



## First record of *Phytophthora nicotianae* causing leaf blight on *Dracaena sanderiana*

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*Dracaena sanderiana* is an ornamental plant from tropical West Africa and well known in Brazil as a tropical garden species. According to local producers it is the most frequently sold ornamental plant in Bahia State. During surveys conducted between August and September 2008 in eleven ornamental nurseries of Uruçuca municipality in Bahia State, Brazil, various plants of *D. sanderiana* showing leaf blight were observed in three nurseries. Seven isolates of *Phytophthora* sp. were obtained from diseased leaf tissues and also from the rhizosphere of diseased plants of *D. sanderiana* through soil dilution plating on selective medium PARPH (Kannwischer & Mitchell, 1978).

Seven-day old colonies of all isolates grown on carrot agar were star-shaped with sparse aerial mycelium. Sporangia were predominantly limoniform (Fig. 1), non-caducous, papillated and arranged in irregular sympodial sporangiophores measuring 40 µm x 32 µm, with a length/width ratio of 1.3:1. Chlamydospores measuring 25.0 µm ± 0.3 in diameter were regularly formed. All seven isolates were heterothallic, forming oospores when mated with an A2 isolate of *P. palmivora*. All cultures grew at 35°C. The isolates were deposited in the Brazilian Collection of *Phytophthora* under accession numbers CBP 1179-1185. Based on morphological and physiological criteria (Stamps *et al.*, 1990; Waterhouse, 1963; Gallegly & Hong, 2008) all isolates were identified as *P. nicotianae*. The ITS sequences obtained for isolates CBP 1179, CBP 1183, and CBP 1185 (JF326834, JF326835 and JF326836 respectively) were identical. These sequences most closely matched that of isolate STEU6273 of *P. nicotianae* (GU902246) with 99% identity.

Pathogenicity tests were done by inoculating detached leaves of *D. sanderiana* with 5 mm mycelial agar discs of five-day-old cultures of each of the seven isolates. Inoculated leaves and controls treated with sterile agar discs were kept in moistened plastic bags at 25°C. Lesions developed five days later only on inoculated leaves. All seven isolates caused symptoms similar to the ones observed in the field and *P. nicotianae* was re-isolated from the infected leaves. *Phytophthora* spp. are pathogens of various ornamental plants in Brazil (Paim *et al.*, 2006; Silva *et al.*, 2001) and *P. nicotianae* is one of the most prevalent species in Brazil, causing disease in many important crops such as pineapple, citrus, onion, and tobacco, among others. To our knowledge, this is the first time this

pathogen was found on *D. sanderiana* in Brazil and worldwide. It is possible that the pathogen has recently adapted to infect *D. sanderiana* from pineapple, citrus and tobacco plants growing nearby the nurseries. Further molecular studies will show whether this is the case. *P. nicotianae* causes severe damage to *D. sanderiana* in Bahia during the rainy season. The pathogen destroys the leaves, which are the most valuable commercial part of the plant. Additional studies are necessary to determine its potential risk to commercial plantations.

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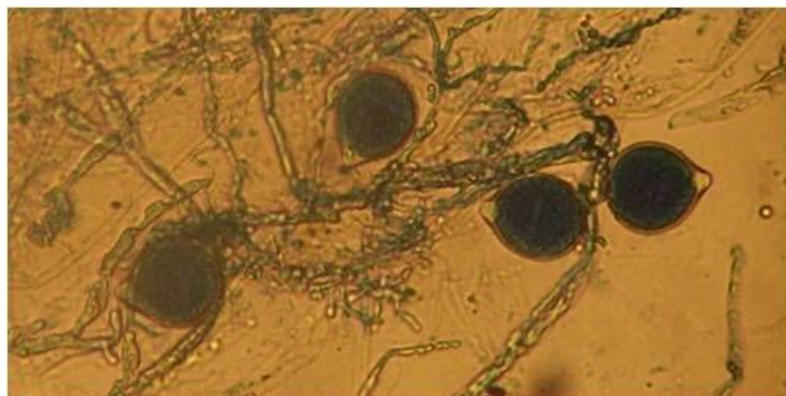


Figure 1

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