi and Souza 1999). Between November 2006 and April 2007, blighted inflorescences of *A. hispida* were observed in Viçosa, state of Minas Gerais, Brazil. Later (May 2007), inflorescences of *J. podagrica* were also observed to have similar symptoms. In both cases the diseased parts showed a grey powdery mass and were constantly associated with a *Botrytis*-like fungus (Fig. 1). The fungus was isolated directly from diseased tissue, on Vegetal Broth Agar (VBA, Pereira *et al.* 2003) and based on its morphology [conidiophores cylindrical, up to 1000 µm long, about half height bifurcate at a wide angle, secondary branches almost symmetrical; terminal conidiogenous cells developing

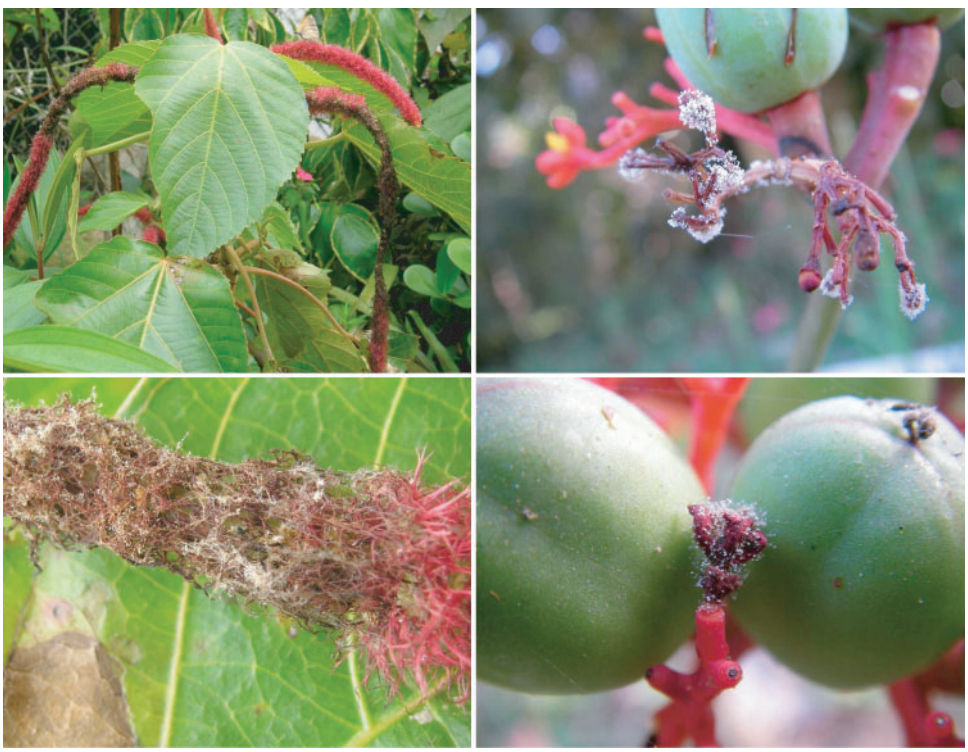

Fig. 1. Left top: Inflorescences of *Acalypha hispida* showing the blighted areas attacked by *Amphobotrys ricini*; Left bottom: Detail of an *A. hispida* inflorescence showing grey mould; Right top and bottom: Blighted *Jatropha podagrica* inflorescences showing fungal colonies.

 10.1071/DN08003 1833-928X/08/010005

simultaneous conidial buds on short pedicels, collapsing at maturity; conidia globose, 5.5–9.0 µm diam., subhyaline to brown, smooth (Fig. 2)] and hosts was identified as *Amphobotrys ricini* (Buchw.) Hennebert [teleomorph: *Botryotinia ricini* (Godfrey) Wethzel (Hennebert 1973)]. This fungus is known to attack several euphorbiaceous hosts worldwide. Samples were deposited at the herbarium of the Universidade Federal de Viçosa (VIC 30476; VIC 30477).

To perform the inoculation tests, the fungus was cultivated on VBA and a conidial suspension was prepared from 10-day-old cultures and adjusted to 2×10^5 conidia/mL with the help of a Neubauer chamber. Healthy inflorescences of *A. hispida*, *A. reptans* Sw., *J. podagrica*, *Ricinus communis* L. and *Manihot esculenta* Crantz were spray-inoculated and covered with plastic bags for 24 h to simulate a dew chamber. Within 3–8 days, all inoculated inflorescences developed similar symptoms to those initially observed in the field on *A. hispida* and *J. podagrica*.

This fungus is the most important pathogen of castor bean (*R. communis*) and is also known to attack several other members of Euphorbiaceae (Godfrey 1923; Holcomb *et al*. 1989). In Brazil it was known only on *R. communis* and *Euphorbia heterophylla* L. (recorded as *Botrytis ricini*) (Barreto and Evans 1998; Mendes *et al*. 1998). Although members of *Acalypha* and *Jatropha* have already been reported as hosts of *A. ricini*, these reports referred to artificial inoculations (Godfrey 1923; Holcomb *et al*. 1989). So, this is the first record of natural infection of inflorescences of *Acalypha* and *Jatropha* by *A. ricini* worldwide.

Fig. 2. Left top: Conidiophore of *Amphobotrys ricini* showing the bifurcate ramification on upper half (bar = 200 µm); Right top: detail of a conidiophore of *A. ricini* showing symmetrical branching (bar = 100 µm); Bottom: Collapsed conidiogenous cells and conidia of *A. ricini* (bar = 50 µm).

Information on the host range of the grey mould of castor bean is of particular relevance in Brazil considering the growing importance of *R. communis* and *J. curcas* L. as sources of renewable fuels.

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Manuscript received 28 November 2007, accepted 15 January 2008