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RESEARCH ARTICLE

Note on the identity of Salacia vellaniana Udayan, Yohannan & Pradeep (CELASTRACEAE)

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Abstract

INTRODUCTION

Gamble (1916) described 3 new species of Salacia viz. S. malabarica, based on the collections of TF Bourdillon from 'Colatoorpolay, Travancore'; S. beddomei on the collections of RH Beddome from Anamalays and S. talbotii on the collections of WA Talbot from North Kanara. Whiting & Kaul (1940) renamed Salacia talbotii Gamble as S. gambleana as the former name is a later homonym of S. talbotii Baker f. (1913). Udayan et al., (2013) described S. vellaniana as a new species from Vellanimala, Thrissur District of Kerala. Sasidharan and Sivarajan (1996) identified similar specimens from Vellanimala, Thrissur as S. macrosperma based on the fimbriate calyx lobes, entire leaf margins and nearly smooth fruit surface. In the light of description of S. vellaniana, we made a critical study of the specimens from Vellanimala, Thrissur with the species of Salacia so far described from Peninsular India. It is found that S. vellaniana shares many characters with S. gambleana. Gamble (1916) differentiated S. talbotii from S. macrosperma based on the smaller oblong coriaceous leaves with entire margin, 4-6 mm long petioles, 1-8 flowered cymes (against 22-30 flowered cymes), 3 or 4 stamens and pale reddish-orange echinate fruits.

Examination of the protologue and images of the type specimens of S. talbotii (WA Talbot 1361, WA Talbot 1217, 2.6.1885, North Kanara) it is found that S. vellaniana is very much matching with S. gambleana.

Udayan et al., (2013) described the petals as ovate-lanceolate, but it is not reflected in the illustration. In fact the petals are ovate-oblong with obtuse apex. The filaments are flattened and tapering towards apex and reflexed as described by Gamble. The ovary of S. vellaniana was descried as 3-loculed with 1 ovule in each locule and fruits globose or obovate, tuberculate, pale reddish-orange; seeds 3. Observation of fresh specimens from the type locality (Vellanimala), reveal that there are 2 ovules in each locule and up to 5 seeds in the fruits, further endorsing the similarity with S. gambleana. The fruit surface varies from nearly smooth with 1 or 2 warts to completely rugose with linear ridges. Thus, there are no true diagnostic characters to distinguish S. vellaniana from S. gambleana. It can be confirmed that Salacia vellaniana was erected based on imperfect study of materials by the authors.

Therefore, it is reduced to a synonym of S. gamblei Whiting & Kaul. Description based type specimens and our fresh collections are provided along with images.

Salacia gambleana

Whiting & Kaul, Bull. Misc. Inf. Kew. 1940:300.1940; Ramamurthy & Naithani in NP Singh et al., (eds.) Flora India 5:153.2000; Punetkar & Lakshminarasimhan, Fl. Anshi National Park 153.2011.
Salacia talbotii Gamble, Bull. Misc. Inf. Kew. 1916:133.1916 (non EG Baker, 1913); Saldanha & Singh in Saldanha Fl. Karnataka 2:92.1996.
Salacia vellaniana Udayan, Yohannan & Pradeep, Candollea 68: 148. 2013. **syn. nov.**

Scandent lianas; young branchlets brownish, often lenticellate. Leaves opposite to sub-opposite, 6-11 x 2.5-3.5 cm, oblong, apex acute to acuminate, base cuneate or attenuate, margin entire or remotely crenate, subcoriaceous; lateral nerves 5 or 6 pairs, reticulations faint; petiole 4-6 mm long. Flowers in simple fascicles of 2-8, from axillary or extra-axillary tubercles; pedicel 4-6 mm long. Calyx lobes 5, triangular ovate, green, ca. 1 mm long, margin fimbriate. Petals 5, 1.8-2 x 1-1.2 mm, ovate-oblong with a small notch towards the apex, obtuse, erect, green with a tinge of yellow towards the upper margins. Disk green turning creamy yellow, 1 x 1.5 mm, oblong, tapering towards apex, completely covering the ovary. Stamens 3, rarely 4, discoid, 0.2 mm long, creamy-white with a brown tinge, arising from within the disk; filaments flattened, recurved, creamy-white when young, become yellow with orange tinge later. Ovary 3-loculed; ovules 2 in each locule; stigma simple, pale green. Fruits globose or obovoid, 3-4.5 x 2.5-3.5 cm, rind 2-2.5 mm thick, smooth to tuberculate, with thickened linear ridges, pale reddish-orange; seeds 2-5, ellipsoid, slightly angular, immersed in pulp, 1.5-2 x 1-1.5 cm, brown. [Plate I].

Distribution: Western Ghats of Kerala and Karnataka

Specimens examined: Maharastra, North Kanara WA Talbot 1361 dated 25.01.1886 ; 1217 dated 02.06.1886 [http://specimens.kew.org/herbarium/ K000669982, K000669983 accession on 19.12.2014 10.45 IST] ; Kerala Thrissur, Vellanimala N. Sasidharan 3079 dated 18.04.1984; 27903 dated 11.01.2013; 3940 dated 13.03.1987; 3484 dated 10.05.1985 [KFRI]; PS Udayan et al., 03371, dated 23.02.2005 ; 06121 dated 20.06.2009 [Herbarium CMPR, Kottakkal].

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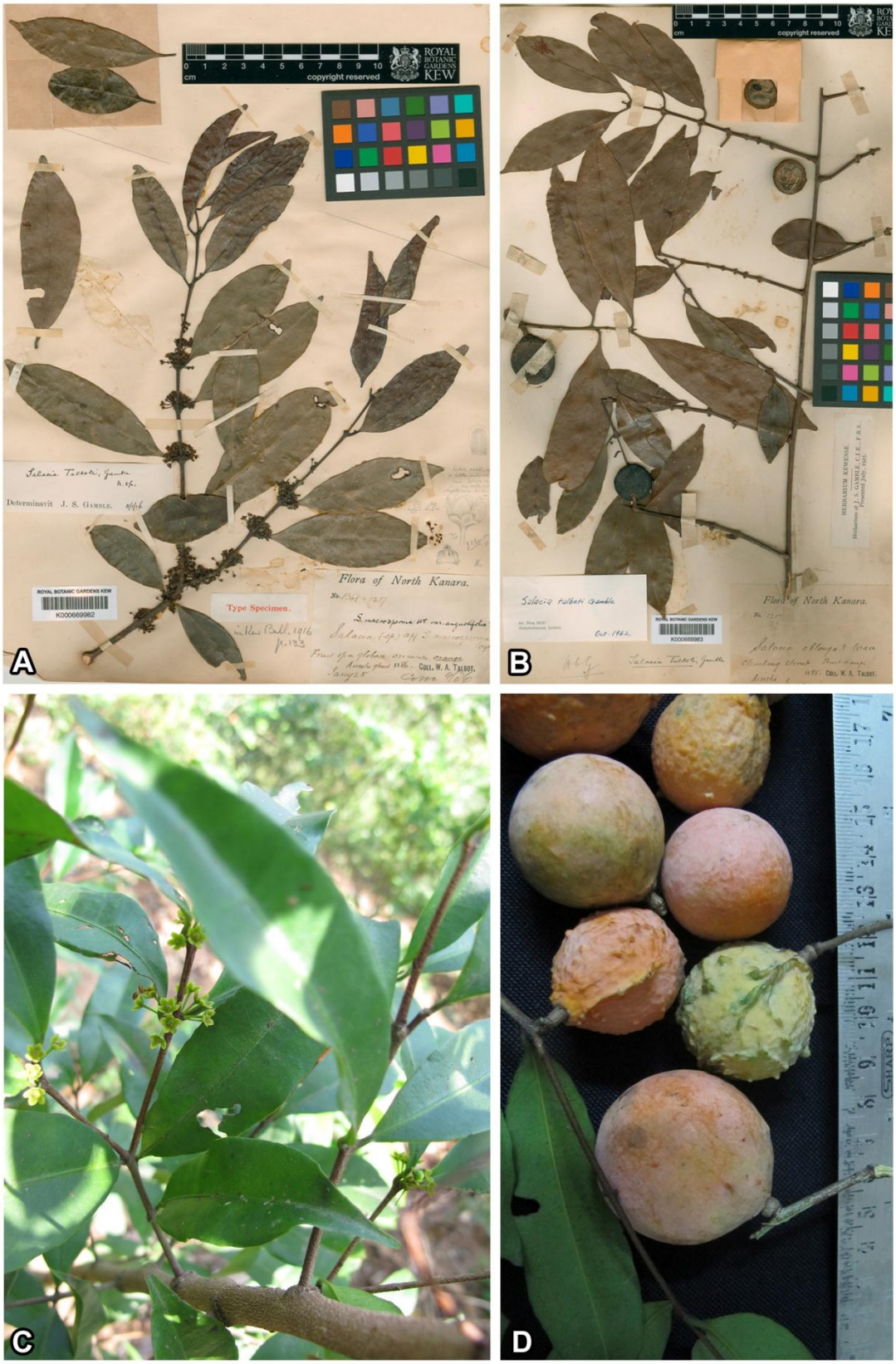

Plate 1. ***Salacia gambleana*** Whiting & Kaul, **A.** & **B.** Herbarium specimens [©The Board of Trustees of the Royal Botanic Gardens, Kew. Reproduced with the consent of the Royal Botanic Gardens, Kew.]; **C.** Flowering twig; **D.** Fruits

References

Gamble, JS, 1916. Decades Kewensis. Bull. Misc. Inf. Kew 1916: 131-136.

Gamble JS, 1918. Family Hippocrateaceae. In The Flora of the Presidency of Madras. Adlard & Son Ltd., London.

Whiting MM and KN Kaul 1940. New or Little Known Plants from Southern India XIII . Bull. Misc. Inf. Kew 1940:300-302.

Sasidharan, N. and V.V. Sivarajan 1996. Flowering Plants of Thrissur Forests. Scientific publishers, Jodhpur.

Udayan PS, Regy Yohannan, Devipriya MS, Devipriya V & AK Pradeep, 2013. Salacia vellaniana Udayan, Yohannan & Pradeep (Celastraceae), a new species from India. Candollea 68(1):147-149.