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A new species of *Hubera* (Annonaceae) from Peninsular India

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Introduction

Annonaceae, one of the most diverse plant families in tropical forests, comprise roughly 108 genera and 2400 species (Rainer *et al*. 2006, Chatrou *et al*. 2012). As per the current understanding, Annonaceae have four subfamilies: Anaxagoreoideae, Ambavioideae, Annonoideae and Malmeoideae (Chatrou *et al*. 2012). Phylogenetic studies on Annonaceae (Mols *et al*. 2004; Erkens *et al*. 2007; Su *et al*. 2008; Nakkuntod *et al*. 2009; Chatrou *et al*. 2012) have brought significant changes in circumscription and nomenclature of several genera due to the strict adherence to the principle of monophyly (Su *et al*. 2005, 2010; Rainer, 2007; Mols *et al*. 2008; Saunders, 2009; Chaowasku *et al*. 2011, 2012; Xue *et al*. 2012, 2014). The problematic case of the polyphyletic genus *Polyalthia* Blume *s.l.* (1830: 68) has recently been studied phylogenetically in detail and presently is fully solved; species of *Polyalthia s.l.* have been segregated into several smaller monophyletic genera, for example, *Fenerivia* Diels (1925: 355; Saunders *et al*. 2011), *Hubera* Chaowasku (2012: 46; Chaowasku *et al*. 2012), *Maasia* Mols, Keßler & Rogstad (2008: 493; Mols *et al*. 2008), *Marsypopetalum* Scheffer (1870: 342; Xue *et al*. 2011) and *Monoon* Miquel (1865: 15; Xue *et al*. 2012).

Most southern Indian species of *Polyalthia s.l.* are currently placed under *Hubera* or *Monoon*, both of which along with *Polyalthia s. str.* are members of the morphologically diverse tribe Miliuseae (Chaowasku *et al*. 2014). *Hubera* is differentiated from *Polyalthia s. str.* mainly by number of ovules and structure of pollen infratectum, and it is morphologically similar to *Monoon* in position of the inflorescence and number of ovules.

Floristic studies carried out in Gingee Hills, Villupuram District, Tamil Nadu identified unique populations of one Annonaceae species occurring in several pockets scattered on the hill. The morphology of this species fits the circumscription of *Polyalthia s.l.*, e.g. presence of six subequal petals, stamens numerous with truncate connective, carpels numerous with basal or lateral ovules and fruit an aggregate of stalked berries with one to several seeds (Johnson & Murray, 1999). Study of characters highlighted and differentiated in Chaowasku *et al.* (2012) indicated that this species belongs to the recently described genus *Hubera* because of the presence of e.g. axillary inflorescences, spiniform endosperm ruminations, and uniovulate ovaries, which are principal features characterizing this genus. Although the genus is widely distributed in Paleotropics, so far only three of ca. 27 species of *Hubera* have been reported to occur on the Indian subcontinent: *H. jenkinsii* (Hooker & Thomson, 1855: 141) Chaowasku (2012: 48), *H. cerasoides* (Roxburgh, 1795: 30) Chaowasku (2012: 47) and *H. korinti* (Dunal, 1817: 133) Chaowasku (2012: 49). Comparisons with other species in the relevant literature (Dunal, 1817; Hooker & Thomson, 1872; Thwaites, 1864; Huber 1985) indicate that recognition of this species is warranted, and it is described below. In addition, morphological comparisons of the new species and three other Indian species of *Hubera* are presented (Table 1).

Taxonomy

Hubera senjiana R.Muralidharan, Naras. & N.Balach., *sp. nov.* (Figs. 1a–h, 2a–b)

Type**:**—INDIA. Tamil Nadu: Gingee, Villupuram District, Devathanampettai, Pakkamalai Reserve Forest, 12° 10.146’ N, 79° 19.280’ E, 250 m, 17 August 2008, *Muralidharan* & *Narasimhan* 7210A, (holotype MH!; isotypes,7210 B-C, CAL!).

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