Phytotaxa 126 (1): 22–30 (2013)
www.mapress.com/phytotaxa/

Article

ISSN 1179-3155 (print edition)
PHYTOTAXA
ISSN 1179-3163 (online edition)

http://dx.doi.org/10.11646/phytotaxa.126.1.2

Two new species of *Pestalotiopsis* from Southern China

YU SONG[1], KUN GENG[1,3], BIN ZHANG[1], KEVIN D. HYDE[4,5], WEN-SHENG ZHAO[2], JI-GUANG WEI[6], JI-CHUAN KANG[7] & YONG WANG[1]

1 Department of Plant Pathology, Agriculture College, Guizhou University, 550025, People's Republic of China
email: yongwangbis@yahoo.cn
2 Department of Plant Pathology, China Agricultural University, Beijing 100193, People's Republic of China
email: mppzhaws@cau.edu.cn
3 Plant Protection and Quarantine Station, Guiyang City, 550081, People's Republic of China
4 Institute of Excellence in Fungal Research, Mae Fah Luang University, Chiang Rai 57100, Thailand
5 School of Science, Mae Fah Luang University, Chiang Rai 57100, Thailand
6 College of Agriculture, Guangxi University, Nanning 530005, People's Republic of China
7 Guizhou Biochem-engineering Research Center, Guizhou University, 550025, China
Song Y and Geng K contributed equally to this work.

Abstract

Three *Pestalotiopsis* isolates were obtained from leaves of *Coffea arabica* and *Rhodomyrtus tomentosa*. Among them, two isolates produced versicolorous conidia, and the other produced concolorous conidia. Phylogenetic analysis based on a combination of ITS, β-tubulin and *tef*1 gene sequence data clearly confirms that they belong to two species and distinguishes them from other species in this genus, with ex-type sequence data in GenBank. On the basis of evidence from morphology and molecular phylogeny they are described as new species, *Pestalotiopsis coffeae-arabicae sp. nov.* and *P. rhodomyrtus sp. nov.*

Key words: coelomycetes, phylogeny, taxonomy

Introduction

Species in the genus *Pestalotiopsis* have received much attention in recent years, not only because of their role as plant pathogens, but also as common endophytes, which have been shown to produce a wide range of chemically novel metabolites (Xu *et al*. 2010, Debbab *et al*. 2011, 2012, Maharachchikumbura *et al*. 2011, 2013). We surveyed the *Pestalotiopsis* diversity in southern China. Among them were two undescribed species, described below, which were isolated from *Coffea arabica* and *Rhodomyrtus tomentosa* leaves. Morphological details are provided and a comparison made with related species. Molecular characteristics based on the DNA sequences of three gene loci (ITS, β-tubulin and *tef1*) were also determined.

Materials & Methods

Morphological and cultural studies

Diseased leaves of *Coffea arabica* and healthy leaves of *Rhodomyrtus tomentosa* were collected from Hainan and Guangxi Provinces. Leaf samples were placed in clean paper bags and symptoms were recorded. A single conidium culture technique was performed to obtain pure colonies of the fungi following the method outlined in Chomnunti *et al.* (2011). The colonies were transferred to 2% potato-dextrose agar (PDA) medium and incubated at room temperature (25°C). Sporulation was induced using sterilized carnation leaves, which were aseptically placed on the surface of the medium with growing mycelium. The morphology of fungal colonies was recorded following the method of Hu *et al*. (2007). Fungal mycelium and spores were observed under a

 Accepted by Eric Mckenzie: 19 July 2013; published: 26 August 2013