

Rediscovery and Lectotypification of *Eugenia argentea* Bedd. (Myrtaceae) – An Endemic and Endangered Species of India

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Received 3 October 2010, accepted in revised form 13 December 2010

Abstract

Eugenia argentea Bedd. has been rediscovered from Wayanadu forests in Kerala after a lapse of 138 years of its first collection. Detailed description, photographs, lectotypification, etc are provided.

Keywords: *Eugenia argentea*; Rediscovery; Western Ghat; Lectotypification.

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doi:10.3329/jsr.v3i1.6210

J. Sci. Res. 3 (1), 213-216 (2011)

1. Introduction

The pan tropical genus *Eugenia* L. (Myrtaceae) has about 550 species distributed mainly in the tropical regions of the World [1]. Out of the 19 species reported from India 13 of them are endemic to the country [2-8]. Kerala harbors about 14 species and most of them are confined to evergreen and semi evergreen forests of the state [9].

During one of the plant exploration trips for the germplasm collection of wild edible fruits of Kerala, the authors collected a curious species of *Eugenia* from Periya range in Wayanadu district of the state. Perusal of literature and matching with the type specimens deposited in British Museum (BM) (Beddome, 2940, 2941), Kew Herbarium (K) and Madras Herbarium (MH) it was identified as *Eugenia argentea* Bedd.

Eugenia argentea Bedd., is an endemic and endangered species of the Western Ghats. It was collected and described by Beddome in 1872 from 'Thambracherry Ghats' (presently known as Thamarassery) in Wayanadu district of Kerala. Formerly, it was treated as 'possibly extinct' [10] due to lack of further collections. The present gathering hence forms a rediscovery of the species after 138 years from its original collection.

Perusal of literature revealed that the present collections show some discrepancies from its original collection. Beddome described the flowers as solitary, whereas in the present collection in addition to the solitary flowers, there are specimens with flowers ranging from 2-12, aggregated in axillary or extra axillary as well as in terminal contracted cymes as in BM specimens. It is assumed that these represented later

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collections of Beddome since such characters are lacking in the protologue. We, therefore, provide here with a detailed description and other pertaining notes to facilitate its easy identification.

Eugenia argentea Bedd. Fl. Sylv. Anal. Gen. p. 109. 1872; Duthie in Hook.f., Fl. Brit. India 2: 503.1879; Gamble, Fl. Pres. Madras 484.1919.

Medium sized evergreen tree, up to 5 m high; bark light brown, smooth, flaky; branchlets terete, slender, pubescent. Leaves 4.5-12 x 1.5-4.5 cm, elliptic-lanceolate, acuminate to caudate-acuminate at apex, rounded at base, slightly revolute at margin, silvery pubescent beneath, chartaceous; mid rib channeled above, lateral nerves 14-17 pairs, prominent, at right angles to midrib, with one tier of intramarginal nerve, c.1 mm from margin; petiole to 6 mm long, silvery pubescent. Flowers solitary or 2-12 flowered axillary, lateral or terminal contracted cymes, 1 cm across. Peduncle up to 1 cm long. Pedicel in solitary flowers 2.0-2.5 cm long, in cymose flowers up to 0.5 cm long. Bracteoles filiform, 3.5 mm long, exceeding the calyx lobes. Calyx 4-lobed, 2 x 1.8 mm, ovate, obtuse at apex, hairy. Petals 4, suborbicular, 5 x 4 mm, white, ciliate along the margin. Stamens numerous, filament up to 5 mm long, anthers up to 1 mm long. Stigma capitate, ovary up to 5 mm long, pubescent. Fruit globose or ellipsoid, 2.2 x 1.9 cm. Seeds 1-2 (rarely up to 8).

Flowering and fruiting: Throughout the year.



Fig. 1. *Eugenia argentea* Bedd.

Note: *Eugenia argentea* is a critically endangered species of the southern Western Ghats. It is seen only in Wayanadu district of Kerala. Presently they are enjoying a limited range of distribution, less than 10 sq. km and the population size is less than 100 mature

individuals of different age groups of small trees and treelets in 3 fragmented subpopulations within Periyara range of hills and hillocks. It is usually seen associated with *Syzygium laetum* (Buch.-Ham.) Gandhi, *S. hemisphericum* (Wight) Alston, *S. munronii* (Wt.) Chandr., *Colebrookea oppositifolia* Smith., *Ixora elongata* Heyne ex G.Don, etc. We have successfully introduced this species in the field gene bank of Tropical Botanic Garden and Research Institute (TBGRI) for further studies.

Specimens examined: India: Kerala state, Wayanadu district, Thamarassery Ghats ('Thambracherry Ghat'), *Beddome* s.n. (Acc.No. K 000518029, K); *ibid*, *Beddome* s.n. (Acc. No. MH 20851) (MH); Brahmagiri hills ('Brumaghirry hills') west corner, Wynad (Periya hill), *Beddome* 2940 (BM); Chembra peak, Wynad, *Beddome* 2941 (BM); Periya, 1100m. 28-01-2010, *S.M.Shareef* 69306 and 69309 (TBGT).

2. Lectotypification

Beddome (*l.c.*) did not designate a type in his protologue and that was not mandatory during those times. But he mentioned an annotation 5/74 in the protologue. There are four collections known to exist till date, two in BM and one in K and one in MH. In the Kew herbarium, there is a single sheet with four specimens collected by Beddome from Thambracherry Ghats, Wayanadu, two of these are bearing globose fruits and the others are sterile. It was bearing the annotation 5/74 as in protologue.

In Madras Herbarium (MH), there is only a single sheet bearing two specimens collected from Thambracherry Ghats, Wayanadu (Acc. No. 20851). There is no collection number and date of collection as those in KH specimens. It seems that it may be a duplicate of the same collection. It agrees with the protologue of *E. argentea* in terms of the flowers being solitary and axillary.

The BM collections bearing two field numbers viz. 2940 and 2941, both were collected by Beddome, the previous one from 'Brahmagirry hills (Brahmagiri hills) western corner Waynad' and the later from 'Chembra peak' in Waynad. Both the collections were mounted on a single sheet. The top one having four flowering twigs mounted under the collection number 2940, of these, two are having leaves and the rest are without leaves. The lower part of the same sheet bearing the collection number (Beddome 2941) consists of two specimens, one with flowers and the other is a sterile specimen. Both are having flowers being congested either axillary or lateral cymes. Such cases were observed in populations of *E. argentea*. Since Beddome did not mention such characters in his protologue, it is assumed that these may be collected by Beddome in a later course of time.

Quite unlikely in other species of *Eugenia*, it has both flowers and fruits often seen simultaneously. Since Beddome has neither cited any specimens nor provided further details both of his collections in MH and K, so these are treated as syntypes. It is assumed that both of his collections were from the same locality. Both K and MH specimens are candidates to be selected as a lectotype. Out of these, specimen in K bearing the

annotation 5/74 fully agrees with description given in the protologue as the lectotype of *Eugenia argentea* Bedd. The details of the specimen are given below:

Kerala state, Wayanadu ('Wynad') Dist., Thamarassery ('Thambracherry Ghat') Ghats. dat., *Col. R.H. Beddome*, s.n. (Acc. No. K 000518029) (K).

Acknowledgements

The authors are grateful to the Director, TBGRI for the facilities provided and constant encouragements.

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