

DISEASE NOTE

***ALTERNARIA ALTERNATA* AS THE
CAUSE OF BUD ROT ON GLOBE
ARTICHOKE REPORTED FOR THE FIRST
TIME IN GREECE**

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A new disease of globe artichoke (*Cynara scolymus*), affecting ca. 50% of the edible portion, was observed during 2011 in Peloponnese (southern Greece). On flower buds, symptoms started as small concentric dark-brown sunken spots, later coalescing and covering the entire surface of the buds, which rotted completely. Single-spore cultures on potato dextrose agar (PDA) gave rise to white colonies which turned to grayish-black and produced verrucose, echinulate or smooth conidia in long chains. Conidia had 1 to 6 transverse and 0 to 2 longitudinal septa and measured 10.4-26.0 × 7.8-15.6 µm (average 18.1 × 10.1 µm). These morphological characteristics conform to those of *Alternaria alternata* (Fr.) Keissl. (Simmons, 2007). The ITS1-5.8S-ITS2 region was amplified with primers ITS1 and ITS4 and sequenced (GenBank Accession No. KT071541). BLAST search revealed 100% homology with sequences of various *A. alternata* isolates (e.g., LN835252). Twenty healthy detached artichoke buds were sprayed with a spore suspension (10⁶ spores/ml), covered with a polyethylene bag for 48 h and incubated in a growth chamber at 25°C. Ten days post inoculation, spots similar to those observed in the field developed on all inoculated buds, while control buds sprayed with sterile water remained symptomless. *A. alternata* was consistently reisolated from inoculated buds. *Alternaria* sp. has been reported on globe artichoke in Brazil, California, Mexico and South Africa (Farr and Rossman, 2015). This is the first report of *A. alternata* as the cause of bud rot on *C. scolymus* in Greece.

Farr D.F., Rossman A.Y., 2015. Fungal Databases, Systematic Mycology and Microbiology Laboratory, ARS, USDA. Retrieved June 12, 2015 from <http://nt.ars-grin.gov/fungaldatabases/>.

Simmons E.G., 2007. *Alternaria*. An Identification Manual. CBS Biodiversity Series, Utrecht, The Netherlands.

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DISEASE NOTE

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

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Campanula medium, family Campanulaceae, is used in borders of gardens and as a cut flower. During the summer 2014, 12-month-old plants grown in a garden near Biella (Northern Italy) showed a severe foliar disease. Approximately 60% of about a hundred plants were affected. Symptoms were extensive chlorosis, followed by the appearance of brown, irregular spots on the leaves. Also stems were damaged, showing longitudinal necrosis. From affected leaves, on PDA, a fungus with a dark olive mycelium at maturity was consistently isolated on potato dextrose agar (PDA) plates. On oat agar (OA), colonies produced dark, spheroid to elongated pycnidia, 75-297 (mean 159) µm in diameter. These contained numerous cylindrical non-septate conidia, measuring 4.1-8.0 × 0.9-2.3 (mean 5.7 × 1.6) µm. The internal transcribed spacer (ITS) was amplified using the primers ITS1/ITS4 and sequenced (GenBank accession No. KP136795). BLAST analysis (Altschul *et al.*, 1997) showed 99% homology with the sequence of *Stagonosporopsis trachelii* (GU237850). For pathogenicity tests a suspension of mycelial fragments was sprayed onto leaves of three healthy plants of *C. medium*. Three controls were inoculated with sterile water. Plants were covered with plastic bags. The first foliar lesions developed on leaves three days post inoculation. The fungus reisolated from leaf lesions was identical in morphology to the isolate used for inoculation. Controls remained healthy. This is the first report of *S. trachelii* on *C. medium* in Italy.

Altschul S. F., Madden T. L., Schaffer A. 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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