

## FIRST REPORT OF *COLLETOTRICHUM GLOEOSPORIOIDES* ON *JASMINUM GRANDIFLORUM* IN INDIA

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**Abstract:** Anthracnose disease symptoms were observed on *Jasminum grandiflorum*. The spots were dark red and mostly irregular shaped lesions on leaves. Acervuli containing masses of spores and dark setae were observed within lesions. The fungus after purification was identified as *Colletotrichum gloeosporioides*. This is the first report from India and elsewhere showing that *C. gloeosporioides* causes anthracnose on *J. grandiflorum*.

**Key words:** anthracnose, *Jasminum grandiflorum*, *Colletotrichum gloeosporioides*

*Jasminum grandiflorum* Linn. (Oleaceae) is commonly known as Jasmine. It is well known as a glabrous twining shrub widely grown in gardens throughout India. Its leaves are mostly ternate or pinnate; the flowers are usually white with an acrid, bitter sharp taste. The leaves are useful for treating diseases of the mouth and teeth, especially for toothaches (Kirtikar and Basu 1993).

The *J. grandiflorum* flowers and leaves are largely used in folk medicine to prevent and treat breast cancer. It is widely used in the Aurveda for its anti-ulcerative and anti-leprotic qualities as well as for skin diseases and wound healing (Joshi 2000).



Fig. 1. Anthracnose symptoms on leaves of *J. grandiflorum*

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After the post-rainy season, an estimated 40% of the *J. grandiflorum* surveyed in Jaipur, India were infected with *Colletotrichum gloeosporioides* (Penz.) Penz. & Sacc. Symptoms included dark red mostly irregular shaped lesions on leaves (Fig. 1). Acervuli containing masses of spores and dark setae were observed within lesions. Infected tissues were dipped into 0.2% sodium hypochlorite for 5 sec, blotted dry, embedded in water agar, and incubated at 25±1°C. Hyphal tips that grew from lesions were transferred to Potato Dextrose Agar (PDA) and incubated under cool-white fluorescent lights. Developing colonies were gray and contained masses of orange conidia. Conidia were straight with rounded or bulbous ends. These morphological characteristics of the isolate were consistent with the description of *C. gloeosporioides* (Sutton 1992). The Fungal Identification Service, Mycology and Plant Pathology Group, Agharkar Research Institute Pune, India (Accession No. 1034) confirmed the identity. Pathogenicity was proved by completing Koch's postulates. Conidia obtained from 5-day-old PDA culture were suspended in sterile distilled water (SDW) to 10<sup>4</sup> conidia/ml. These suspensions were sprayed with hand sprayers on *J. grandiflorum* leaves till runoff. Leaves were covered with plastic bags for 48 h. Within 5 days, lesions

developed on inoculated leaves. The fungus was re-isolated from acervuli that developed on the leaves following the previously outlined procedures. Inoculation tests were repeated once. Symptoms did not appear on controls sprayed with SDW. *C. gloeosporioides* was reported on *Jasminum sambac* Soland in Bhubneshwar, Orissa (Gupta *et al.* 1985). However, on the basis of the literature, this is the first report from India and elsewhere, showing that *C. gloeosporioides* causes anthracnose on *J. grandiflorum*.

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