Lectotypification of *Hyphaene dichotoma* and *Arenga wightii* (Arecaceae)

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Abstract

The names *Hyphaene dichotoma* and *Arenga wightii* are typified. Citation anomaly in *H. dichotoma* has been clarified.

Keywords: Arecaceae, *Arenga wightii*, epitype, *Hyphaene dichotoma*, lectotype

Introduction

Arecaceae, a distinct component of tropical and subtropical habitat comprises c. 2400 species in 187 (www.theplantlist.org) genera. The genus *Hyphaene* Gaertn. possess peculiar dichotomously branching habit and is represented by eight species in the world (Dransfield *et al.*, 2008) distributed throughout Africa, Madagascar and India. *Hyphaene dichotoma* (J. White Dubl. ex Nimmo) Furtado is endemic to India.

*Arenga* Labill. is a South east Asian genus comprising 25 species. In India, the genus is represented by three species viz., *A. wightii* Griff., *A. westerhoutii* Griff. and *A. pinnata* (Wurmb) Merr., of which, *A. wightii* is threatened and endemic to India (IUCN, 2017). As part of taxonomic studies in Indian palms *Hyphaene dichotoma* (J. White Dubl. ex Nimmo) Furtado and *Arenga wightii* Griff. were found to lack proper typification. Hence, lectotypes are selected for these names conforming to the latest botanical code and an epitype *H. dichotoma* is selected following Art. 9.3 and Art. 9.9 of Shenzhen Code (Turland *et al.*, 2018) respectively.


Epitype (designated here): INDIA, *Diu*, Nagoa beach, 28.1.2014, P.R.Lawand PRL001 (SUK!). Fig. 3.

Notes: *H. dichotoma* was originally described by White (1839) under the genus *Borassus* as *B. dichotomus*. Fig. 1. Protologue of *Borassus dichotomus* J. White Dubl. ex Nimmo (Image reproduced from http://www.biodiversitylibrary.org).

Fig. 2. Lectotype of *Hyphaene dichotoma* (J. White Dubl. ex Nimmo) Furtado, One of three illustrations of Bowler’s Remarkable Palmyra Tree (Image reproduced from http://www.books.google.co.in).
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(*dichotomus*) in Graham’s “Catalogue of Plants Growing in Bombay and its vicinity”. While describing the species, White did not mention any specimen however; he mentioned a sketch of this palm in Madras Journal of Literature without precise year and volume number. Details of the sketches have been mentioned by Martius (1850). The sketches were already catalogued prior to publication of this species under the title “Description and Drawings of some Remarkable Palmyra Tree in the Northern Circars” in Madras Journal of Literature and Science by Bowler (1833).

Later, Furtado (1970) transferred *Borassus dichotomus* to *Hyphaene* and made new combination as *Hyphaene dichotoma*. Because of the unavailability of any known specimen, the only existing material the sketch ‘No. 1’ published by Bowler should be considered as an original material which has been chosen here as a lectotype for *H. dichotoma* according to article No. 9.3 of Shenzhen code (Turland et al., 2018).

The selected lectotype depicts only the habit which is inadequate or ambiguous for precise identification of the species. Hence, a flowering specimen collected by the first author from one of the type localities, Diu Island in Gujarat, is designated here as an epitype following Art. 9.9 of Shenzhen Code (Turland et al., 2018).

**Discussion on authority citation**

Ever since its publication, the name *Borassus dichotomus* was ascribed only to John White (Chaphekar et al., 2007, Ravikiran & Das, 2010, www.theplantlist.org, www.tropicos.org). However, the information given in the protologue was provided by Vaupel and Nimmo (indicated by ‘N’ after the description.). Moreover, Graham’s “Catalogue of Plants Growing in Bombay and its vicinity” was completed and published posthumously by Nimmo. Since the important diagnostic description in the protologue was provided by Nimmo, correct author citation for this binomial should be written as ‘*Hyphaene dichotoma* (J.White Dubl. ex Nimmo) Furtado (=*Borassus dichotomus* J.White Dubl. ex Nimmo)’.


**Lectotype** (designated here): INDIA, Tamil Nadu, Coimbatore, *R. Wight s.n.* (BR0000013237035 image!).

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**Fig. 3.** Epitype of *Hyphaene dichotoma* (J.White Dubl. ex Nimmo) Furtado (*P. R. Lawand PRL 001, SUK*).

**Fig. 4.** Lectotype of *Arenga wightii* Griff. (BR0000013237035).
Griffith (1845) described *Arenga wightii* based on specimens received from Robert Wight. Whatever specimens he received were ‘sine numero’ but in protologue he mentioned all the details of those specimens. Von Martius then acquired many of Griffith’s material and Martius’ widow sold a lot of specimens to the Brussels Herbarium (BR), Botanic Garden Meise, Belgium (John Dransfield., Pers. comm., 14.01.2014). Authors could trace two specimens at ‘BR’ viz., BR0000013237035 and BR0000006727802. The material on specimen BR0000013237035 correctly matches to the details provided by Griffith. Hence this specimen is selected here as lectotype following Art. 9.3 of Shenzhen code (Turland et al., 2018). The specimen BR0000006727802 was annotated as ‘Type or Isotype’ by H.E. Moore, Jr. but such labels cannot be considered as an effective typification of the species. This specimen is one of the communicated samples from Robert Wight to Griffith, therefore, should be treated as isolectotype.

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**Literature Cited**


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