



***Adelobotrys tessmannii* (Merianieae, Melastomataceae) and allies: a refined circumscription and description of two new Amazonian species with notes on their ecology**

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Abstract

Adelobotrys tessmannii is re-circumscribed and a lectotype is designated. Two new species, *A. latifolius* and *A. microcarpus*, are described, and all three species are illustrated. They have a Western Amazonian, broadly sympatric distribution, which is depicted. Field surveys and chemical soil analyses presented show that *A. latifolius* prefers more fertile soils than *A. microcarpus*, while *A. tessmannii* does not differ from the other species in this respect.

Key words: Bolivia, Brazil, Colombia, Ecuador, neotropics, Peru, soil preferences

Introduction

Adelobotrys de Candolle (1828: 127) is an exclusively neotropical and predominantly Amazonian genus. Of the described species that belong to *Adelobotrys sensu stricto*, as defined by Schulman & Hyvönen (2003), one species occurs from Mexico and Jamaica to South America, one is endemic to Panama, and the remaining species dwell in South America, mostly in lowland to submontane rainforest. Its distribution and ecology help to explain why the genus is still so poorly known, despite a relatively high number of total collections made, since the Amazonian rainforest biome remains inadequately and highly unevenly explored botanically (Schulman *et al.* 2007a, b). Most previously described species of *Adelobotrys* require a re-circumscription and several taxa are still undescribed (Schulman & Hyvönen 2003).

Adelobotrys tessmannii Markgraf (1927: 1140) was described almost nine decades ago as the 14th species in a genus that now is thought to contain some 45 species, although it hasn't been revised since Cogniaux (1891); for a more detailed account on the taxonomic history of the genus see Schulman & Hyvönen (2003). Since the discovery of *A. tessmannii*, at least a couple of thousand collections of *Adelobotrys* have been made. Hence, it is not surprising that the original description no longer provides a clear circumscription of *A. tessmannii*, and that it is easily confused with related species. As a result, herbarium specimens of *A. tessmannii* have often been misidentified as *A. adscendens* (Sw.) Triana (1867: 210), and at least four different species of *Adelobotrys* have repeatedly been misidentified as *A. tessmannii*.

Here we clarify the circumscription of *A. tessmannii* and segregate two new species on the basis of their morphology. We also provide general distribution maps for all three species, and present an account on their edaphic preferences on the basis of ecological field surveys and soil chemical analyses.

Material & Methods

Taxonomy, distribution, and conservation:—Collections of the following 34 herbaria were studied between 1998 and 2014 for specimens of *Adelobotrys*: AAU, AMAZ, B, BM, BR, C, CAS, COL, DS, F, G, H, HBG, HUA, K, L, LL, LPB, M, MG, MICH, MO, NY, P, QCA, S, SP, TEX, TUR, U, UC, US, and W (acronyms after Thiers, queried June 12 2014), and the Harvard University Herbaria. All collections of the species treated here are listed below under