



# First report of powdery mildew caused by *Erysiphe elevata* on *Catalpa bignonioides* in Turkey

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*Catalpa bignonioides* is planted as a shade tree in Turkey. In autumn 2017, typical powdery mildew signs on leaves of *C. bignonioides* were observed on the main campus (Kurupelit) of Ondokuz Mayıs University (OMU) in Samsun, Turkey. The signs consisted of white superficial mycelia and chasmothecia on almost all upper surfaces of the leaves. Fructification structures and spores of the pathogen were examined microscopically. Conidia were produced singly on the conidiophores, and measured 25–30 × 11–14 μm. Chasmothecia were 80–130 μm in diameter with six to eight appendages, 100–340 μm in length. Each chasmothecium contained four to seven asci, 49–61 × 28–43 μm, short-stalked or sessile, containing 3–5 ascospores (14–25 × 10–15 μm in length). Based on these characteristics, the fungus was identified as *Erysiphe elevata* (Ale-Agha et al. 2004) and deposited in the herbarium of OMU (accession Samsun\_02). To confirm the morphological identification, the internal transcribed spacer (ITS) region of rDNA of the representative isolate was amplified with primers ITS5 and P3 (Takamatsu et al. 2009) and sequenced. The resulting 691-bp ITS sequence was deposited in GenBank (Accession No. MG601548). A BLAST search of the sequence showed >99% similarity with that of *E. elevata* (AY808059). A pathogenicity test was conducted by pressing a leaf of *C. bignonioides* with heavy sporulation onto

five young healthy leaves at the tip of three different shoots of the same species, under natural conditions in a location where the disease was not observed. Uninfected leaves with similar features were used as controls. Powdery mildew signs including conidia and conidiophores were observed on inoculated leaves after 10–15 days, while no signs developed on leaves of control trees. To our knowledge this is the first report of *E. elevata* causing powdery mildew disease on *C. bignonioides* in Turkey.

## Compliance with ethical standards

**Competing interests** The authors declare that they have no competing interests.

## References

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