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First Report of Stem Rot of *Dracaena* Caused by *Aspergillus niger* in Iran

Mehrdad Abbasi and **Faezeh Aliabadi**, Department of Botany,
Iranian Research Institute of Plant Protection, Tehran 19395-1454,
Iran

Corresponding author: Mehrdad Abbasi. puccinia@gmail.com

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Dracaena sanderiana Mast. has recently become a common ornamental plant in Tehran and other cities of Iran. In January of 2007 some *D. sanderiana* plants exhibiting stem rot symptoms were collected from a local market in Tehran. Leaves of infected plants were yellow. More importantly, there were rotted areas covered with black spots on the middle of the stem. In some cases, epidermis was ruptured and black masses of fungal spores covered the rotted area (Fig. 1A & B). We isolated *Aspergillus* from these *D. sanderiana* plants. The fungus grew rapidly and produced black colonies on PDA after 5 days at 24°C (Fig. 1F). The conidial head was radiate, vesicles were nearly spherical and covered with metulae and phialides (biseriate). Conidia were globose (3 to 4.5 µm in diameter) and usually very rough with irregular ridges, bars, and verrucae (Fig. 2). Morphology of the isolated fungus fit the description for *A. niger* provided by Klich and Pitt (1). Inoculation on four healthy plants was performed in the greenhouse. By means of a 1 ml insulin syringe approximately 0.1 ml of spore suspension (10^4 to 10^6 CFU/ml) was injected into the cortex region under epidermis in stem of healthy *Dracaena* plants between the nodes. Sterilized water was used as the control. Inoculated (0.1 ml of a 10^4 to 10^6 CFU/ml spore suspension injected into the cortex region under the epidermis) and control plants were grown at 25 to 27°C. Water-soaked spots developed on inoculated plants in 5 days (Fig. 1C). Spots increased in size after 10 days and their color turned to pale-brown. Masses of spores covered the rotted area after 16 days. Inoculated plants wilted and often died within 25 days after inoculation (Fig. 1D & E). No symptoms developed on control plants. We were able to isolate *A. niger* from all inoculated plants. To our knowledge, the only report of *A. niger* on *D. sanderiana* was from Natour and Miller (2), who reported stem rot of *Dracaena* in the USA. They named it *A. niger* var. *floridanus*, based on cultural and morphological characteristics, cross-inoculation, and host-range studies but the name is a nomen nudum as it was not accompanied by a Latin description. More specimens and research is needed to verify that *A. niger* isolates on *D. sanderiana* is a new taxon.

A

B

C

D

E

F

Fig. 1. (**A** and **B**) *Dracaena sanderiana* naturally infected by *Aspergillus niger*; (**C**) Water-soaked spots on inoculated plant in 5 days after inoculation; (**D** and **E**) Masses of fungus spores covered the rotted area of inoculated plant after 25 days; (**F**) black colonies of *A. niger* on PDA.

Fig. 2. *Aspergillus niger* conidia. Bar in upper right = 10 μ m.

Literature Cited

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