First report of *Neofusicoccum parvum* causing stem blight and dieback of *Osmanthus fragrans* in China

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Osmanthus fragrans (Thunb.) Lour is cultivated as an ornamental plant and has high economic value with market potential in China. In September of 2020, symptoms of stem blight were observed on *O. fragrans* in Kunming City. Symptoms included stem and twig dieback, and extensive vascular discoloration. A total of 217 plants were investigated, among which the disease incidence was 13.6%. Samples from plants with symptoms were surface sterilized with 2% sodium hypochlorite and then 75% ethanol, plated on potato dextrose agar (PDA), and incubated at 28 °C. Fungal colonies developed copious white aerial mycelium that became dark grey after five days, and formed black pycnidia after 23 days. Conidia forming on PDA were one-celled, fusiform to ellipsoidal, externally smooth and thin walled, with dimensions of 13.5–17.8 × 4.1–6.3 (average 14.2 × 5.3 μm). Sequencing of ITS1–5.8S–ITS2, β-tubulin, and EF1-α were performed. BLAST searches at GenBank showed the highest nucleotide sequence identity with *Neofusicoccum parvum* reference sequence (ITS: 100%, MH988433; β-tubulin: 100%, MK563987; EF1-α: 98.08%, KP183186). Representative sequences of isolates from these regions were deposited in GenBank (ITS: MW617270; β-tubulin: MW625871; EF1-α: MW625870). Based on the multigene phylogeny and morphology, isolates were identified as *N. parvum*. Pathogenicity tests were conducted by stem inoculation of 2-year-old *O. fragrans* seedlings. Inoculated and control seedlings were

kept in the greenhouse. After 30 days, all the inoculated plants showed tissue discoloration and leaf wilting, but none of the control. *N. parvum* was reisolated from symptomatic tissues, thus fulfilling Koch's postulates. *N. parvum* has been reported as a pathogen causing stem dieback and branch canker on *Platanus × acerifolia* (Yu et al. 2018), peach (Zhang et al. 2019) and Hemp (Feng et al. 2020). To our knowledge, this is the first report of *N. parvum* on *O. fragrans* in China as well as worldwide.

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Declarations

Ethical approval This article does not contain any studies with human participants or animals performed by any of the authors.

Conflict of interest The authors declare that they have no conflict of interest.

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