

## DISEASE NOTE

**FIRST REPORT OF DOWNY MILDEW  
(*PLASMOPARA OBDUCENS*)  
ON *IMPATIENS WALLERIANA* IN ITALY**

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During summer 2012, potted plants of impatiens (*Impatiens walleriana*) grown in gardens near Biella (northern Italy) showed symptoms of downy mildew. Infected leaves were paler green than normal and showed white, downy growth on the lower surface. Plants collapsed very rapidly, especially at high relative humidity (RH). Microscopical observations of infected leaves, maintained for 24 h at high RH, disclosed the presence of hyaline, tree-like, straight, 120-350×5.8-10 µm sporangiophores, with three sterigma. Sporangia were ovoid, hyaline and 10.7-15.4×11.7-16.6 (average 13.2×14.5) µm in size. Oospores were not observed in leaf tissue. The DNA region encoding the large ribosomal subunit (LSU rDNA) was amplified using primers NL1 and NL4 (Maier *et al.*, 2003) and sequenced (GenBank accession No. JX880252LSU). BLAST analysis of the 729 bp product obtained showed a similarity of 99% (E-value=0) with *Plasmopara obducens* from the USA (GenBank accession No. JX217746). To confirm pathogenicity, 60-day-old impatiens plants, grown singly in 15 litre pots in a growth chamber at 20±1°C, were inoculated by spraying leaves with a suspension of 1×10<sup>5</sup> sporangia/ml. Control plants were sprayed with distilled water. Plants were covered with plastic bags for 4 days. The first symptoms (chlorosis) developed 8 days post inoculation. Control plants remained healthy. This is the first report of *P. obducens* in Italy. The disease has been reported in several countries, including the USA (Wegulo *et al.*, 2004), UK (Lane *et al.*, 2005) and Serbia (Bulajic *et al.*, 2011). Currently, this disease is present in several gardens in northern Italy, where its importance may increase rapidly due to the widespread cultivation of impatiens.

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## DISEASE NOTE

**FIRST REPORT OF POSTHARVEST  
DRY ROT OF *RAPHIA HOOKERI* FRUITS  
CAUSED BY *XYLARIA FEEJEENSIS***

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*Raphia hookeri* palm is cultivated in Nigeria and other parts of the world for its economic products ranging from building and construction materials to local beverage. The plant is propagated only by seed. *R. hookeri*-induced dry rot of palm fruits, a storage and field disease, was found to be associated with *Xylaria feejeensis*, *Penicillium dierckxii*, *Botryodiplodia theobromae*, *Aspergillus niger* and *Trichoderma* sp. A total of 309 seeds were examined and 17.48, 23.95 and 27.18% were found to be affected by the disease after two, four weeks and three months of storage, respectively. When healthy fruits were inoculated separately with the various fungi according to Oruade-Dimaro (1989) only *X. feejeensis* produced disease symptoms (dryness and flaky nature of the entire fruit, affecting the testa and embryo). Symptoms began with the growth of a mycelial mat on the fruit scales which gradually penetrated the mesocarp, forming a web of mycelium surrounding it. The Commonwealth Mycological Institute (UK) confirmed the identity of the fungus by processing a partial ITS DNA sample of the organism followed by sequencing (IMI No. 501772). Analysis of the sequence showed top matches at >99% identity to the ITS sequences reported from *X. feejeensis* (Hsieh *et al.*, 2010). This is apparently the first time that *X. feejeensis* has been isolated from *Raphia* palm and the first report of dry rot of *Raphia* palm fruit caused by *X. feejeensis*.

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