DISEASE NOTE

AN OUTBREAK OF *CYCLANEUSMA MINUS* NEEDLE CAST ON SWISS MOUNTAIN PINE (*PINUS UNCINATA*) IN ITALY

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In September 2010, a significant decline of *Pinus uncinata* was observed in a mixed forest of *Larix decidua* and *P. cembra* in Claviere (western Italian Alps). In the forest, which covered about 32 ha and was located between 1800 and 1900 m of elevation (coordinates: 44°56'05.19"N - 6°45'28.46"E), *P. uncinata* accounted for 12% of the trees. The disease affected 85-90% of *P. uncinata* trees belonging to all diameter classes. More than 70% of the trees showed needle yellowing, but the remaining trees showed thin and transparent crowns, and needle cast that progressed from the inner to the outer parts of the twigs. No symptoms were observed on *L. decidua* and *P. cembra*. Twenty symptomatic twigs were collected from 10 randomly selected trees. Needles were placed in Petri dishes containing a sterile piece of filter paper dampened with sterile water and incubated at room temperature for 10-12 days to induce sporulation. After incubation, white to creamy, scattered, elliptical apothecia embedded in yellowed needles were observed. Apothecia produced hyaline, filiform, 2-septate, smooth ascospores 80-90×2.5-3.0 µm in size. Based on these macro- and micro-morphological characters, the fungus was identified as *Cyclaneusma minus* (Butin) Di Cosmo, Peredo et Minter (syn. *Naemacyclus minor* Butin). *C. minus* has been reported both as an endophyte on symptomless *P. uncinata* needles (Sieber *et al.*, 1999) and as a pathogen on needles of several pine species (Millar and Minter, 1980). In Italy, the fungus has previously been observed on *Pinus sylvestris* (Gonthier *et al.*, 2010) but, to our knowledge, this is its first report on *P. uncinata* in this country.

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Received March 21st, 2011
Accepted April 4, 2011

DISEASE NOTE

FIRST REPORT OF A NEW *FUSARIUM OXYSPORUM* CAUSING CARNATION WILT IN COLOMBIA

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During 2008 and 2009, carnation plants of cvs Nelson, Toldo and 99-0-81 growing in the Bogotà plateau (Colombia), showed a progressive blight resembling early senescence that turned into wilting with shrivelled leaves starting from the collar. Affected plants showed discontinuous brownish discolourations of the vascular system, small areas of suberose pith tissue and, eventually, they died. Disease incidence ranged from 10 to 60%. Isolations from symptomatic vascular tissues yielded fungal colonies that produced microconidia 6.6-13.4×2.3-3.8 µm in size, nearly straight 3-septate macroconidia measuring 24.5-39.9×3.0-5.0 µm, and single terminal chlamydospores. Genomic DNA extracted from mycelium was used for amplification of the nuclear ribosomal intergenic spacer sequence (IGS) using primers CNL12 and CNS1 (Mbofung *et al.*, 2007). The purified fragment (~2000 bp) was cloned into pDrive cloning vector (Qiagen, USA), then sequenced with primers T7, SP6,CN61, RU4667, RU3, IGSF4, CNS1, CN12, CNS34, U4667 and NCN61, obtaining a 1,532 bp fragment. The IGS sequence (GenBank accession No. HQ659776) showed an E-value of 0.0 with several *Fusarium oxysporum*, such as *F. oxysporum* f. sp. *pisi*, when blasted in NCBI database. For pathogenicity tests, 10 rooted cuttings of each carnation cv. Dafne, Sorbetto, Toldo, 204-0-38, 205-1-39, inoculated with a conidial suspension (1×10^7 ml^{-1}) and maintained at 26-30°C, developed wilt symptoms 30 days after artificial inoculation. *F. oxysporum* was consistently reisolated from infected plants, whereas non-inoculated controls remained healthy. This is, to our knowledge, the first report of a new *F. oxysporum* on carnation showing symptoms different from those caused by *F. oxysporum* f. sp. *dianthi* (Brayford, 1996).

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Received March 21st, 2011
Accepted March 28, 2011