DISEASE NOTE

FIRST REPORT OF *CLERODENDRON YELLOW MOSAIC VIRUS* INFECTING CROTON

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Croton (*Codiaeum variegatum*; family Euphorbiaceae) is an evergreen shrub grown as a garden hedge in Pakistan. Leaf samples from two croton plants, showing mild leaf curl and yellowing symptoms, and from two symptomless plants were collected in Lahore (Pakistan) during 2012. DNA was extracted from samples by the CTAB method. The presence of a begomovirus was confirmed by amplification of a product of the expected size (*ca.* 2800 nts) in PCR with abutting primers BGAF/BGAR (Tahir *et al.*, 2010), from symptomatic but not from non-symptomatic leaf samples. The PCR product was cloned and sequenced in its entirety with no ambiguity remaining. The complete nucleotide sequence, determined to be 2760 nts, is available in the databases under accession number HE863667. The sequence showed 99.1% nucleotide sequence identity to *Clerodendron yellow mosaic virus* (ClYMV; accession No. EF408037) and thus represents a new variant of ClYMV (Fauquet *et al.*, 2008). Attempts to identify the presence of a second component using primers specific for DNA B BGBF/BGBR (Tahir *et al.*, 2010) and Beta01/02 primers (Briddon *et al.*, 2002) for betasatellites failed to produce an amplification product. Since Croton is a widely grown evergreen plant it may harbor begomoviruses for many years and act as source of inoculum for crops. This is the first report of ClYMV occurring in Pakistan and the first time that this virus has been identified in Croton.

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OUTBREAK OF POWDERY MILDEW CAUSED BY *ERYSIPHE* sp. ON EVENING PRIMROSE IN ITALY

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Oenothera biennis, family Onagraceae, is a biennial species used as border and potted plant. In summer 2011, severe outbreaks of a powdery mildew were observed in a private garden near Biella (northern Italy). Leaves were covered with a dense white mycelium, especially on the adaxial surface, which was also present on stems, pedicels of flowers and bracts. Conidia were hyaline, ellyptical, borne singly, and measured 25.0-38.4×17.8-25.4 (average: 31.5×21.0) µm. Germ tubes were produced terminally. Fibrosin bodies were absent. Conidiophores were erect, with a cylindrical foot cell measuring 18.0-49.4×7.5-9.6 (average: 30.9×8.4) µm, followed by 1-2 shorter cells, measuring 15.5-35.0×8.8-12.8 (average: 22.5×10.5) µm. Chasmothecia were not observed. The ITS region of rDNA was amplified using primers ITS1/ITS4 and sequenced (Altschul *et al.*, 1997) (GenBank accession No. JQ288740). The amplified 603 bp product showed 98% similarity with a comparable sequence of *Erysiphe pisi*. To determine pathogenicity, diseased leaves of *O. biennis* were pressed against leaves of four healthy plants of the same host. Four plants of *Pisum sativum* were also inoculated. Controls consisted of four non-inoculated plants for each tested species. Plants were maintained at temperatures from 23 to 33°C. Symptoms were reproduced only on inoculated plants of *O. biennis*. The pathogen was retained as *Erysiphe* sp. since *P. sativum* remained healthy. *E. howeana* was reported on *O. biennis* in several European countries (Braun, 1995) as well as in New Zealand, while *E. polygoni* was reported in the USA (Farr *et al.*, 1989).

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