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A new species of *Miconia* (Miconieae, Melastomataceae) from the Brazilian Amazon

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Abstract

A new species of *Miconia* sect. *Miconia* subsection *Seriatiflorae* was collected in Igapó Forest from the Purus-Madeira interfluve, in the state of Amazonas, Brazil. This new species, *Miconia suberosa*, can be distinguished from other species in the subsection by a variety of morphological features, namely: (i) treelet habit; (ii) deeply fissured bark with a thick cork; (iii) long dendritic hairs with short arms on young branches, inflorescences and leaves; (iv) petiolated leaves with rounded to obtuse bases, and ciliate margins, congested at the branch apices; and, (v) truncated stigmas.

Resumo

Uma nova espécie de *Miconia* sect. *Miconia* subsect. *Seriatiflorae* foi coletada em floresta de Igapó no interflúvio Purus-Madeira no estado do Amazonas, Brasil. Esta nova espécie, *Miconia suberosa*, distingue-se dentre as demais espécies da subseção por várias características morfológicas, especialmente: (i) hábito arvoreta; (ii) tronco profundamente fissurado com espessa camada de súber; (iii) longos tricomas dentríticos com braços curtos sobre os ramos jovens, inflorescências e folhas; (iv) folhas pecioladas com base arredondada a obtusa e margens ciliadas, congestas nos ápices dos ramos; e, (v) estigmas truncados.

Introduction

Miconia Ruiz & Pavón (1794: 60) includes 1057 species, constituting the largest genus of Melastomataceae (Goldenberg *et al.* 2013). The genus belongs to the Tribe Miconieae which is characterized by fleshy fruits and inferior ovaries (Michelangeli *et al.* 2004). Species of the genus are shrubs, treelets, or trees, rarely climbers, ranging from western Mexico and the Caribbean to Uruguay and northern Argentina, growing from sea level to the Andean Paramos (Goldenberg *et al.* 2008). The genus can be recognized by the terminal inflorescences, rounded, obtuse or retuse petals, and lack of ant domatia, among others (Cogniaux 1891, Goldenberg 2000). The high levels of homoplasy encountered in the genus and close relatives involves overlapping patterns of morphological variation that have led to a complicated generic circumscription in this group (Judd & Skean 1991).

In Brazil, the genus is most diverse in the Amazon, where more than half of its species occur (ca. 166 of the 300 Brazilian species) (Goldenberg *et al.* 2013). Despite the constant efforts to document and inventory the Amazonian Flora (Black *et al.* 1950, Pires *et al.* 1953, Ter Steege *et al.* 2013), western Brazilian Amazon remains as a major gap in botanical knowledge, likely containing many undescribed species (Hopkins 2007). In particular, the interfluve between the Purus and Madeira rivers has yielded many recent discoveries, including new genera and species of fishes (Bührnheim *et al.* 2008), mammals (Roosmalen *et al.* 2002), and a new record for the angiosperm family Tetrameristaceae, previously only known from Venezuela (Viana *et al.* 2010). The new species of *Miconia* described here was first collected in the 1970's along the BR-319 highway, between Manaus and Porto Velho; however, these earlier specimens lacked flowers, complicating the identification of this taxon. Recent new collections from this same species allowed us to study this taxon in further detail and confirm its identity.

References

- Bentham, G. (1850) Report on the plants collected by Mr. Spruce at Pará. *Hooker's Journal of Botany and Kew Garden Miscellany* 2: 241.
- Black, G.A., Dobzhansky, T.H., Pavan, C. (1950) Some attempts to estimate species diversity and population density of trees in Amazonian forests. *Botanical Gazette* 111 (4), 413–425.
<http://dx.doi.org/10.1086/335612>
- Bührnheim, C.M., Carvalho, T.P., Malabarba, L.R. & Weitzman, S.H. (2008) A new genus and species of characid fish from Amazon basin – the recognition of a relictual lineage of characid fishes (*Ostariophysi: Cheirodontinae: Cheirodontini*). *Neotropical Ichthyology* 6: 663–678.
<http://dx.doi.org/10.1590/s1679-62252008000400016>
- Cogniaux, C.A. (1886) Melastomaceae. In: Martius, C.F.P. & Eichler, A.W. (Eds.) *Flora Brasiliensis* 14 (4). Fleischer, Leipzig, 655 pp.
- Cogniaux, A.C. (1891) Melastomataceae. In: A. P. de Candolle & C. de Candolle (Eds.) *Monographiae phanerogamarum* 7: 1–1256. G. Masson, Paris.
- De Candolle, A.P. (1828) *Prodromus Systematis Naturalis Regni Vegetabilis*. Tom. I et II. Paris.
- Fearnside, P.M. & Graça, P.M.L.A. (2009) BR-319: A Rodovia Manaus-Porto Velho e o impacto potencial de conectar o arco de desmatamento à Amazônia central. *Novos Cadernos NAEA*. 12: 19–50.
- Goldenberg, R. (2000) O gênero *Miconia* Ruiz & Pav. Melastomataceae. I. Listagens analíticas. II. Revisão taxonômica da seção *Hypoxanthus* (Rich. ex DC.) Hook. F. Ph.D. dissertation. Universidade Estadual de Campinas, Campinas, Brazil.
- Goldenberg, R., Penneys, D.S., Almeda, F., Judd, W.S. & Michelangeli, F.A. (2008) Phylogeny of *Miconia* (Melastomataceae): patterns of stamen diversification in a megadiverse neotropical genus. *International Journal of Plant Sciences* 169: 963–979.
<http://dx.doi.org/10.1086/589697>
- Goldenberg, R., Almeda, F., Caddah, M.K., Martins, A.B., Meirelles, J., Michelangeli, F.A. & Weiss, M. (2013) Nomenclator botanicus for the neotropical genus *Miconia* (Melastomataceae: Miconieae). *Phytotaxa* 106: 1–171.
<http://dx.doi.org/10.11646/phytotaxa.106.1.1>
- Goldenberg, R., Baumgratz, J.F.A. & Souza, M.L.R. (2012) Taxonomia de Melastomataceae no Brasil: retrospectiva, perspectivas e chave de identificação para os gêneros. *Rodriguésia* 63: 145–161.
<http://dx.doi.org/10.1590/s2175-78602012000100011>
- Hopkins, M.J.G. (2007) Modelling the known and unknown plant biodiversity of the Amazon Basin. *Journal of Biogeography* 34: 1400–1411.
<http://dx.doi.org/10.1111/j.1365-2699.2007.01737.x>
- IUCN (2014) IUCN Standards and Petitions Subcommittee. 2014. Guidelines for Using the IUCN Red List Categories and Criteria. Version 11. Prepared by the Standards and Petitions Subcommittee. Downloadable from <http://www.iucnredlist.org/documents/RedListGuidelines.pdf>.
- Judd, W.S. & Skean, J.D. (1991) Taxonomic studies in the *Miconieae* (Melastomataceae). IV. Generic realignments among terminal-flowered taxa. *Bulletin of the Florida Museum of Natural History* 36: 25–84.
- Kriebel, R. & Almeda, F. (2013) Two new species of *Miconia* (Melastomataceae: Miconieae) from the cloud forests of Panama. *Phytotaxa* 13: 27–41.
<http://dx.doi.org/10.11646/phytotaxa.134.1.2>
- Michelangeli, F.A., Penneys, D.S., Giza, J., Soltis, D., Hils, M.H. & Skean, J.D. (2004) A preliminary phylogeny of the tribe Miconieae (Melastomataceae) based on nrITS sequence data and its implications on inflorescence position. *Taxon* 53: 279–290.
<http://dx.doi.org/10.2307/4135608>
- Michelangeli, F.A. (2010) Neotropical Myrmecophilous Melastomataceae an annotated list and key. *Proceedings of California Academy of Sciences* 4: 409–449.
- Naudin, C.V. (1849–1853) Melastomacearum monographiae descriptionis. Annales des Sciences Naturelles, Botanique, Series III, tom. xii–xviii, consolidated reprint.
- Ocampo, G. & Almeda, F. (2013) Seed diversity in the Miconieae (Melastomataceae): morphological characterization and phenetic relationships. *Phytotaxa* 80: 1–129.
<http://dx.doi.org/10.11646/phytotaxa.80.1.1>
- Pires, J.M., Dobzhansky, T. & Black G.A. (1953) An estimate of the number of species of trees in an Amazonian forest community. *Botanical Gazette* 114 (4): 467–477.
<http://dx.doi.org/10.1086/335790>

- Roosmalen, M.G.M. van, Roosmalen, T. van & Mittermeier, R.A. (2002) A taxonomic review of the titi monkeys, genus *Callicebus* Thomas, 1903, with the description of two new species, *Callicebus bernhardi* and *Callicebus stephennashi*, from Brazilian Amazonia. *Neotropical Primates* 10: 1–52.
- Ruiz, D.H. & Pavón D.J. (1794) *Florae Peruvianaæ, et Chilensis Prodromus*. Imprenta de Sancha, Madrid, 153 pp.
<http://dx.doi.org/10.5962/bhl.title.11759>
- Viana, P.L., Carvalho, F.A. & Silva, I.R. (2010) Tetrameristaceae (Angiospermae: Ericales): primeiro registro da família para o Brasil. *Revista Brasileira de Botânica* 33: 375–378.
<http://dx.doi.org/10.1590/s0100-84042010000200018>