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# Lectotypifications and a new combination in *Eugenia* sect. *Racemosae* (Myrtaceae)

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## ABSTRACT

*Eugenia* sect. *Racemosae* (Myrtaceae) includes about 59 species of shrubs and trees native to the Neotropics. Members of the section range from northern Mexico and the Antilles throughout South America to Uruguay and northern Argentina. Most species are trees, found in several vegetation types. The section as treated here contains species with flowers exclusively in racemes and/or rarely diplobotrys (compound inflorescence with racemose partial inflorescences), with an obvious flower-bearing axis with a pedicel to internode ratio of 2:1 or less. All typification and nomenclatural issues pertaining to the section and its component species are comprehensively examined here. *Eugenia* sect. *Racemosae* is monophyletic, as showed by previous studies. Thirty five names are lectotypified where necessary; many of these taxa were described from collections in Berlin (B) that are no longer extant. This study also provides other nomenclatural notes of species of *Eugenia* sect. *Racemosae*, such as a new synonym and a new combination. A new name for *Eugenia macrophylla* O. Berg is also proposed.

**Key-words:** *Eugenia biflora, Eugenia florida*, Atlantic Rainforest

## Introduction

*Eugenia* Linnaeus (1753: 470) is the largest genus of Neotropical Myrtaceae, comprising c. 1000 species (Govaerts et al. 2014) and also the largest genus in Brazilian flora, containing c. 378 taxa, being 311 endemic (Sobral et al. 2014). Using DNA sequence data from the nuclear (ITS, ETS) and plastid (psbA-trnH) genomes, Mazine et al. (2014) produced a phylogenetic hypothesis of Neotropical *Eugenia*, including associated genera and species from Africa and the Pacific. This analysis aimed to investigate the validity of the currently recognised infrageneric groups within *Eugenia* as well as suites of supporting morphological characters, to determine relationships between groups and produce a framework for future taxonomic research. The resulting topology identified nine clades as morphologically diagnosable groups. Following these results, a taxonomic monograph summarizing the infrageneric classification in *Eugenia* (placement of the sections) and providing an identification key for the sections is ongoing (Mazine et al. in prep.).

"Clade 8" sensu Mazine et al. (2014) corresponds to *Eugenia* sect. *Racemosae* O. Berg, diagnosed basically by the flowers arranged exclusively in racemes or diplobotrys, pedicels at most twice as long as the flower internodes, calyx 4-merous, free in the flower bud and ovary 2-locular with many ovules per locule. The section includes about 59 species, occuring throughout the Neotropics, from northern Mexico and the Antilles throughout South America to Uruguay and northern Argentina. Most species are trees, found in several vegetation types. Approximately 45% of the species occur exclusively in Brazilian territory and approximately 1/3 of the total of species is restricted to small areas.

Working towards a complete treatment of *Eugenia* sect. *Racemosae* species we became aware of several instances of confusion regarding erroneous or uncertain names. In addition, some type specimens have not been found or have been destroyed in Berlin during the Second World War while others are composed of more than one gathering.

This study provides lectotypifications for 35 names and other nomenclatural notes of species of *Eugenia* sect. *Racemosae*, such as a new synonym and a new combination. Additionally, a new name for *Eugenia macrophylla* O. Berg (1857: 268), an illegitimate name, is proposed.

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**New Name in *Eugenia* sect. *Umbellatae***

***19. Eugenia glomeruliflora*** Mazine, nom. nov.

Replaced synonym: *Eugenia macrophylla* O.Berg (1857: 268). Nom. illeg., non *Eugenia macrophylla* Lamarck (1789: 196). *Eugenia cupulata* Amshoff var. *macrophylla* McVaugh (1969: 176).

Type:—BRAZIL. "In silvis ad oppidum Ega prov. do Alto Amazonas", October 1834, *Poeppig 2704* (holotype W, isotypes BM, G, LE, P).

Notes:—McVaugh (1969) recognized *Eugenia macrophylla* O. Berg as a variety of *Eugenia cupulata* Amshoff (1942: 160), *E. cupulata* var. *macrophylla* McVaugh, differing from *E. cupulata* var. *cupulata* through its flowers arranged in fascicles, with a very short rachis (2–7 mm long), with rusty to yellow trichomes. The holotype and isotypes of *E. macrophylla* O. Berg (*Poeppig 2704*) have been analyzed and compared to types and other specimens of *Eugenia cupulata* Amshoff. We concluded that it is a different species, being part of *Eugenia* sect. *Umbellatae*, not *Eugenia* sect. *Racemosae.*

A new name was necessary because *Eugenia macrophylla* Lam. (1789) has priority.

Etymology:—The specific epithet alludes the short-pediceled flowers, densely arranged similar to a cluster.

The name of Otto Berg does not appear between brackets before McVaugh's name, because *E. macrophylla* O. Berg is an illegitimate name, a later homonym (McNeill et al. 2012, article 6.11).

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