



A new species of *Miconia* from the remaining primary forest at Las Cruces Biological Station in Costa Rica

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Abstract

A new species of *Miconia*, *M. povedae* is described from a small remnant of primary forest at Las Cruces Biological Station in San Vito, Puntarenas province, Costa Rica. The new species is distinguished by its orangish indument of dendritic and stellate trichomes on most parts of the plant, sessile leaves with a tapering leaf base and strongly plinerved and asymmetric leaf venation, deflexed inflorescences, sessile herkogamous flowers with fused calyces that rupture at anthesis and geniculate staminal filaments. *M. povedae* is related to a group of for the most part Costa Rican and Panamanian endemics and the distinctive features of *M. povedae* and these species are discussed. Photographs of live plants, dissections of flowers preserved in ethanol, Scanning Electron Micrographs of leaf trichomes and a distribution map are provided.

Resumen

Una nueva especie de *Miconia*, *M. povedae* se describe de un pequeño remanente de bosque primario en la Estación Biológica Las Cruces, provincia de Puntarenas, Costa Rica. La nueva especie es distintiva en base a su indumento anaranjado de tricomas dendríticos y estrellados en la mayoría de la planta, hojas sésiles con la base atenuada y con venación fuertemente plinervada y asimétrica, inflorescencias deflexas, flores sésiles hercógamas con el cáliz fusionado y rompiéndose en la antesis, y filamentos de los estambres geniculados. *M. povedae* se encuentra relacionada a un grupo de especies mayormente endémicas a Costa Rica y Panamá y las características que diferencian a estas especies de *M. povedae* se discuten. Se proveen fotografías de plantas vivas, disecciones de material floral colectado en ethanol, micrografías de tricomas tomadas con un microscopio electrónico de barrido y un mapa de distribución.

Key words: Costa Rica, endemic, Las Cruces Biological Station, *Miconia*

Recent publication of taxonomic treatments for the Melastomataceae of Costa Rica as well as for Flora Mesoamericana (Almeda et al., 2007; Almeda, 2009) are providing a solid base for identifying more recently collected specimens from new or more recently, thoroughly collected localities. In addition, a Miconieae Planetary Biodiversity Inventory grant is placing these taxa in a molecular phylogenetic context and thus helping to guide species discovery by permitting comparison of newly proposed taxa to their close relatives. In this paper we describe a new species of *Miconia* Ruiz & Pavon (1794: 60) known only from the remnant primary forest at Las Cruces Biological Station in San Vito de Coto Brus, Puntarenas, Costa Rica.

The new taxon described here belongs to a clade that includes several Costa Rican and Panamanian endemics, based on preliminary molecular phylogenetic data (Kriebel & Michelangeli, in prep.). This clade is nested in the *Conostegia sensu lato* clade sensu Goldenberg et al (2008), where the type of *Conostegia*, *C. procera* (Swartz 1788: 68) De Candolle (1828: 174) is placed (Kriebel & Michelangeli, in prep.). The *Conostegia s. l.* clade also includes some species of *Clidemia* and *Miconia*, both genera found to be polyphyletic (Goldenberg et al. 2008; Michelangeli et al. 2004, 2008). One of the conclusions of the most