

First Report of *Coleosporium ipomoeae* on *Ipomoea fistulosa* in Brazil

Frederico M. C. Vieira¹, Olinto L. Pereira² & Robert W. Barreto²

Universidade Federal de Viçosa, ¹Departamento de Zootecnia, ²Departamento de Fitopatologia, CEP 36571-000, Viçosa, MG, e-mail: rbarreto@ufv.br

(Accepted for publication on 18/05/2004)

Corresponding author: Robert W. Barreto

RESUMO

Primeiro relato de *Coleosporium ipomoeae* em *Ipomoea fistulosa* no Brasil

O fungo *Coleosporium ipomoeae* é relatado associado a

sintomas de ferrugem em *Ipomoea fistulosa* pela primeira vez no Brasil (Três Lagoas, MS). Este fungo possui aparente potencial para o controle biológico clássico de *I. fistulosa*.

Ipomoea fistulosa Mart. ex Choisy (local names: canudo, algodão-bravo, capa-bode, maniorana) is an arbustive perennial, member of Convolvulaceae native to South America. In Brazil, it occurs naturally in the Pantanal Matogrossense and Vale do São Francisco (Lorenzi, Plantas Daninhas do Brasil, 2000). It is also widely distributed in Brazil as an ornamental species (Kissmann & Groth, Plantas Infestantes e Nocivas, 1992). This plant is one of the poisonous weeds most feared by Brazilian cattle ranchers as it is able to cause severe nervous disorders when ingested by bovines, sheep or goats (Tokarnia *et al.*, Plantas tóxicas do Brasil, 2000). *Ipomoea fistulosa* has been introduced into areas outside the neotropics and now causes serious invasions of native habitats in Southern India, for example, where streams, mangroves and other ecosystems may be blocked, thus hampering irrigation and access (H.C. Evans pers.obs. 1999). The problem is especially acute in Tamil Nadu State, and Indian scientists are attempting to develop a management strategy to combat it. In 2001, a rust disease was observed on the foliage of *I. fistulosa* plants growing in a temporarily flooded area at Três Lagoas, state of Mato Grosso (Brazil). The causal agent was identified as *Coleosporium ipomoeae* Burriel, which had only been reported on *Ipomoea crassicaulis* (Benth.) B. L. Rob. (syn. of *I. fistulosa*) from Cuba (Urban, Rept. Tottori Mycol. Inst. 28: 37. 1990). A description of the fungus specimen from Três Lagoas includes: **Lesions** on living leaves, which are subcircular and chlorotic, becoming grayish-brown adaxially, and bright orange pustules adaxially; becoming necrotic with age. **Spermogonia** and **aecia** not observed. **Uredinia** hypophyllous, subepidermal, and clustered, 108 – 458 µm wide. **Paraphyses** absent. **Urediniospores** subglobose to ellipsoidal, non-pedicellate, 17–26 X 16–20 µm, echinulate, thin walled and yellow, pores not differentiated. **Telia** hypophyllous, subepidermal, often formed around uredinial clusters, 87–275 µm diam. **Paraphyses** absent. **Teliospores** clavate, oblong to ellipsoidal, with a somewhat beaked apex, 44–83 X 19–27 µm, 0–4 septate, thin walled, pale yellow to subhyaline, and smooth (VIC 26536). Additional specimens

were obtained from Minas Gerais (VIC 27834) and Rio de Janeiro (VIC 26585, VIC 27835).

In Brazil, *C. ipomoeae* has been reported on *I. acuminata* (Vahl) Roem. & Schult., *I. batatas* (L.) Lam., *I. cairica* (L.) Sweet, *I. glabra* Choisy and *I. pentaphylla* (L.) Jacq., (Hennen *et al.* Arquivos do Instituto Biológico, 49, 1982), but not mentioned before on *I. fistulosa*. This is, therefore, the first record of *C. ipomoeae* on *I. fistulosa* in Brazil. Further studies are necessary in order to evaluate possible host specialization and the potential of *C. ipomoeae* as a biological control agent.

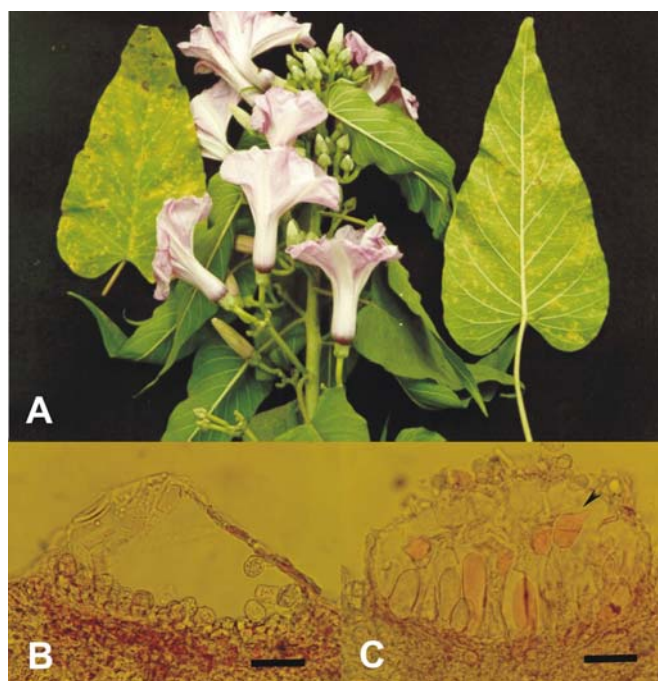


FIG. 1 - *Coleosporium ipomoeae*. A. *Ipomoea fistulosa* plant showing rust symptoms. B. Uredia with urediniospores. C. Telia showing clavate teliospores with beaked apical cell (arrowhead). Bars = 50 µm.