Research Article

NEW LEAF SPOT DISEASE CAUSED BY *Paraconiothyrium variabile* ON *Vanda* ORCHID IN INDIA

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ABSTRACT

Vanda is a high value tropical orchid gaining huge popularity due to its great aesthetic value. In January 2018, new leaf spot disease with initial symptoms characterized by round to ovoid spots of irregular size (0.3-0.5cm) was observed on *Vanda* sp. of orchid in a nursery at Nadia District, West Bengal, India (23º16´98´´N, 88º51´60´´E). Disease incidence and severity were 9.0% and 15.3%, respectively. The fungus was isolated from the diseased leaves and tentatively identified as *Paraconiothyrium variabile* based on cultural and morphological characteristics such as spore and pycnidial characters. Partial DNA sequences of the ITS1 and ITS4 of the rRNA gene of Small Sub Unit (SSU) of two representative isolates M-A. Basu and AB were found to be 100% similar with that of *Paraconiothyrium variabile* strain KF027 (Accession number: KM096133) obtained from NCBI database. Phylogenetic analysis using the internal transcribed spacer (ITS) region sequences indicated that two isolate M-A. Basu (ON076866) and AB (ON204526) were closely related with *Paraconiothyrium variabile* KM096133 and clustered together as a single group with *Paraconiothyrium variabile* KM096140 from Italy, MT328169 from USA, NG064914 from South Africa and HM150641 from Iran. Isolates M-A. Basu and AB were found to be pathogenic on the *Vanda* orchid. This is the first report of *Paraconiothyrium variabile* as the causal organism of leaf spot disease in *Vanda* orchid in India.

KEYWORDS: *Paraconiothyrium variabile*, leaf spot, *Vanda*, orchid, New report