



## A further study on *Inonotus linteus* complex (Hymenochaetales, Basidiomycota) in tropical America

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### Abstract

Based on morphological and phylogenetic data, two new species in the *Inonotus linteus* complex (Hymenochaetales, Basidiomycota), *Inonotus pseudolinteus* and *I. sideroxylicola*, are described from tropical America. In addition, a new combination, *Inonotus dependens*, is proposed. Previously, the species was treated as *Phellinus dependens* (Murrill) Ryvarden. However, it is phylogenetically related to the *Inonotus linteus* complex. Its description is given based on our recent collections. An identification key to tropical species of *Inonotus linteus* complex is provided.

**Key words:** Hymenochaetales, *Inonotus dependens*, *Inonotus pseudolinteus*, *Inonotus sideroxylicola*, phylogeny, taxonomy

### Introduction

The *Inonotus linteus* complex has been recently studied (Dai and Xu 1998, Wu et al. 2012, Tian et al. 2013) because of its medicinal values (Dai et al. 2009, Jeon et al. 2011), and several new species and combinations have been described from Asia (Dai 2010, Wu et al. 2012, Tian et al. 2013). The species diversity of the complex is not well investigated in tropical America. However, *Inonotus cubensis* Y.C. Dai, Decock & L.W. Zhou in Tian et al. (2013: 163) has recently been described from Central America (Tian et al. 2013). During the study on recent collections of *Phellinus* Qué. in Quélet (1886: 172) and *Inonotus* P. Karst. in Karsten (1879: 39) from tropical America, two new species belonging to the *Inonotus linteus* complex were identified based on both morphological and molecular data, and they are described in the present paper. In addition, *Phellinus dependens* (Murrill 1908: 106) Ryvarden (1972: 234), described by Murrill (1908) and treated in *Phellinus* by Ryvarden (1972), was found closely related to the *Inonotus linteus* complex based on the current phylogenetic analysis.

### Materials and Methods

#### *Morphological studies*

The studied specimens are deposited at the private herbarium of J. Vlasák (JV) with duplicates in the Prague Museum Herbarium, Czech Republic (PRM), and herbarium of Beijing Forestry University (BJFC). The microscopic procedure follows Zhao and Cui (2012). The microscopic characters were studied under a Nikon 80i microscope at magnifications of up to 1000×. Drawings were made with the aid of a drawing tube. The measurements and drawings were made from slide preparations stained with Cotton Blue in Lactic acid and