

Five new species of *Miconia* (Melastomataceae) from the Central Peruvian Andes

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Abstract

We describe five new species of *Miconia* (Melastomataceae) from Yanachaga Chemillén National Park and vicinity in Pasco, Peru: *Miconia cardenasiae*, *Miconia chemillensis*, *Miconia humifusa*, *Miconia odoratissima*, and *Miconia pozuzoana*. These species occur across a range of ecological habitats in the central Andes of Peru. Two of these species exhibit modifications for plant-arthropod interactions as leaf domatia and one of them has hollow stems. The number of previously undescribed species presented here from a relatively small area underscores the continued need for alpha taxonomy in the tropical Andes. Based on restricted distribution and habitat degradation pressure, we recommend that all species be categorized as either Endangered or Critically Endangered under IUCN guidelines.

Resumen

Se describen cinco especies nuevas de *Miconia* (Melastomataceae) del Parque Nacional Yanachaga Chemillén y sus alrededores en Pasco, Perú: *Miconia cardenasiae*, *Miconia chemillensis*, *Miconia humifusa*, *Miconia odoratissima*, *Miconia pozuzoana*. Estas especies ocurren a lo largo de un gran rango de hábitats en los Andes centrales de Perú. Dos de estas especies exhiben modificaciones para interacciones planta-artrópodo en forma de acarodomacios y una de ellas tiene tallos huecos. La cantidad de especies nuevas presentadas en este estudio proveniente de un área tan pequeña enfatiza la necesidad de trabajos de alfa taxonomía en los Andes tropicales. Basado en la distribución restringida y la presión de degradación del hábitat de todas estas especies, recomendamos que sean categorizadas como En Peligro o En Peligro Crítico bajo las categorías de la IUCN.

Introduction

The Melastomataceae are comprised of about 5000 species in 150–166 genera of mostly trees and shrubs, but also lianas and herbs (Renner 1993). Of these over 3500 species are present in the Neotropics, often as important elements both in number of species and individuals in most humid forest environments (Renner 1990, Tuomisto & Ruokolainen 1994). Within Latin America the family has been the object of several floras and/or checklists (e.g. Wurdack 1973, 1980, Wurdack *et al.* 1993, Almeda *et al.* 2007, Almeda 2009), but remains poorly studied in Peru. The last comprehensive treatment of the family for Peru was that of Macbride (1941), in which he cited 504 species for the country. More recently these numbers have increased to 43 genera and 660 species (Brako & Zarucchi 1993, Ulloa-Ulloa *et al.* 2004), of which 169 species are endemic (Leon 2006). However, ongoing work for the PBI-Miconieae project (Michelangeli *et al.* 2009 onwards) has shown that these numbers are a gross underestimate.

During an inventory of *Miconia* Ruiz & Pavon (1794: 60) for the Yanachaga Chemillén National Park the first author registered 113 species (Cárdenas 2007). Of these, two were immediately identified as new to science and three others were later found to also be undescribed when the first author consulted the herbarium at The New York Botanical Garden in February 2013. The facts that two of these five new species are only known from the type, and that the number of Melastomataceae collections for the area is relatively low, underscore the need for more taxonomic work in central Peru.

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