



Eugenia kuhlmanniana (Myrtaceae), a new synonym of *E. hiraefolia*, a Mesoamerican species cultivated in Brazil

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ABSTRACT

The synonymization of *Eugenia kuhlmanniana* Mattos & D. Legrand, previously described as endemic from Rio de Janeiro, Brazil, under *Eugenia hiraefolia* Standley is proposed.

Keywords: Panama, Nicaragua, Costa Rica, Rio de Janeiro Botanical Garden

INTRODUCTION

Eugenia kuhlmanniana Mattos & D. Legrand (1975:30) was described based on a single specimen collected by João Geraldo Kuhlmann, then director of the Rio de Janeiro Botanical Gardens (JBRJ; 1944–1951). No exact reference to the location from where this collection was made was included on the label or in the protologue, except ‘Rio de Janeiro’. *Eugenia kuhlmanniana* is currently included in the ‘Lista de Espécies da Flora do Brasil’ (Sobral *et al.*, 2014). Besides the type-specimen, the only collection of this species that is available on line (*C.G. Pinto 169*, “cultivated in the arboretum of the Rio de Janeiro Botanical Gardens, bed 9E, individual 2347”—voucher deposited in herbarium RB; this acronym and others follow Thiers 2015) is clearly labeled as cultivated at JBRJ, no other collections are known. An image of this collection can be observed in <http://reflora.jbrj.gov.br/jabot/geral/ExibeFiguraFSIUC/ExibeFiguraFSIUC.do?idFigura=3214778>.

During a phylogenetic analysis (Mazine *et al.*, in prep.) of *Eugenia* sect. *Umbellatae* (Berg 1856: 204) using DNA sequence data from the nuclear and plastid genomes, leaf samples of *Eugenia kuhlmanniana* were used, collected from the arboretum of JBRJ (collection *Souza 1142*). The preliminary results of this analysis show that *Eugenia kuhlmanniana* emerges in an otherwise monophyletic Caribbean clade giving rise to the suspicion that the individual in cultivation and therefore species, might not be native to Brazil.

This species is distinctive (see descriptive note below) and examination of type-specimens of *Eugenia* from international herbaria demonstrated that the type-specimen of *Eugenia kuhlmanniana* is identical to *Eugenia hiraefolia* Standley (1937: 202), a well collected Mesoamerican species found from Honduras to Panama. An image of the holotype of *Eugenia kuhlmanniana* at herbarium RB can be observed in <http://plants.jstor.org/specimen/rb00542110?s=t>.

Based on the well supported evidence of DNA sequencing (Mazine *et al.*, in prep.), strong morphological similarity and the fact that no wild material of this species has ever been collected in Brazil, we are led to believe that the type-specimen of *Eugenia kuhlmanniana* (*J. G. Kuhlmann s.n.*) was collected from the same cultivated plant in the arboretum of JBRJ, that itself was brought from Central America, and consequently propose its synonymization under *E. hiraefolia* Standley.