



## Three new species of *Eugenia* (Myrtaceae) from Brazilian Amazonia

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### Abstract

Three new species of *Eugenia* occurring in Brazilian Amazonian rainforest are described and illustrated: *Eugenia kerianthera*, *Eugenia caducipetala* and *Eugenia marleneae*. *Eugenia kerianthera* is related to *Eugenia yasuniana*, from which it is distinguished by its deltoid bracts and setaceous bracteoles, persistent and widely deltoid sepals, and oblong to obovate petals. *Eugenia caducipetala* is similar to *Eugenia exaltata* but is differentiated by leaves with flat margins and midvein convex adaxially. *Eugenia marleneae* is similar to *Eugenia gomesiana* and *Eugenia trinervia*, being distinguished from the first by its orbicular bracteoles and from the second by its fasciculate inflorescences. Phenological data, geographical distributions and further comparisons with morphologically similar species are provided.

**Key words:** Central Amazonia, terra firme rainforest

### Resumo

Três novas espécies de *Eugenia* ocorrendo em floresta pluvial na Amazônia Brasileira são descritas e ilustradas: *Eugenia kerianthera*, *Eugenia caducipetala* e *Eugenia marleneae*. *Eugenia kerianthera* é relacionada morfológicamente com *Eugenia yasuniana*, da qual se diferencia pelas brácteas deltoides e bractéolas setáceas, sépalas deltoides, amplas e persistentes no fruto e pétalas oblongas a obovadas. *Eugenia caducipetala* é relacionada com *Eugenia exaltata* e pode ser diferenciada pelas folhas com margem plana e nervura central convexa na face adaxial. *Eugenia marleneae* é similar a *Eugenia gomesiana* e *Eugenia trinervia*, diferenciando-se da primeira pelas bractéolas orbiculares e da segunda pela inflorescência fasciculada. São fornecidos dados fenológicos, distribuição geográfica e comparações com as espécies morfológicamente relacionadas.

### Introduction

Myrtaceae is one of the most diverse families in the Neotropics. The family is well represented in dense tropical rain forests, and at times can dominate or characterize the landscape (Mori *et al.* 1983, Ferreira & Merona 1987). *Eugenia* Linnaeus (1753:470) is the largest neotropical genus (Holst 2002), with richness estimated between 500 (Holst *et al.* 2003) and 2000 species (Sánchez-Vindas *et al.* 2001). The genus ranges from Mexico through the Central America to Uruguay, with a few species in Asia and Africa (Haron & Moore 1996, Van der Merwe *et al.* 2005). Many species are cultivated for food and for their medicinal value (Cruz & Kaplan 2004, Donadio & Moro 2004).

In Brazil, the family is represented by 20 genera (Govaerts *et al.* 2011) and about 1000 species (Landrum & Kawasaki 1997). *Eugenia* predominates with 388 species, of which 302 are endemic (Sobral *et al.* 2015). The genus is characterized by having tetramerous flowers, hypanthium scarcely or not extending beyond the top of the ovary, the latter usually bilocular with several ovules per locule, and seeds with a solid embryo with fused cotyledons and indistinct hypocotyl (Mazine & Souza 2008, Sobral 2010). *Eugenia* is in need of a full taxonomic treatment (Holst 2002), especially for the Amazonian region. McVaugh (1956, 1958, 1963, 1969, 1989) did extensive work on the Myrtaceae of northern South America and parts of Central America. Nonetheless, in the Amazonian Biome, the studies have been completed at the genus level (Rosário *et al.* 2004, 2005, 2014a, 2014b; Rosário & Secco 2006, 2013) or for particular locations (Nee 1995, Souza 1999). One of the commonly cited difficulties for resolving the taxonomy of the family is its high species-diversity. This problem is felt acutely in the Brazilian Amazon, which lacks an updated and complete check list, although the Flora of Brasil list has registered 244 species in 15 genera (Sobral *et al.* 2015).