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New species of Graphidaceae (Ostropales, Lecanoromycetes) from southern Thailand

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Abstract

Fourteen species of the lichen family Graphidaceae from southern Thailand are described as new, namely *Creographa subbrasiliensis*, which is similar to *C. brasiliensis* but without chemistry; *Diorygma angusticarpum,* which differs from *D. hieroglyphicum* by a I+ blue hymenium and lirellae with a slit-like disc; *D. chumphonense*, distinguished by its small, densely muriform ascospores and production of salazinic and norstictic acids; *D. citri*, distinguished by a I- hymenium and a complex chemistry including salazinic and hypostictic acids as major metabolites; *D. conprotocetraricum*, which is unique by its chemistry, i.e. conprotocetraric acid as a major substance; *D. fuscopruinosum* with a brown pruina on the disc of the apothecium and comparatively small ascospores; *D. hieroglyphicellum*, which is similar to *D. hieroglyphicum* but differs by much smaller ascospores; *D. inexpectatum*, which is distinguished by its chemistry (salazinic and hypostictic acids) and a I+ blue hymenium; *D. salazinicum*, separated from *D. pruinosum* by its rare chemistry (stictic and salazinic acids as ± major metabolites); *D. subpruinosum*, distinguished by often 2-spored asci and protocetraric and hypostictic acids as major constituents; *D. thailandicum*, which is similar to *D. pruinosum*, but differs by protocetraric and stictic acid as major metabolites; *Graphis australosiamensis*, distinguished by one muriform ascospore per ascus, a laterally carbonized exciple and norstictic acid in the thallus; *Ocellularia palianensis*, distinguished by small, transversely septate ascospores and by producing two unknown substances; and *Platygramme microspora*, which is distinguished by very small transseptate ascospores and producing stictic acid and its satellites.

Key words: Asia, lichenized Ascomycota

Introduction

About 310 species of Graphidaceae are currently known from Thailand (Aptroot & Sparrius 2013). This number is rather high if taken into account that for Australia, where the Graphidaceae biota is well explored, ca. 340 species are reported (Archer 2009; Mangold *et al.* 2009). By far the most collections of the members of this family in Thailand originate from central and northern regions of the country or cover only the former Thelotremataceae or Graphidaceae, which are now united in one family (Homchantara 1999; Homchantara & Coppins 2002; Sutjaritturakan 2002; Poengsungnoen 2010; Mongkolsuk & Poengsungnoen 2012). The south is lichenologically rather unexplored (Amataviwat 1993). To remedy this fact, the first author undertook a large number of collecting trips, spanning twelve provinces in southern Thailand and gathering more than 3000 specimens of the family Graphidaceae. Several new taxa discovered in this material are formally introduced here, focusing on the genus *Diorygma*. The high number of new *Diorygma* species seems astonishing, especially after the world-monograph by Kalb *et al.* (2004) and the subsequent additions to this genus by Indian lichenologists (Sharma & Makhia 2009a, b; Makhia *et al.* 2009; Sharma & Khadilkar, 2012). Within a few years, 16 new species were described in these papers

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