NOMENCLATURE COMMUNICATIONS

(3030) Proposal to conserve the name *Astrocaryum gynacanthum* against *A. aculeatum* (*Arecaceae*)

Gustavo Pereira Lima[1] **& Eduardo Bezerra de Almeida, Jr.**[2]

1 *Programa de Pós-Graduação em Biodiversidade e Biotecnologia da Rede BIONORTE, Universidade Federal do Maranhão, Departamento de Biologia, Av. dos Portugueses, 1966, Bacanga, São Luís, MA, Brazil*

2 *Universidade Federal do Maranhão, Departamento de Biologia, Av. dos Portugueses, 1966, Bacanga, São Luís, MA, Brazil*

Address for correspondence: *Gustavo Pereira Lima, gustavo-plima@hotmail.com*

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(3030) ***Astrocaryum gynacanthum*** Mart., Hist. Nat. Palm. 2: 73. 1824 (prob. post 13 Apr) [Angiosp.: *Palm.*], nom. cons. prop.

Lectotypus (hic designatus): [Brazil], Rio Negro, Barra do Rio Negro [Manaus], *Martius* (M barcode M-0209557 [photo!]).

(=) *Astrocaryum aculeatum* G. Mey., Prim. Fl. Esseq.: 266. Nov 1818, nom. rej. prop.

Lectotypus (hic designatus): [Guyana], Essequibo, "in sylvis circa rivum Arowabischkreek", *Rodschied* (GOET [on 2 sheets] barcodes GOET009318 & GOET009319 [photos!]).

The genus *Astrocaryum* G. Mey. (Prim. Fl. Esseq.: 265. Nov 1818), one of the prominent and most diverse genera of palm trees in the Neotropics, was initially described as *Avoira* by Giseke (Prael. Ord. Nat. Pl.: 38, 53. 1792). However, this initial name was rejected in favour of *Astrocaryum* described some years later (Kahn in Revista Peruana Biol. 15: 31–48. 2008). In 1967, the Committee for Spermatophyta unanimously recommended conservation of *Astrocaryum* since this generic name had been used for over a century in all monographic and floristic works in which this palm group was considered (McVaugh in Taxon 16: 226–229. 1967) and this was accepted (App. III in Wiersema & al., ICN Appendices I–VII, https://naturalhistory2.si.edu/botany/codes-proposals/).

Despite the resolution of the confusion surrounding the nomenclatural aspects of the generic name over 50 years ago, an issue persists regarding the type that characterizes *Astrocaryum*. Meyer described the genus in 1818, with the single species *A. aculeatum* G. Mey. from the Essequibo River in what is currently Guyana. However, until the account by Bernal (in Taxon 57: 997–998. 2008) the exact identification of this species had remained uncertain since its original description.

Over two centuries, some researchers had made comments and published opinions about the identity of *Astrocaryum aculeatum*, but, apparently, had not studied the original specimens cited by Meyer (Bernal, l.c.). Martius (Hist. Nat. Palm. 2: 80. 1824) provided a diagnosis based on the original description and suggested that the species resembled his *A. gynacanthum* Mart. and *A. munbaca* Mart. Drude (in Martius, Fl. Bras. 3(2): 387. 1881) classified the species as *incertae sedis*. Barbosa Rodrigues (Sert. Palm. Bras. 2: 62. 1903), like Martius, suggested that the species resembled *A. gynacanthum* and *A. munbaca*, and he grouped the three species in the Mumbaca group of *A.* sect. *Astrocaryum*. Burret (in Repert. Spec. Nov. Regni Veg. 35: 155. 1934) considered the taxon *incertae sedis* and suggested it should be classified under *A.* subg. *Monogynanthus*. However, he highlighted inconsistencies in the shape and size of the fruit description, which appeared unusual within that subgenus. Burret suggested that the fruits described by Meyer might not correspond to the inflorescence mentioned in the protologue; instead, they could belong to *A. tucuma* Mart.

Wessels Boer (in Pulle, Fl. Suriname 5: 126–129. 1965), based on the description of the fruit in the protologue, treated *Astrocaryum aculeatum* as conspecific with *A. tucuma* Mart., putting this latter into synonymy. *Astrocaryum tucuma* is a scientific name associated with the species commonly known as tucumã or tucumã-do-amazonas, found throughout a large portion of the Amazon basin. The tucumã palm is a common large species (up to 25 m) with long leaves, grouped pinnae, and large, edible fruits (Kahn & Millán in Bull. Inst. Franç. Études Andines 21: 459–531. 1992). The pulp of the fruit is highly appreciated in culinary practice and represents an essential food source in the region (Kahn, l.c. 2008).

The name *Astrocaryum tucuma* Mart. had been in use since 1824 for the tucumã palm (Martius, l.c. 1824: 77–78; Kunth, Enum. Pl. 3: 274. 1841; Martius in d'Orbigny, Voy. Amérique Mér. 7: 90. 1844; Wallace, Palm Trees Amazon: 107. 1853; Drude, l.c.; Barbosa Rodrigues in Contr. Jard. Bot. Rio de Janeiro 3: 80. 1902, l.c. 1903; Burret, l.c.). However, since Wessels Boer's treatment in 1965, *A. aculeatum* has been used, with rare exceptions, in this sense in taxonomic accounts, floras and other works in the last six decades (Wessels Boer in Acta Bot. Venez. 6: 299–362. 1971, in Pittieria 17: 279. 1988; Kahn & Millán, l.c.; Henderson, Palms Amazon: 238. 1995; Henderson & al., Field Guide Palms Amer.: 203. 1995; Kahn & Ferreira in Candollea 50: 326. 1995; Kahn, Palms Eldorado: 157–159. 1997; Moussa & Kahn in Bull. Inst. Franç. Études Andines 26: 1–9. 1997; Kahn & Second, Evol. Var. Classif. Palms: 179–184. 1999; Bacelar-Lima & al. in Acta Amazon. 36: 407–412. 2006; Lorenzi & al., Brazil. Fl. Arec.: 49. 2010; Moraes, Fl. Palm. Bolivia: 44–48. 2020; Ramos & al. in Plants (Switzerland) 11: 2957. 2022).

On the other hand, Bernal (l.c.) in his rediscovery of original material of *Astrocaryum aculeatum* from Meyer's herbarium now at GOET (Guyana, near Arowabischkreek, *E. Rodschied s.n.*, GOET), revealed that, as assumed by Burret (l.c.), the protologue of *A. aculeatum*

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combines a description of the fruitless type specimen and second-hand information on the fruits of another species, most probably *A. tucuma*. The original herbarium material consists of two sheets with an inflorescence and fragments of the leaf, labelled as being part of that same specimen (Art. 8.3 of *ICN*, Turland & al. in Regnum Veg. 159. 2018). According to Bernal (l.c.), it is likely that Meyer's description of the fruits was based on information provided by E. Rodschied, who had seen them but was not even sure whether they belonged to the same species as the specimen described by Meyer.

Based on these original specimens of *Astrocaryum aculeatum* and the information available in the protologue, but disregarding Rodschied's second-hand information about the fruits, Bernal (l.c.) pointed out that this herbarium material that he wrongly considered the holotype belongs to what are currently known as *A.* subg. *Monogynanthus* and *A.* sect. *Munbaca*, and can be identified as *A. gynacanthum*. Thus, Bernal considered thatt *A. aculeatum* was referable to the species currently known as *A. gynacanthum*, and that this was the correct application of this name.

Although Bernal (l.c.) claimed that Rodschied's material in GOET was the holotype of *Astrocaryum aculeatum*, that is not possible as Meyer (l.c.) included other eligible elements in the protologue. He clearly cited illustrations of Jacquin (Select. Stirp. Amer. Hist. 2: t. CLXXI, fig. 3. 1763) and Gaertner (Fruct. Sem. Pl. 2: t. CXXXIX, fig. 5. 1791). Therefore, the original material of *A. aculeatum* comprises several elements according to Art. 9.4(a) of the *ICN*. As Bernal merely cited the specimen at GOET as the holotype but did not designate it as such with the phrase "designated here" (Art. 7.11), there is no erroneous designation that might be corrected to lectotype under Art. 9.10. For this reason, we designate the specimen of *E. Rodschied s.n.* (GOET [on 2 sheets] barcodes GOET009318 & GOET009319 [photos!]) as the lectotype of *A. aculeatum*.

Analyzing all these nuances and complying with the rule of priority (Art. 11.3 of the *ICN*), the correct name for *Astrocaryum gynacanthum* should be *A. aculeatum*. On the other hand, the species recognized today as *A. aculeatum* should be reestablished as *A. tucuma*, the original and correct sense. However, given all possible nomenclatural changes resulting from the rediscovery of the type, Bernal (l.c.) proposed to conserve the name *A. aculeatum* with a conserved type (Art. 14.9 of the *ICN*) tying it to the tucumã palm in order to avoid changes in the names of these two species of palm that are so widespread and well-known. However, the Nomenclature Committee for Vascular Plants did not recommend approval of this proposal and considered an alternative solution suggested by Wendy L. Applequist (Brummitt in Taxon 60: 227. 2011), which was accepted by the General Committee (Barrie in Taxon 60: 1213. 2011). The suggestion was to allow *A. tucuma* to come back into use in its original and correct sense since it had been known by this name for a century and a half and has persisted today in some contexts. The committee also suggested it might then be desirable to reject *A. aculeatum* or conserve *A. gynacanthum* over it. Both options would require the submission of a new proposal to the journal *Taxon*.

Therefore, for these reasons and per the recommendations outlined by Brummitt (l.c.), we formally propose to conserve *Astrocaryum gynacanthum* Mart. against *A. aculeatum* G. Mey. under Art. 14 of the *ICN*. This proposal aims to enhance nomenclatural stability, and its acceptance would safeguard the use of the well-established *A. gynacanthum*, resolving this longstanding issue. Conversely, failure to accept this proposal would result in undesirable nomenclatural instability. Also, it would add unnecessary confusion to plant taxonomists, phytosociologists, conservationists, and biochemical and ethnobotanical studies, among others. Regarding the reestablishment of *A. tucuma* in opposition to *A. aculeatum*, as recommended by Brummitt (l.c.), we highlight that the formalization of this reestablishment is under preparation and will soon be disseminated to the scientific community.

With regard to the typification of *Astrocaryum gynacanthum*, Martius (l.c. 1824) cited only one locality in the protologue but did not specify any specimen. Burret (l.c.) mentioned that Martius collected specimens in the locality indicated in the protologue and that a sample was deposited in the Berlin-Dahlem herbarium (B). However, we did not find any specimen in this collection, and that referred to by Burret was probably destroyed during World War II. From a search at the Munich herbarium (M), we found two sheets of *A. gynacanthum* collected by Martius. Only one of the sheets (barcode M-0209557) bears Martius's original label, the month "Sept." and the number "831" on a strip of paper affixed to the plant. The other sheet (barcode M-0209556) has a herbarium label and a different number affixed to a strip of paper. Because the sheets do not bear a single, original label in common and are not cross-labeled, they are treated as duplicates (see Art. 8.3). We selected the sheet with Martius's original label (barcode M-0209557) and designated it above as the lectotype of *A. gynacanthum*.

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