



Taxonomy, conservation, geographic and potential distribution of *Macrotorus* Perkins (Mollinedioideae, Monimiaceae), and a key to the Neotropical genera of Monimiaceae

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Abstract

Macrotorus is a dioecious, monotypic genus that is endemic to the Brazilian Atlantic rainforest, where it occurs in lowland, submontane and montane forests; different from most other Monimiaceae in Atlantic rainforest, which are restricted to dense, humid, montane forests. Here, an updated description of *Macrotorus utriculatus* is provided, including the first description of the pistillate flowers, together with the lectotypification of the species, comparison with related genera, its conservation status, geographic distribution, and modeling of potential distribution. We also provide an identification key to the Neotropical genera of Monimiaceae.

Resumo

Macrotorus é um gênero dióico, monotípico, endêmico da Mata Atlântica brasileira, onde ocorre em florestas de tabuleiro, e floresta ombrófila densa montana e submontana, diferentemente da maioria das Monimiaceae da Mata Atlântica, que são restritas a floresta ombrófila densa montana. Neste trabalho é provida uma descrição atualizada de *Macrotorus utriculatus*, incluindo pela primeira vez as flores pistiladas da espécie, tipificação, comparação com gêneros relacionados, avaliação de risco, distribuição geográfica, e modelagem da distribuição potencial. Uma chave de identificação dos gêneros neotropicais de Monimiaceae também é fornecida.

Introduction

The family Monimiaceae is pantropical, with 28 genera and 195–200 species (Renner *et al.* 2010). Currently, the family comprises three subfamilies supported by morphology and molecular analyses: Hortonioideae, Monimioideae and Mollinedioideae (Philipson 1993, Romanov *et al.*, 2007, Renner *et al.* 2010). In the Neotropics, Monimiaceae are represented by one monotypic genus of the subfamily Monimioideae, *Peumus boldus* Molina (1782: 185) and five genera of the subfamily Mollinedioideae, three of them monotypic, *Grazielanthus arkeocarpus* Peixoto & Pereira-Moura (2008: 138), *Hennecartia omphalandra* Poisson (1885: 41) and *Macrotorus utriculatus* (Martius ex Tulasne 1857: 319) Perkins (1898: 561), as well as *Macropeplus* Perkins (1898: 556) with four species (Santos & Peixoto 2001) and *Mollinedia* Ruiz & Pavón (1794: 83) with ca. 60 species (Peixoto 1987).

Macrotorus utriculatus (Mart. ex Tul.) Perkins was first described as a species of *Mollinedia*, based on material with staminate flowers (Tulasne, 1857). Perkins (1898) considered the species as a new genus, because she thought that its long urceolate receptacle, small tepals in the staminate flowers (length of tepals with 1/9 to 1/11 of the length of the receptacle) and the circular anther dehiscence did not fit *Mollinedia*. Perkins (1898) included *Macrotorus* in the tribe Mollinedieae, along with *Mollinedia* and *Macropeplus*, surely because the species had originally been placed in *Mollinedia* and resembled that genus in its habit and leaves.

Philipson (1987, 1993), in classification of the Monimiaceae, considered *Macrotorus* as probably a member of Mollinedieae, because it was insufficiently known. Peixoto *et al.* (2002), in the Monimiaceae account for the flora of São Paulo, Brazil, described for the first time the fruits of the species. Peixoto & Pereira-Moura (2008) compared morphologically *Macrotorus* with *Grazielanthus*, and accepted the inclusion of *Macrotorus* in the tribe Mollinedieae, as previously proposed by Perkins (1898).