



SHORT COMMUNICATION

Notes on the identity of *Amanoa pubescens* Steyer. (Phyllanthaceae)

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ABSTRACT. (Notes on the identity of *Amanoa pubescens* Steyer. (Phyllanthaceae)). This study aims at revealing the true identity of *Amanoa pubescens* based on the analysis of specimens from herbaria, including type collections, and the dissection of vegetative and reproductive structures under a stereomicroscope. An androphore was observed in the staminate flowers of *A. pubescens* in anthesis, a characteristic that was also observed in *A. almerindae* Leal. A discussion on the two specific epithets is presented. We conclude that *A. pubescens* is a synonym of *A. almerindae*.

Key words: *Amanoa almerindae*, Amazonia, botanical nomenclature, plant taxonomy.

RESUMO. (Notas sobre a identidade de *Amanoa pubescens* Steyer. (Phyllanthaceae)). Este trabalho tem como objetivo revelar a verdadeira identidade de *Amanoa pubescens*, com base em análise de espécimes de herbários, incluindo coleções-tipos, pelo método de dissecação das partes vegetativas e reprodutivas sob estereomicroscópio. Foi observado um andróforo nas flores estaminadas de *A. pubescens* em antese, característica encontrada também em *A. almerindae* Leal. Uma discussão sobre a real identidade dos dois nomes é aqui apresentada. Conclui-se que *A. pubescens* é um sinônimo de *A. almerindae*.

Palavras-chave: *Amanoa almerindae*, Amazônia, nomenclatura botânica, taxonomia vegetal.

INTRODUCTION

According to Hoffmann *et al.* (2006), *Amanoa* Aublet is placed in Phyllanthaceae, subfamily Phyllanthoideae Kostel., tribe Brideliae Müll. Arg., and is the sole representative of subtribe Amanoinae Pax & K. Hoffm. According to the revision by Secco *et al.* (2014), the genus is composed of 17 species. Three belong to an endemic section of Africa (Webster 1994), and 14 are distributed in the Neotropics, of which 11 are recorded in Brazil. Although the genus has been recently revised (Secco *et al.* 2014), *Amanoa* still has species that require reassessment, such as *A. pubescens* Steyer.

Amanoa pubescens was proposed by Steyermark (1952) based on materials from Venezuela, without comparison to any other species of *Amanoa*. Leal (1951) described *A. almerindae* Leal based on material from Brazil (Amazonas), comparing it to *A. glaucophylla* Müll. Arg. Morphologically, *A. pubescens* and *A. almerindae* are similar in the characteristics of leaves and the pubescence of the inflorescence axis, raising doubts on the identification of specimens in this group. The purpose of this paper is to clarify doubts concerning the identification of *A. pubescens*, complementing data from Secco *et al.* (2014).

MATERIAL AND METHODS

The study was carried out based on specimens deposited in the following herbaria, including types (acronyms follow Thiers 2012): F, IAN, INPA, MG, MO, NY,

RB, and US. Material from herbarium specimens was analyzed by dissecting vegetative and reproductive structures under a stereomicroscope, followed by comments of the species.

RESULTS AND DISCUSSION

Hayden (1990) included *A. pubescens* as a synonym of *A. almerindae*, ratifying this position in his treatment for the Flora of the Venezuelan Guayana (Hayden 1999), where he highlighted the stamens that form androphores in *A. almerindae*.

Secco *et al.* (2014) analyzed the holotype of *A. almerindae* at RB, which contains only buds of staminate flowers, and found only free stamens, with no sign of an androphore. The same authors analyzed the isotype at NY, which contains staminate flowers with fused stamens forming an androphore, and the original description of *A. pubescens*. These observations led them to reestablish *A. pubescens*, although the androphore was the only character separating the two species.

However, besides flowers, buds in several maturation stages were analyzed from *A.S. Tavares 285*, *L. Coelho 510*, *L. Williams 14859*, *L. Williams 13866*, and *W. Rodrigues 10829*, which were identified as *A. pubescens*, and also the isotypes (*L. Williams 14439*), showing the following details: in buds, stamens are free, only evidencing androphores (stamens concrescent) after anthesis (open flowers). It is assumed that Leal (1951) only analyzed buds when describing *A. almerindae*, and

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therefore evidenced the free stamens (“anthers sessile, elliptical”). However, we believe that Steyermark (1952) only analyzed open flowers when proposing *A. pubescens*, and therefore found stamens forming androphores (Hayden 1999). Based on these observations, it is now clear that androphores are only present in post-anthesis flowers (not buds), and therefore *A. pubescens* should be considered a synonym of *A. almerindae*.

Amanoa almerindae Leal, Arch. Jard. Bot. Rio de Janeiro 11: 68. 1951. Type. BRAZIL. AMAZONAS: Rio

Negro, abaixo da Boca do Curicuriary, 16 dez. 1931, fl, *A. Ducke s/n* (holotype, RB 24241!). (Figures 1-2).

= *Amanoa pubescens* Steyermark, Fieldiana. Bot. 28: 304. 1952. Type. VENEZUELA. ESTADO AMAZONAS: orillas del Caño Pimichin, Rio Guáinia, 128 m, 20 fev. 1942, fl, fr, *L. Williams 14439* (holotype, F; isotypes, NY!, US!).

Additional specimens examined. BRAZIL. AMAZONAS: **São Gabriel da Cachoeira**, Rio Içana, igapó, 2 nov. 1987, fl, *W. Rodrigues 10829* (INPA, MG); Rio

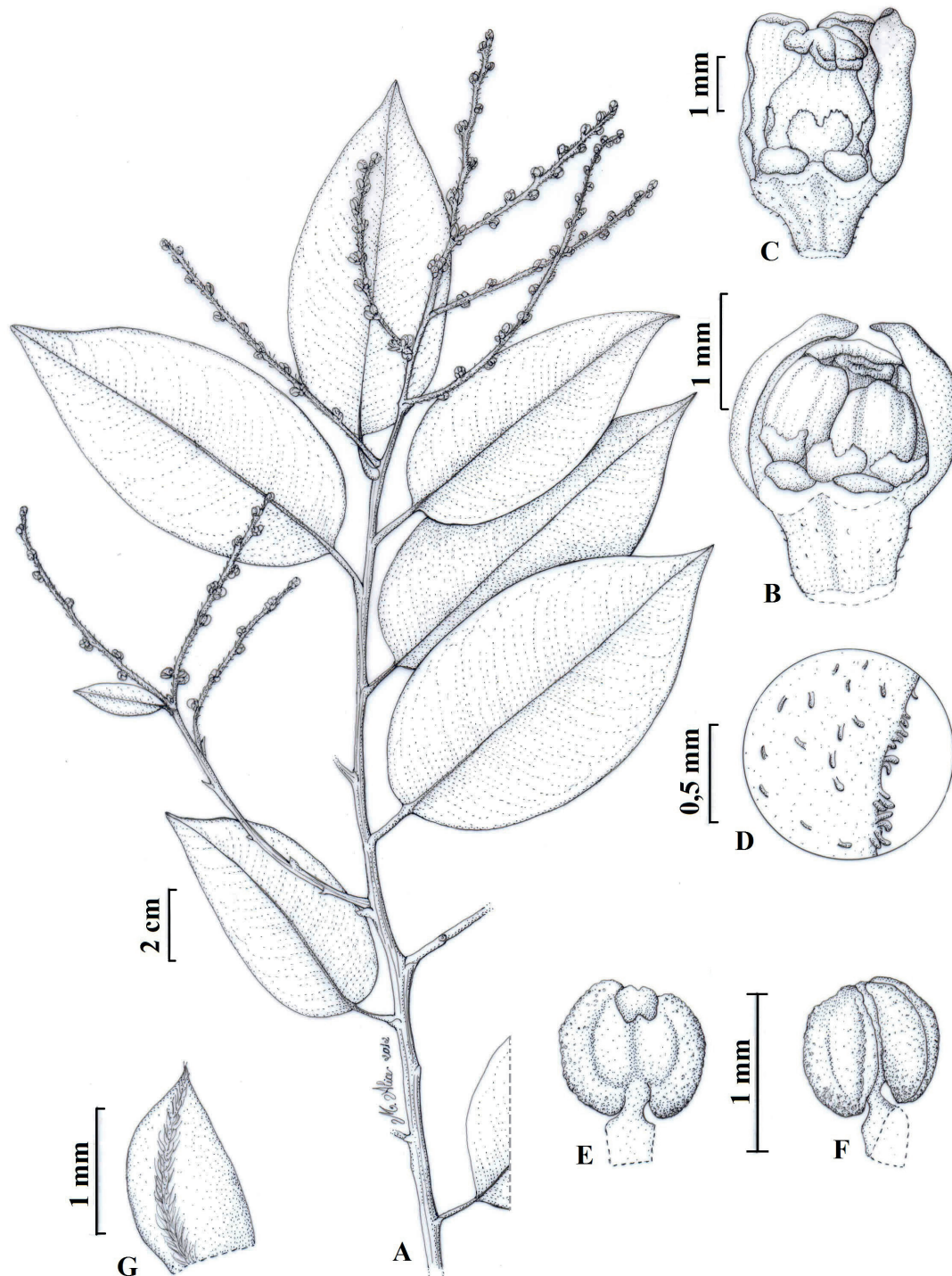


Figure 1. *Amanoa almerindae* Leal. A. Branch of the plant with staminate buds. B. Bud of the staminate flower. C. Pistillate flower. D. Detail of simple trichomes. E-F. Stamens. G. Bracteol. (A-F: *Ducke s/n*, Herbário RB 24241). Figure from Secco *et al.* (2014).

Uniuxi, afluente do Rio Negro, igapó, 23 jun. 1976, fl, *L. Coelho 510* (INPA, MG); Rio Mariê, Projeto RADAM, Ponto 2, mata alagada, 15 jun. 1978, fr, *L.R. Marinho 553* (IAN). PARÁ: **Ilha do Marajó**, Rio Anajás, mata de t. firme, 29 out. 1987, fl, *A.S. Tavares 285* (INPA, NY). VENEZUELA. **Caño San Miguel**, Rio Guáinia, 127 m, 24 mar. 1942, fl, *L. Williams 14859* (paratype, F, MO!); Rio Temi, 200 m, 21 jan. 1942, fl, *L. Williams 13862* (paratype, F); Rio Temi, 280 m, 21 jan. 1942, fl, *L. Williams 13866* (paratype, F, MO!).

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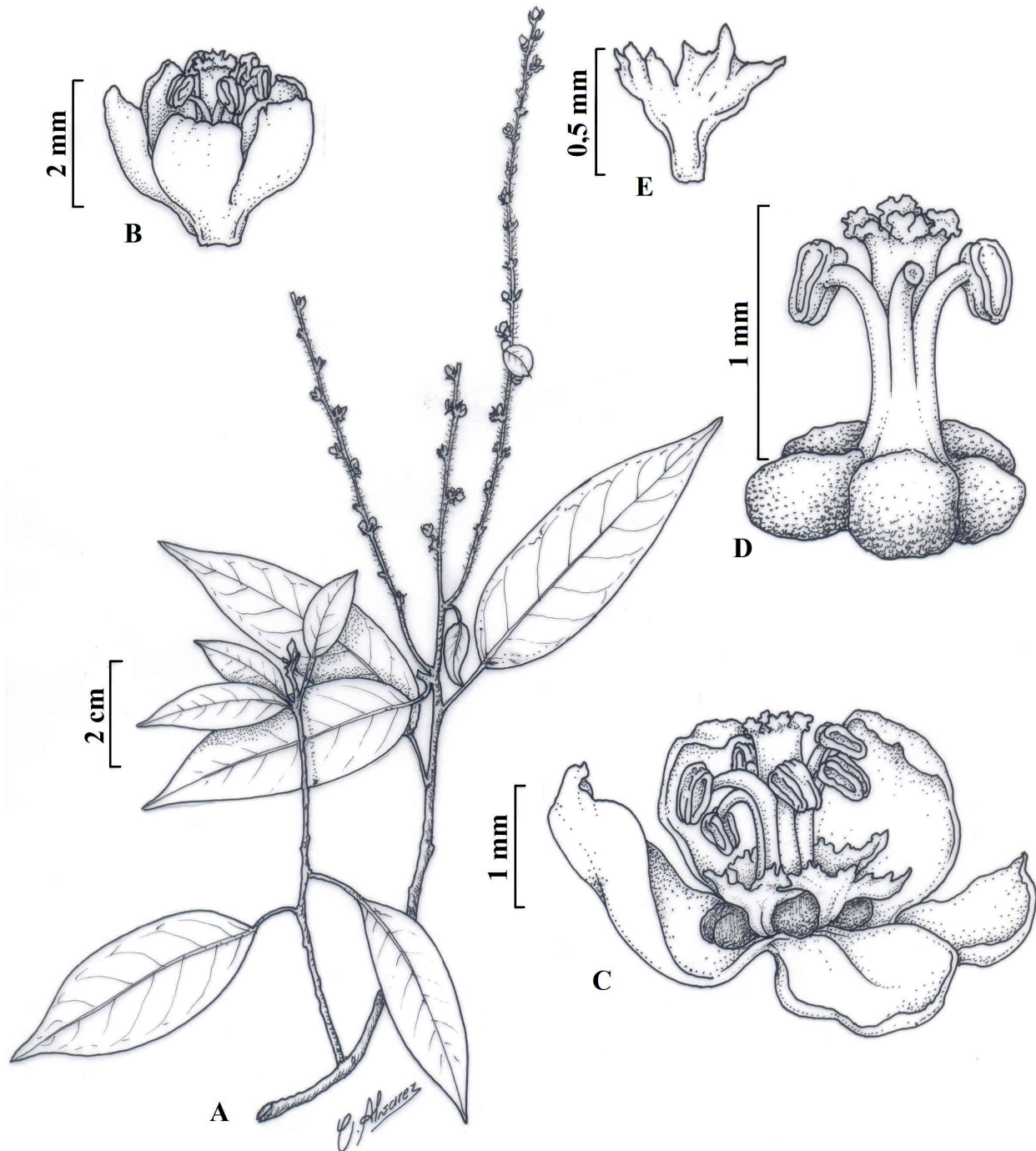


Figure 2. *Amanoa almerindae* Leal. A. Branch of the plant with staminate flowers. B. Staminate flower. C. Open staminate flower. D. Androphore, central pistillode, lobed disc. E. Petal. (A-E: *W. Rodrigues 10829*). Figure from Secco *et al.* (2014).

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