

DISEASE NOTE

**A LEAF SPOT CAUSED BY
STAGONOSPOROPSIS TRACHELII ON
CAMPANULA TRACHELIUM IN ITALY**

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Campanula trachelium (family Campanulaceae), is widely present in the Italian flora and it is used in gardens for borders. In September 2016, a foliar disease was observed on 10-month-old plants grown in a garden located in the Biella province (northern Italy). Symptoms consisted in extensive chlorosis followed by dark brown, irregular, necrotic spots that extended onto and dried the affected leaves. A fungus was consistently isolated from affected leaf tissues. On oatmeal agar (OA), colonies were first whitish, then greenish olivaceous in the centre and produced spheroid pycnidia 81-287 (mean 138) µm in diameter that contained conidia elliptical to cylindrical in shape, non-septate measuring 3.3-6.7 × 1.1-2.9 (mean 4.4 × 1.8) µm in size. The internal transcribed spacer (ITS) of the isolate DB16SET27 was amplified using the primers ITS1/ITS4 and sequenced (GenBank accession No. KY704321). BLAST analysis (Altschul *et al.*, 1997) showed 99% homology with the sequence of *Stagonosporopsis trachelii* KP136795. For pathogenicity tests mycelial PDA plugs (8 mm in diameter) of the isolate DB16SET27 were applied onto leaves of three 3-month-old plants of *C. trachelium*. Three control plants were treated with PDA dishes only. All the plants were maintained in a humid chamber at a temperatures ranging from 20.7 to 22.5°C. Two days after the appositions of the PDA dishes, the first necrosis appeared around the inoculum. The same fungus used for inoculation was reisolated from affected leaves. Controls remained healthy. *S. trachelii* had already been reported on *Campanula medium* in Italy (Garibaldi *et al.*, 2015), whereas this represents the first report to the same pathogen infecting *C. trachelium* in the same country.

Altschul S.F., Madden T.L., Schaffer A., Zhang Z., Miller W., Lipman D.J., 1997. Gapped BLAST and PSI-BLAST: a new generation of protein database search programme. *Nucleic Acids Research* **25**: 3389-3402.

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**FIRST REPORT OF CAULIFLOWER COLLAR
ROT CAUSED BY *GLOBISPORANGIUM
ULTIMUM* IN ITALY**

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During October 2015, severe symptoms of collar rot were observed in a commercial field of two month-old cauliflower (*Brassica oleracea* L. var. *botrytis*) in BAT province (Apulia, southern Italy). Among several cultivars grown in the same field (6 ha), only cultivar Tipoff F₁ (Bejo) showed disease symptoms with ca. 5% of plants affected. First symptoms appeared on collar tissues and consisted of wide water-soaked lesions which progressively darkened, rotted and extended to the midrib of basal leaves.

Pythium-like colonies were consistently isolated from decayed plants on potato dextrose agar (PDA), and one representative isolate, designated DiSSPA P8, showed morphological characters consistent with those described by van der Plaats-Niterink (1981) for the type specimen CBS 398.51 of *Pythium ultimum* Trow var. *ultimum*, recently renamed *Globisporangium ultimum* (Trow) Uzuhashi, Tojo & Kakish. (Uzuhashi *et al.*, 2010).

The *coxII* gene as well as ITS and D1/D2 regions of rDNA were sequenced and deposited in GenBank under accession Nos. KY753869, KY392755 and KY753868, respectively. Once these sequences were included in the phylogenetic trees constructed by Uzuhashi *et al.* (2010), DiSSPA P8 clustered with *G. ultimum* strain UZ056 with a 99% sequence identity to the corresponding sequences from this isolate.

Furthermore, the representative isolate induced collar rot symptoms, similar to those observed in the field, on six week-old cauliflower plants cv. Tipoff F₁ after two days at 26°C from inoculation with colonized PDA discs on superficially wounded stem.

To the best of our knowledge, this is the first report of collar rot caused by *G. ultimum* on cauliflower in Italy.

Uzuhashi S., Tojo M., Kakishima M., 2010. Phylogeny of the genus *Pythium* and description of new genera. *Mycoscience* **51**: 337-365.

Van der Plaats-Niterink A.J., 1981. Monograph of the genus *Pythium*. *Studies in Mycology* **21**: 1-242.

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