

Didymosperma gracilis, a new synonym of *Wallichia nana* (Arecaceae)

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Abstract: *Didymosperma gracilis* Hook.f. is merged here as a synonym of *Wallichia nana* Griff. based on examination of the protologue, type materials and fresh collections. Both are similar in their habit, habitat, size and nature of leaflets and fruits.

Key words: Nomenclature, Northeast India, Palm.

Introduction

All species of *Didymosperma* H.Wendl. & Drude ex Hook.f., except *Didymosperma gracilis* Hook.f., were either placed under *Arenga* Labill. ex DC. (Mogea, 2004; www.theplantlist.org) or *Wallichia* Roxb. (Henderson, 2007, 2009; www.theplantlist.org). Henderson (2007) revised the genus *Wallichia* and raised the question of the existence of the species *D. gracilis* as he not only mentioned the name under “excluded and doubtful names”, but also stated that “The type specimen is so poor that it is not possible to identify this specimen”. Out of eight species of *Wallichia* (Henderson, 2007), five species are found in India (Renuka & Sreekumar, 2012; Mehmud & Roy, 2020). Three species occur in Assam (Mehmud & Roy, 2021). Whereas *Arenga* is represented by 24 species (Pillai *et al.*, 2020) with five species in India. Northeast India harbours three species *viz.* *A. micrantha* C.F.Wei from Sikkim and Arunachal Pradesh, *A. obtusifolia* Mart. from Arunachal Pradesh, and *A. westerhoutii* Griff. from Arunachal

Pradesh and Manipur (Renuka & Sreekumar, 2012). Only *A. westerhoutii* was recorded so far from Assam (Barbhuiya, 2014; Mehmud & Roy, 2021). All these three species of *Arenga* in northeastern India bear linear leaflets and their diameter of stem ranges from 13–60 cm (Renuka & Sreekumar, 2012).

Didymosperma gracilis was described by Hooker (1894) based on Booth’s collection from Daphla Hills in Assam (now Dafla Hills in Arunachal Pradesh). The type specimen at K (K000400178 digital image!) has a part of stem with two leaves, incomplete or damaged, fibrous ligule and alternate, serrated, abaxially white leaflets. The apical leaf near the fruiting branch is comparatively shorter than the other leaves. The fruiting branch is terminal, with three rachillae, having few elliptic-oblong fruits having persistent perianth and acute lobes and brown, elliptic-curved or concavo-convex seeds. The information associated with the protologue and type material of *D. gracilis* is not matching with any species of *Arenga*, but shows perfect match with the protologue of *Wallichia nana* Griff. (Griffith, 1845) and information related to types (Griffith, 1850; Henderson, 2007; Reveal & Nixon, 2013), especially when features of the stem, leaf, fruit and seed are compared. Moreover, the taxonomic description and note added to *W. nana* in relevant studies (Henderson, 2007; Renuka & Sreekumar, 2012; Mehmud & Roy, 2020, 2021), and examination of the fresh collections in different stages (Fig. 1) in the present study gives additional support to consider *Didymosperma gracilis* as a synonym of *Wallichia nana*.

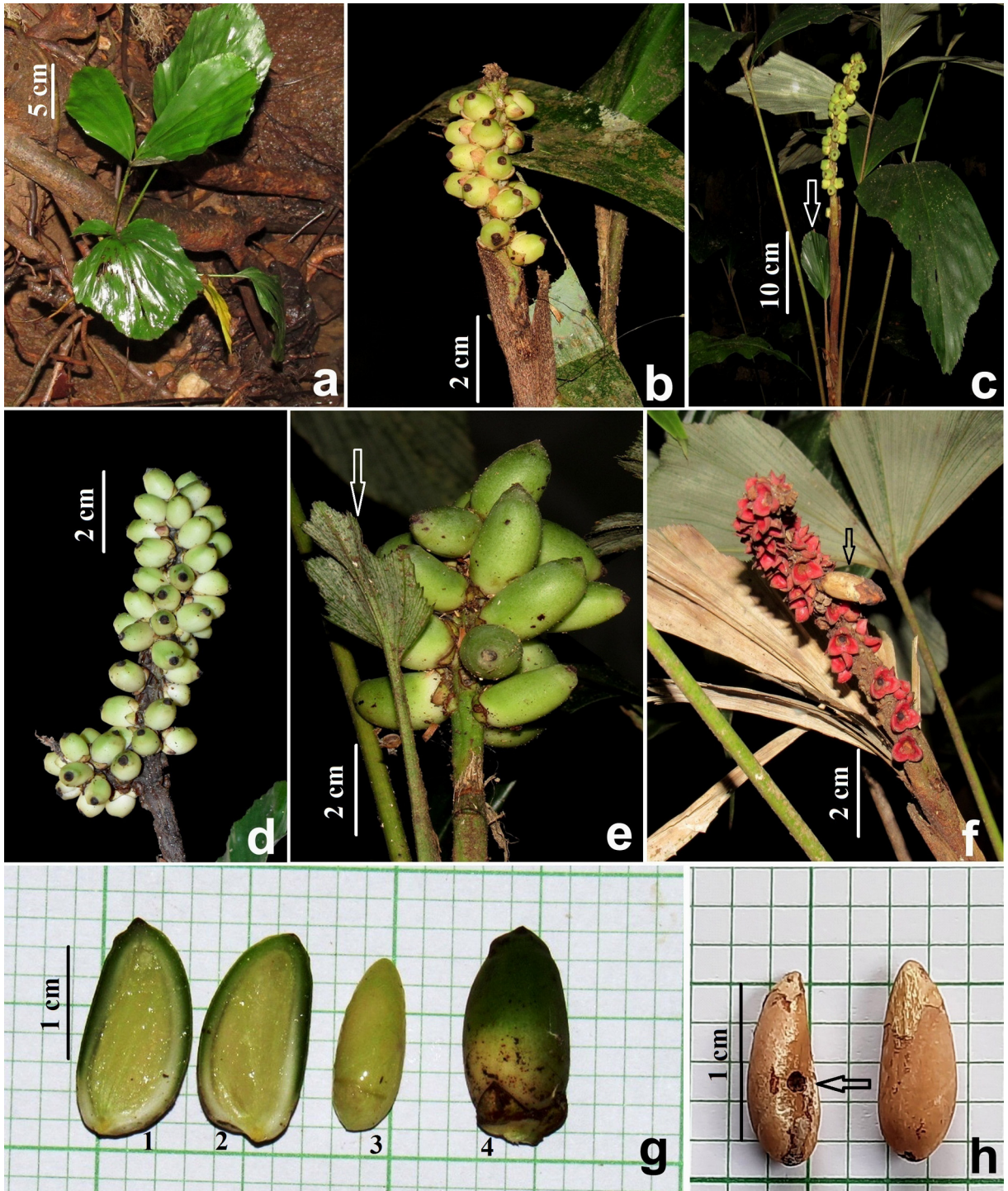


Fig. 1. *Wallichia nana* Griff.: a. Young plant; b-d. Young fruits (arrow showing small leaf); e. Small leaf near the infructescence (arrow); f. Infructescence with dry fruit (arrow) and persistent perianth; g. Longitudinal cut of an immature fruit (1 & 2), seed (3) and a complete fruit (4); h. Dry seeds with embryo in central position (arrow).

Taxonomic Treatment

Wallichia nana Griff., Calcutta J. Nat. Hist. 5: 488. 1845. *Harina nana* (Griff.) Griff., Palms British East India 176. 1850. *Didymosperma nanum* (Griff.)

H.Wendl. & Drude in Kerchove, Palmiers 243. 1878. *Blancoa nana* (Griff.) Kuntze, Revis. Gen. Pl. 2: 727. 1891. *Arenga nana* (Griff.) H.E.Moore, Principes 4: 114. 1960. *Type: INDIA, Assam, s.d.,*

Jenkins s.n. (A [00421704 digital image!], BH *n.v.*, BR [BR0000006876920 digital image!], K [K000400177 digital image!], L [0042007 digital image!], NY *n.v.*, P [P00491422 digital image!]).

Didymosperma gracilis Hook.f., Fl. Brit. India 6(18): 420. 1894. *Type*: INDIA, **Arunachal Pradesh**, Dapla ("Daphla") Hills, *s.d.*, *Booth s.n.* (holo K [K000400178 digital image!]). *syn. nov.* Fig. 1.

Specimens examined: INDIA, **Arunachal Pradesh**, Dibang valley, 26.03.1999, *M. Bhaumik* 2168 (ASSAM). **Assam**, Jorhat, Nambor R.F., 21.11.1964, *S.K. Kataki* 41649 (ASSAM 44563); Tinsukia, Bherjan, N 27°3'27.2", E 95°22'14.4", alt. 84 m, 03.09.2019, *Selim Mehmud* 169 (ASSAM, Herbarium of Department of Botany, Cotton University); West Karbi Anglong, Nellie to Umapanai road, 13.02.2020, *Selim Mehmud* 242 (Herbarium of Department of Botany, Cotton University).

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