



<http://dx.doi.org/10.11646/phytotaxa.236.3.4>

## *Mutinus albo truncatus* (Phallales, Agaricomycetes), a new phalloid from the Brazilian semiarid, and a key to the world species

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### Abstract

A new species of the genus *Mutinus* has been found in the semiarid region of Northeastern Brazil. *Mutinus albo truncatus* is described macro- and microscopically, and is characterized by the white pseudostipe and truncated apex. Molecular and ecological data are also provided. Phylogenetic analyses, based on LSU (large subunit of nuclear ribosomal DNA) and *atp6* (subunit 6 of ATP synthase) sequences, support the inclusion of this new species in the genus *Mutinus*. A provisional key to the species of *Mutinus* known in the world is proposed.

**Key words:** Gasteromycetes, fungal taxonomy, phalloid fungi, phylogeny, stinkhorns

### Introduction

The genus *Mutinus* Fries (1849: 434) belongs to the family Phallaceae Corda (1842: 29), of the order Phallales Fischer (1898: 276), and the Subclass Phallomycetidae Hosaka, Castellano & Spatafora (2006: 955) (Hosaka *et al.* 2006). It is characterized by presenting a globose to ovoid, white to yellowish immature basidiome basally attached by white rhizomorphs; with a mucilaginous layer inside, splitting at the apex into two or three lobes and finally collapsing against the base of the spongy pseudostipe, cylindrical to fusiform, hollow, perforated or not at the tip; gleba mucilaginous, covering the apical portion of the pseudostipe; and elliptical and smooth basidiospores (Bottomley 1948, Dring 1964, Liu 1984, Pegler *et al.* 1995, Calonge 1998).

Cunningham (1944) separates the species of the genus into three sections: *Glabrosi*, characterized by the fertile portion smooth or rugulose; *Granulosi*, with fertile portion with irregular pseudoparenchymatous processes, appearing pseudo-reticulate; and *Tuberculosisi*, with fertile portion covered with digitate processes. *Mutinus* is close to *Phallus* Junius ex Linnaeus (1753: 1178), differing by the presence of gleba on the receptacle on the apical part of the pseudostipe in *Phallus* (Calonge 1998).

According to Index Fungorum (<http://www.indexfungorum.org/Names/Names.asp>—accessed April 2015) and MycoBank (<http://www.mycobank.org/>—accessed April 2015) there are 36 species of *Mutinus* described to date. *Mutinus caninus* (Huds.) Fries (1849: 434) is the type species of the genus and six synonyms may be considered: *Aedycia* Rafinesque (1808: 358), *Caromyxa* Montagne (1856: 281), *Corynites* Berk. & M.A. Curtis (1853: 136), *Cynophallus* (Fr.) Corda (1842: 29), *Floccomutinus* Hennings (1895: 109), and *Jansia* Penzig (1899: 139) (Kirk *et al.* 2008). The genera *Jansia* and *Floccomutinus* have been shown molecularly to belong to the genus *Mutinus* (Degreef *et al.* 2013, Trierveiler-Pereira *et al.* 2014).