

A new leaf blight disease of *Tabernaemontana coronaria*

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A severe leaf spot disease was found in *Tabernaemontana coronaria*, which leads to the twig blight. The fungus and host constitutes new record for India. Symptoms on the host and morphology of the fungus is described.

Key words: Blight, *Phytophthora*, *Tabernaemontana coronaria*

A severe leaf spot and blight disease of *Tabernaemontana coronaria* a most popular ornamental plant belongs to family Apocynaceae was observed by writers during the monsoon months of 1991 and since then the disease recurring every year in many gardens, surrounding JNKVV campus Jabalpur. An examination of the diseased lesions revealed the presence of abundant hyaline pear spore sporangia characteristic of the genus *Phytophthora*. A perusal of the available relevant literature showed no report of the fungus on this plant (Bilgrami *et al.*, 1991). The present paper briefly deals with the morphological characters of the fungus.

The infection usually starts in the form of small, irregular hydrotic spots on any part of the leaf lamina but mostly from the margins or tips of lower leaves. Finally the leaves show a typical blighted appearance and drop down. Within a week the disease cover the whole twig which shown blackened drooping of branches. In congenial conditions the entire leaf was covered with white downy growth consisting of sporangiophores and sporangia of the pathogen. Isolation from such hydrotic spots repeatedly yielded a pure culture of a species of *Phytophthora* on oat meal agar medium, which proved highly pathogenic to healthy leaves of *Tabernaemontana coronaria* resulting in typical symptoms within 72 hrs. Reisolations from such spots yielded the same fungus. The culture was maintained on oat meal agar on which it exhib-

ited finely radiate growth. Hyphae hyaline, coenocytic, broad and tuberculate, measuring 6 or 7 μm in diameter. It produced abundant crop of deciduous sporangia in water within 24 hrs. Sporangiophores very thin, irregularly branched with a swelling at the size broadly ovoid to elongated, average 31 to 65 X 31 to 35 sometimes 90 X 60 μm , papilla hemispherical, apical thickening upto 4 μm . Sporangia often distorted and with more than one apex (Fig. 1). Chlamyospore produced in old cultures, 22-34 μm in diameter but oospores never formed.

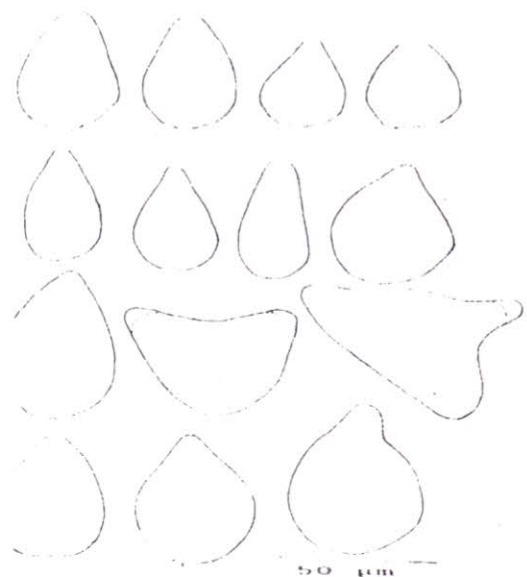


Fig. 1: Sporangia of *Phytophthora citrophthora* on oat meal agar medium.

The cardinal temperature for growth in dark : minimum 5°C, optimum 25-28°C and maximum 32°C on oat meal agar medium, although the isolate also grew well on carrot agar, hemp seed agar, french bean agar, rape seed agar, corn meal agar and pigeonpea dal agar media with few sporangia. Considering the detailed morphological characters, the fungus was tentatively identified as *Phytophthora citrophthora* (Smith & Smith) Leonian. It was further confirmed by Dr. M.D. Coffey and deposited at ATCC Riverside.

The disease herein described constitute a new record for India.

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