

DISEASE NOTE

PRESENCE OF FIG LEAF MOTTLE-ASSOCIATED VIRUS 3 IN AN IRANIAN FIG ORCHARD**E. Norozian¹, F. Rakhshandehroo¹
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Fig leaf mottle-associated virus 3 (FLMaV-3) is a putative member of the family *Closteroviridae* that has been found in fig mosaic disease (FMD) affected fig trees in Turkey (Elci *et al.*, 2012). In May 2014, outdoor fig gardens in Mazandaran province (north of Iran) with FMD symptoms such as leaf mottling and systemic mosaic on young leaves were surveyed and 20 samples were collected from ten fig gardens. Total RNAs were extracted from all twenty samples and healthy fig leaves and used in RT-PCR with primer pair FLMaV-3s F (5'-CTGTATCTGTCATTACCTCTTCGGG-3') and FLMaV-3as R (5'-CTGTATCTGTCATTACCTCTTCGGG-3') designed to amplify part of the heat shock protein 70 homologue (HSP70h) gene of FLMaV-3 (GenBank accession No. EF654103). The expected 375 bp DNA fragment was amplified from one fig sample but not from the others. The DNA amplicon was purified and cloned into pTZ57R/T (MBI Fermentas, Germany) and sequenced. The corresponding sequence of the partial HSP70h gene was deposited in GenBank under accession No. KM516760. BLAST analysis showed that the sequence of the Iranian FLMaV-3 isolate had 96% and 100% identity with an isolate from the USA (GenBank accession No. EF654103) at the nucleotide and amino acid levels, respectively. Various viruses belonging to different genera have been reported in fig trees in Iran (Shahmirzaie *et al.*, 2012; Nouri Ale-Agha and Rakhshandehroo, 2013; Danesh-Amuz *et al.*, 2014), however, to our knowledge, this is the first report of FLMaV-3 naturally infecting fig in Iran.

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FIRST REPORT OF *LEVEILLULA TAURICA* ON *CAPPARIS SPINOSA* IN ITALY**G. Bubici**

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In July 2014, a white fungal efflorescence was observed on the stems and both surfaces of mature and young leaves of a caper plant (*Capparis spinosa*) growing in the Campus of the University of Bari. Light microscope observations revealed the presence of simple or branched conidiophores emerging through leaf stomata, and bearing conidia singly or in short chains. Primary (pyriform) and secondary (cylindrical) conidia, typical of the anamorphic stage of *Leveillula taurica* (Lév.) G. Arnaud, causal agent of powdery mildew (Palti, 1988), measured on average 62.2×20.2 μm (±7.23×±2.18 μm standard deviation). The teleomorphic stage was not observed during three months of observation. A 630-bp PCR amplicon obtained with the ITS1/ITS4 primer pair was sequenced (BMR Genomics, Italy) and deposited in GenBank under the accession No. KP164030 (isolate designated CSP-PUG1). The sequence shared up to 99% homology with several accessions of *L. taurica*, including the one previously reported on caper (AB045002), and other species of the genus. The Koch's postulates were met with a successful pathogenicity test on caper. It is worth noting that, besides this plant, I have never observed powdery mildew on spontaneous caper plants in different Apulian (southern Italy) sites, even when they were growing close to highly susceptible plant species such as *Convolvulus arvensis*. Therefore, the sporadic pathogen occurrence on this plant might be due to microclimatic conditions unusual for caper. Indeed, the diseased plant had grown under a prolonged shading near a building, but caper normally grows in sun-drenched places like stone walls and rocky cliffs. To the best of my knowledge, this is the first report of *L. taurica* on caper in Italy.

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