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NOTES ON LECTOTYPIFICATION OF THE ASSAM IRONWOOD MESUA ASSAMICA (KING & PRAIN) KOSTERM. (CALOPHYLLACEAE)

Prantik Sharma Baruah, Sachin Kumar Borthakur & Bhaben Tanti

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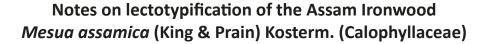


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Mesua assamica (King & Prain) Kosterm., commonly known as 'Sia- Nahor' in Assamese is a slowgrowing, large, evergreen tree belonging to the family Calophyllaceae. Leaves are simple, opposite, ovate in shape, light to dark green in colour and coriaceous in texture. Leaf apex is acuminate, base rounded with entire margin, and petiolate. Venation is semicraspedodromous in nature, distally forming distinct loops with bold inter-secondary veins. Flowers are small, white or creamy white, bisexual, fragrant and coriaceous bearing numerous golden yellow coloured stamens and a 4-fid stigma. Fruit is 1-seeded and globose. Flowering occurs in the months of April-May (Baruah et al. 2017). It is distributed in India, Myanmar and the Malay Peninsula (www.catalogueoflife.org/col.). In India, the plant is, however, confined only to the sub-montane forests of both Lakhimpur and Dhemaji districts of Assam (Kanjilal et al. 1934; Sharma et al. 1993; Baruah et al. 2016, 2020). Although the species has not been assessed by IUCN yet, it is reported as Endangered at a regional level based on its small restricted population (Choudhuri 2007).

The species was reported for the first time by Barker from the foot hills of the North Lakhimpur district of

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Assam and the specimens were submitted to the Forest School at Dehra Dun in October 1886 for identification, but having received no definite reply he sent a flowering material to the Calcutta Herbarium (CAL). Prain (1901) commented that Barker's specimen was not sufficient enough to identify the species but opined that the specimen belonged to the same natural order as that of Mesua in the genus Kayea. Further, King & Prain described the species as Kayea assamica based on two sets of specimens (fruiting and flowering) collected by H.G. Young and Mr. Barker from the erstwhile Dibrugarh district of Assam, India (Prain 1901).

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Out of the set of fruiting specimens available for the species, three of them are housed in Central National Herbarium (CAL), Kolkata, India (CAL 47574; CAL 47575; CAL s.n.); one in Conservatoire et Jardin Botaniques ville de Geneva (G) (G00355757) labelled as Syntype by P.F. Sturn in 1975. All those specimens belonging to the collection of Young bear the same date and place of collection, i.e., December 1899 and Dibrugarh, Assam, India. Moreover, there is a fruiting specimen collected by Young with the same date and place of collection, i.e., December 1899 and Dibrugarh, Assam, India housed



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Notes on lectotypification of Mesua assamica

at Kew (K000677304). Another specimen collected by Young on December 1899 from Dibrugarh bearing only leaves has been housed at Natural History Museum, London (BM000611295) which had been designated as Isosyntype by P.F. Stevens in 1985. Among the flowering specimens available, one of them (CAL 47573) housed in CNH, Kolkata, India is without any date of collection and collector's details, whereas there is an attached illustration of the reproductive parts drawn by King & Prain with the specimen. It evident from the letter of Young to David Prain dated 6 December 1899 and a confirmation slip that remained attached with the above voucher specimen. While the other flowering specimen (K000677305) has been housed in Royal Botanic Gardens, Kew (K) collected by Young from Dibrugarh but with a date of collection of 29 June 1900 and labelled as Isosyntype by P.F. Sturn in 1985. The whereabouts of the specimen of Barker referred to by Prain (1901) could

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not be ascertained as there are nine materials presently housed at Herbarium of the Forest School at Dehradun (DD) (DD 69649; DD 70659; DD 70660; DD 76170; DD 76171; DD 85505; DD 85506; & DD 85507 together with a collection of H.G. Young from Dibrugarh dated 06.xii.1899). Out of the voucher specimens housed at DD, there is only one collection of Young from Dibrugarh in 1899. As no types were designated specifically to Mesua (whereas, P.F. Sturn designated the types twice for the species, under the genus Kayea, once referring fruiting material in 1975 and flowering material in 1985), lectotypification is therefore necessary in this study (Deka et al. 2018). Kostermans (1969) while transferring the species Kayea assamica to Mesua mentions specimens of both Young and Barker housed at BM, G, and K, but he or any of the subsequent workers did not designate any of these specimens as Lectotype.

Out of the five specimens collected by H.G. Young



Figure 1. Lectotype of *Mesua assamica* (King & Prain) Kosterm., H.G.Young (K000677304), © The Board of Trustees of the Herbarium of Royal Botanic Gardens, Kew (K).

Notes on lectotypification of Mesua assamica

Table 1. List of all specimens examined.

	Herbarium	Collector	Studied material
1	CAL	-	s.n. (47573, CAL)
		H.G. Young	Assam, Dibrugarh, December, 1899, H.G. Young (47574, CAL)
			Assam, Dibrugarh, December, 1899, H.G. Young (47575, CAL)
			Assam, Dibrugarh, December, 1899, H.G. Young (s.n., CAL)
2	G	H.G. Young	Assam, Dibrugarh, December, 1899, H.G. Young (G00355757, G)
3	BM	H.G. Young	Assam, Dibrugarh, December, 1899, H.G. Young (BM000611295, BM)
4	К	H.G. Young	Assam, Dibrugarh, December, 1899, H.G. Young (K000677304, K)
			Assam, Dibrugarh, 06.xii.1899, H.G. Young (DD)
			Assam, Dibrugarh, 24.vi.1900, H.G. Young (K000677305, K)
5	DD	Range officer, Tinsukia Range	Assam, Lakhimpur dist., loc. Dibru Reserve, Tinsukia Range, Range officer, 70659 (DD)
			Assam, Lakhimpur dist., loc. Dibru Reserve, Tinsukia Range, 21.ix.1935, Range officer, 70660 (DD)
		Range officer, North Lakhimpur Range	Assam, North Lakhimpur Range, December, 1937, Range officer, 76170 (DD)
			Assam, North Lakhimpur Range, December, 1937, Range officer, 76171 (DD)
			Assam, North Lakhimpur Range, Range officer, 85505 (DD)
			Assam, North Lakhimpur Range, Range officer, 85506 (DD)
		S.K. Dutta	Assam, North Lakhimpur, 26.v.1940, S.K. Datta, 85507 (DD)
6	ASSAM	U. Kanjilal	Assam, Lakhimpur dist., loc. Dulong Reserve Forest, 24.iii.1914, Alt. 310 ft., U. Kanjilal, 3678 (ASSAM)
			Assam, Lakhimpur dist., loc. Dulong Reserve Forest, 24.iii.1914, Alt. 310 ft., U. Kanjilal, 3678 (ASSAM)
			Assam, Lakhimpur dist., loc. Dulong Reserve Forest, 24.iii.1914, Alt. 310 ft., U. Kanjilal, 69649 (DD)
			Assam, Lakhimpur dist., loc. Dirju, 06.iv.1914, Alt. 300 ft., U. Kanjilal, 4398 (ASSAM)
			Assam, Lakhimpur dist., 18.vii.1932, U. Kanjilal, 10256 (ASSAM)
		N. Odyuo & D.K. Roy	Assam, North Lakhimpur, loc. Kakoi Reserve Forest, Block Nala Hill top, 11.ii.2011, Alt. 196 m., N. Odyuo & D.K. Roy, 121241 (89633, ASSAM)
			Assam, North Lakhimpur, loc. Kakoi Reserve Forest, Block Nala Hill top, 11.ii.2011, Alt. 196 m, N. Odyuo & D.K. Roy, 121241(89634, ASSAM)
		N. Odyuo	Assam, North Lakhimpur, loc. Dullung Reserve Forest, Ghokor 2, 07.v.2011, Alt. 250 m., N. Odyuo, 122387 (89648, ASSAM)
			Assam, North Lakhimpur, loc. Dullung Reserve Forest, Ghokor 2, 07.v.2011, Alt. 250 m., N. Odyuo, 122387 (89649, ASSAM)
			Assam, North Lakhimpur, loc. Dullung Reserve Forest, Ghokor 2, 07.v.2011, Alt. 250 m., N. Odyuo, 122387 (89650, ASSAM)
		D.K. Roy & N. Odyuo	Assam, North Lakhimpur, loc. Dullung Reserve Forest, Pathalipam, 17.ix.2011, D.K. Roy & N. Odyuo, 123113 (89647, ASSAM)
		N. Odyuo & R. Daimary	Assam, North Lakhimpur, loc. Dullung Reserve Forest, Ghokor 1, 21.v.2012, Alt. 120 m., N. Odyuo&R. Daimary, 126669 (89635, ASSAM)
			Assam, North Lakhimpur, loc. Dullung Reserve Forest, Ghokor 1, 21.v.2012, Alt. 120 m., N. Odyuo & R. Daimary, 126669 (89636, ASSAM)
		P. Sharma Baruah	Assam, North Lakhimpur, Ioc. Dullung Reserve Forest, Pathalipam, 23.iv.2016, P. Sharma Baruah, 1(92897, ASSAM)
			Assam, North Lakhimpur, Ioc. Dullung Reserve Forest, Pathalipam, 23.iv.2016, P. Sharma Baruah, 1(92898, ASSAM)
			Assam, North Lakhimpur, Ioc. Dullung Reserve Forest, Pathalipam, 23.iv.2016, P. Sharma Baruah, 1(92899, ASSAM)

Abbreviations: CAL—Central national Herbarium/Calcutta Herbarium | G—Geneva Herbarium | BM—The Natural History Museum | K—Kew Herbarium | DD— Herbarium of the Forest Research Institute, Dehra Dun | ASSAM—Eastern Regional Centre, Shillong, BSI (Botanical Survey of India).

from Dibrugarh on 06.xii.1899, one specimen presently housed at Kew (K000677304), three specimens are housed at CAL (CAL 47574; CAL 47575; and CAL s.n.) and one specimen housed at DD (DD s.n.). Further, the flowering specimen presently housed at CAL (CAL 47573) was supposed to be used while describing the species, but is presently in a dilapidated condition except the illustration attached to it. Even after rigorous search we were unable to locate Barker's specimens. Therefore, after consulting the protologues and study

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Notes on lectotypification of Mesua assamica

(H)

of all the original specimens examined by King & Prain, the fruiting specimen of the taxa housed at Kew (K000677304) collected by H.G. Young from Dibrugarh in 06.xii.1899 agreed with the description provided in the protologue and hence selected as the lectotype and specimens housed at CAL (CAL 47574; CAL 47575; & CAL s.n.) and the specimen housed at DD (DD s.n.) have been selected as isolectotypes.

Lectotypification: *Mesua assamica* (King & Prain) Kosterm., *Reinwardtia*, 7: 426 (1969).

Lectotype (designated here): INDIA. Assam: Dibrugarh, December 1899, H.G. Young (K000677304); isolectotypes (CAL 47574; CAL 47575; CAL s.n.; & DD s.n.).

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