

Phyllosticta capitalensis, a widespread endophyte of plants

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Abstract *Phyllosticta capitalensis* is an endophyte and weak plant pathogen with a worldwide distribution presently known from 70 plant families. This study isolated *P. capitalensis* from different host plants in northern Thailand, and determined their different life modes. Thirty strains of *P. capitalensis* were isolated as endophytes from 20 hosts. An additional 30 strains of *P. capitalensis* from other hosts and geographic locations were also obtained from established culture collections. Phylogenetic analysis using ITS, ACT and TEF gene data confirmed the identity of all isolates. Pathogenicity tests with five strains of *P. capitalensis* originating from different hosts were completed on their respective host plants. In all cases there was no infection of healthy leaves, indicating that this endophyte does not cause disease on healthy, unstressed host plants. That *P. capitalensis* is often isolated as an endophyte has important implications in fungal biology and plant health. Due to its endophytic nature, *P.*

capitalensis is commonly found associated with lesions of plants, and often incorrectly identified as a species of quarantine importance, which again has implications for trade in agricultural and forestry production.

Keywords *Guignardia* · Leaf spot · Morphology · Molecular phylogeny · Quarantine

Introduction

Species in the genus *Phyllosticta* are mostly plant pathogens of a wide range of hosts and are responsible for diseases including leaf spots and black spots on fruits (Wulandari et al. 2009; Glienke et al. 2011; Wang et al. 2012). There are about 3,200 names listed for the genus *Phyllosticta* in Index

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