



## Ten new species of corticolous pyrenocarpous lichens from NE Brazil

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### Abstract

Ten corticolous pyrenocarpous lichens are newly described from different forest biomes in NE Brazil. All were collected in the past two years in Atlantic rain forest or Caatinga vegetation in Pernambuco or Sergipe. The following species are described: *Anisomeridium globosum*, *Pyrenula abditicarpa*, *P. albonigra*, *P. aurantiacorubra*, *P. celaticarpa*, *P. cinnabarina*, *P. inspersicollaris*, *P. musaespora*, *P. rubrolateralis*, and *Thelenella lateralis*.

**Keywords:** Atlantic rain forest, *Anisomeridium*, Caatinga, Pernambuco, *Pyrenula*, Sergipe, *Thelenella*

### Introduction

In tropical forests, pyrenocarpous lichens are one of the dominant lichen groups, together with Ostropales and Arthoniales. The forests of equatorial Brazil are exceptionally rich in corticolous pyrenocarpous species. Following a recent surge in collecting activity, many new species have been published in the last two years (Aptroot *et al.* 2012; Aptroot *et al.* 2013; Cáceres *et al.* 2013; Lima *et al.* 2013; Aptroot *et al.* 2014).

The renewed interest in pyrenocarpous lichens is partly a result of the many ecological studies carried out recently for various Master's dissertations in Northeastern Brazil, under the guidance of the last author, where every different lichen species on each investigated tree should be collected and ultimately named. It also helps that a world key (Aptroot 2012) was published for the largest genus, *Pyrenula* Ach. (Acharius 1814: 117). Still, numerous additional new species were found in the past years, including yet more *Pyrenula* species and a variety of other pyrenocarpous lichens.

The purpose of this paper is to formally describe these new species, which names can subsequently be used in ecological studies, but also serves to describe the biodiversity in different forest biomes in Brazil. The present paper describes species found in Atlantic rain forests or in Caatinga. At the moment, most of the species described here are only known from one specimen or locality. However, they are generally morphologically well characterized. There is no doubt that most will be found on other locations, once they are described. Many of the species that were described by us in the past two years from Brazil have already been found more often; several of them also in other states. Even some species described from Rondônia, in the Brazilian Amazon, have been found in Sergipe and/or Pernambuco, which are areas thousands of kilometers apart and with a different vegetation, within one year after they were described; some were even already found in other countries. Some of these species turned out to be locally common and dozens of specimens are now known. The actual description actually facilitates their subsequent recognition in other studies and is a strong argument in favour of describing characteristic species even though only one specimen is known. Details about undescribed species are usually only known to one or a few people and accumulation of such information until more specimens are known from every species is contra-productive.

**Additional specimen examined:**—BRAZIL. **Sergipe:** Aracaju, Parque da Cidade Governador José Rollemberg Leite; 10°52'57"S, 37°03'10"W; alt. *c.* 75 m; on bark of tree; 15 September 2013, *M.E.S. Cáceres & A. Aptroot* 18217 (ISE; ABL, topotypes).

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