



First report of *Colletotrichum siamense* from Andaman and Nicobar Islands causing anthracnose in chilli

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Chilli (*Capsicum annuum*) is a rich source of vitamin C and carotene and an essential spice in cuisine worldwide (Bosland and Votava 2003), and also in Andaman and Nicobar Islands, India. In recent years, anthracnose disease has become a serious problem in chilli fields of the islands which covers about one third of solanaceous vegetable cultivation. In this study, fungal cultures from typical anthracnose infected chilli leaves collected during June 2017 were isolated and purified on potato dextrose agar as per standard methods. Based on spore characters all were confirmed as *Colletotrichum* spp. A representative isolate (Cg_Mg3) was used for further analysis. In culture, mycelium was off-white, non-chromogenic and the conidia were hyaline, clavate to cylindrical, measuring about 9.8–12.64 μm \times 2.4–3.12 μm ($n = 20$) and in later stages black setae were produced in culture. The identity of the isolate was further confirmed via multilocus analysis (Weir et al. 2012) with four genes viz., internal transcribed spacer (ITS), actin (ACT), chalcone synthetase (CHS), histone (H3). The sequence analysis revealed 99% - 100% sequence match with the *Colletotrichum siamense* sequences of NCBI. The original sequences were submitted to NCBI GenBank with the following accession numbers: KX449536 (ITS); MG561758 (ACT); MG561759 (CHS); and MG561760 (H3) which had 99–100% identity

with reference gene sequences MH151141 (ITS); JX009435 (ACT); JX009782 (CHS); JQ894634 (H3) respectively. Pathogenicity assays were performed on chilli fruits in vitro, to prove Koch postulates. Spores recovered from inoculated chilli fruits showed mycelial and spore characters similar to those of *Colletotrichum siamense*. The fungal culture has been deposited to national fungal culture collection center (NFCCI), Pune, India (<http://nfcci.aripune.org/>) with the accession number 4308. To the best of our knowledge this is the first report of anthracnose caused by *Colletotrichum siamense* in chilli from Andaman & Nicobar Islands.

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