RHEEDEA
Journal of the Indian Association for Angiosperm Taxonomy

Vol. 22(2): 111-115 (2012)
ISSN: 0971-2313 (Print edition)
ISSN: 2582-2438 (Online edition)

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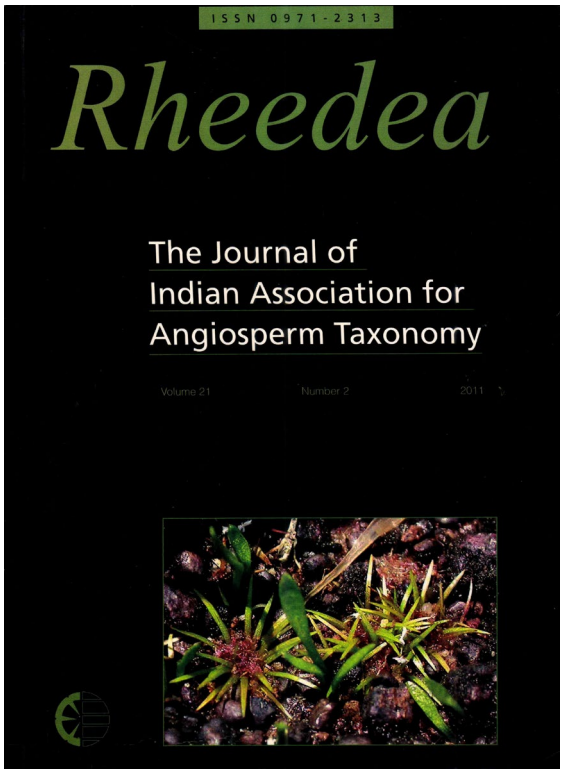

How to cite:

Aitawade M.M. & S.R. Yadav. 2012. Taxonomic status of *Begonia aliciae* (Begoniaceae). *Rheedea* 22(2): 111-115.

https://dx.doi.org/10.22244/rheedea.2012.22.02.11

Received: 30.04.2012 *Published Online*: 21.07.2012

Published in print: 31.12.2012 *Published Online*: 31.12.2012

Published by Indian Association for Angiosperm Taxonomy
This volume of Rheedea is published with partial financial assistance from Science Engineering Research Board, Government of India, New Delhi

Rheedea
Vol. 22(2)
111-115
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Taxonomic status of *Begonia aliciae* (Begoniaceae)

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Abstract

Critical field and literature survey, along with herbarium consultation has revealed that *Begonia aliciae* C.E.C. Fisch. is conspecific to *B. crenata* Dryand.

Introduction

Begonia L. is the sixth largest angiosperm genus in the world. It comprises *c*. 1600 species and classified under 66 sections. The genus consists of herbs, shrubs and lianas, and distributed throughout tropical and subtropical regions of the world, except northern Australia (Frodin, 2004; Sands, 2009; Stults & Axsmith, 2011). Clarke (1879) reported *c*. 65 species. In India, it is represented by *c*. 56 species (Uddin, 2007). A total of 18 species are included under various threat categories (Ahmedullah & Nayar, 1987; Walter & Gillett, 1998; Rao *et al*., 2003). A literature survey (Gamble, 1919; Cooke, 1958; Sharma, 1984; Rao, 2001; Sasidharan, 2004; Nayar *et al*., 2006) indicated that the genus *Begonia* is represented by 17 wild species in Western Ghats. Seven species of Indian *Begonia* are represented only by the type collections housed at K and CAL (Uddin, 2007). Kumar *et al*. (2002a, b) rediscovered four rare and endangered *Begonia* species from the Western Ghats. During the revisionary work on *Begonia* of Western Ghats, it was observed that two of the species, viz., *B. aliciae* C.E.C. Fisch. and *B. crenata* Dryand, rediscovered by Kumar *et al*. (2002a) showing overlapping characters.

Begonia crenata Dryand.

Begonia crenata was originally described by Dryander in 1791, who published a short description and illustration of a single leaf from specimens taken from Salsette to England by Dr. Hove in 1789 (Dalzell & Gibson, 1861). Unknowingly, Beddome (1864) again described this taxon as *B. minima* from moist forest near Devallicottah of Waynaad district Kerala, India and in his publication provided a short description and a more detailed illustration. Clarke (1879) reduced *B. minima* to a synonym of *B. crenata.* Golding & Wasshausen (2002) followed this treatment.

Begonia aliciae C.E.C. Fisch.

Begonia aliciae was originally described by Fischer in 1939, based on 1937 collections of Edward Barnes from Kadalaar valley, Travancore high range, southern India (Type at K; No. 1673 and 1674, including material in spirit) and J.S. Gamble from Devala, Nilgiri Hills (No. 15549). Only one specimen of Barnes (No. 1675) is available at MH. According to Fischer (1939), *B. aliciae* is closely related to *B. crenata* Dryand., but easily distinguishable by leaves with rounded or truncate base, fewer basal nerves, female flowers with 6 perianth lobes and the lateral wings of the ovary cohering at the base. The specific epithet commemorates Mrs. Alice Barnes, wife of Edward Barnes. According to Kumar and Bhattacharya (1990) *B. aliciae* had not been recollected since 1937 and was represented only by the type located in the Kew Herbarium and by a single specimen at MH. Shetty & Vivekananthan (1991) could not locate this species in their survey of Idukki District, Kerala and hence considered this species as "Possibly or Probably Extinct".

Kumar *et al*. (2002b), however, rediscovered the species after 64 years from the type locality. Another population of *B. aliciae* was located about 50 km away from its type locality, and in all less than 200 mature individuals were observed (Kumar & Roy, 2012).

Based on critical literature and field survey and herbarium studies, *B. aliciae* is merged with *B. crenata*. The following reasons support this merger:

1. There is a note on the type specimen (The Herbarium Catalogue, 2006) of *B. aliciae* diffrentiating his specimen from *B. crenata* (vide **Fig. 1**).

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Fig. 1. *Begonia aliciae* C.E.C. Fisch.: Photograph of type specimen at K (Barcode No.: K000761467-K).

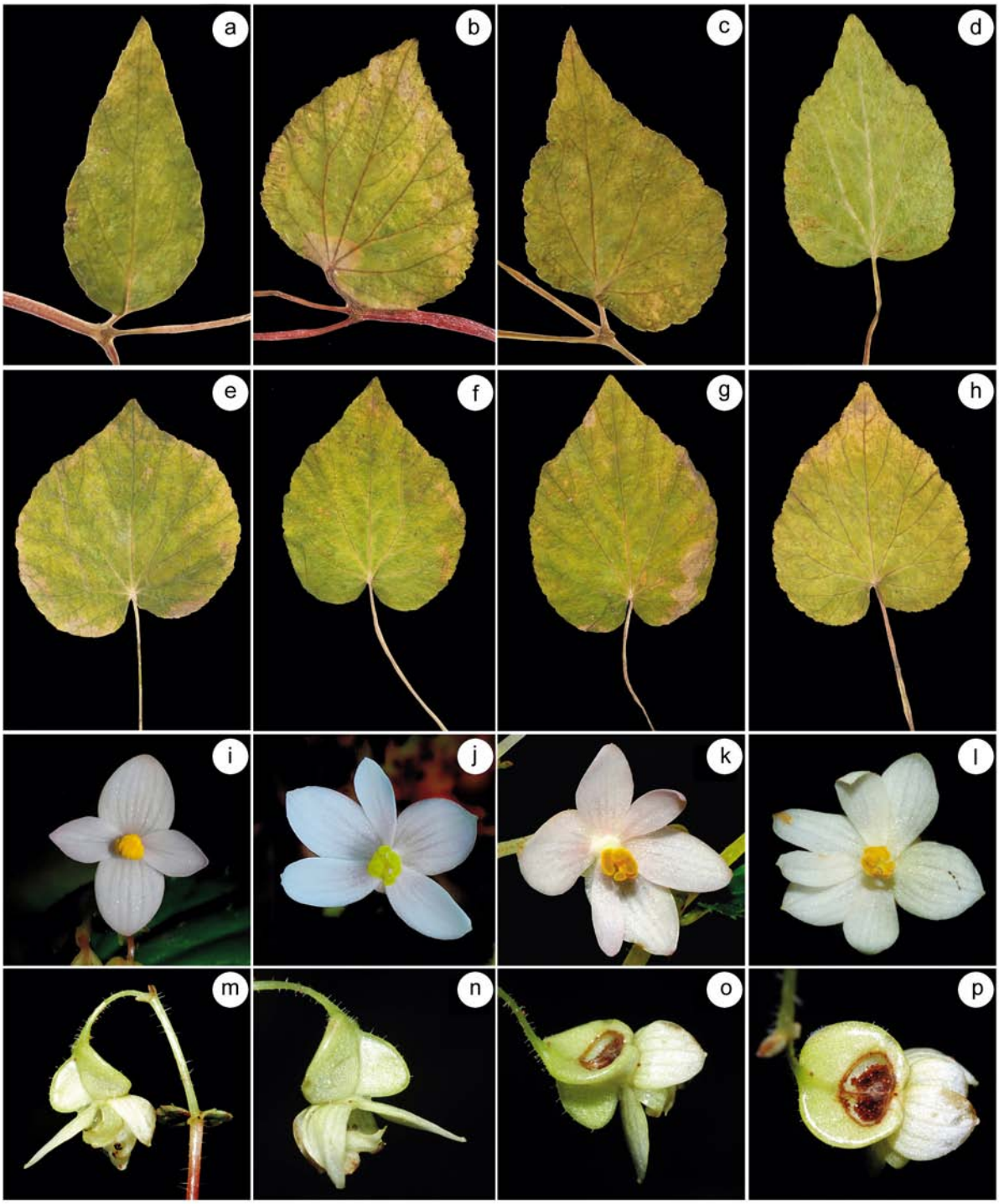

Fig. 2. *Begonia crenata* Dryand.: a – h. Leaves (different shapes and bases); i. Male flower; j – l. Female flower with 5 – perianth lobes; m – p. Different views of ovary.

When we compared the previously published descriptions of the ovary, fruit and pedicels of *B. crenata* no such distinctions are found. Similarly, the description of the ovary and fruit of *B.aliciae* (Kumar *et al*. 2002 b) perfectly matches with that of *B. crenata* (**Fig. 2m – p**). Kumar & Roy (2012) included color picture of *B. aliciae* which is exactly similar to *B. crenata* in all respects. During our survey of the wild populations of *B. crenata* we found that the leaves were variable from deeply cordate to truncate base (**Fig. 2a – h**).

2) The major difference between *B. crenata* and *B. aliciae* according to Fischer (1939) and Kumar *et al*. (2002b) is the number of perianth lobes in the female flowers. Female flowers of *B. aliciae* are said to have six perianth lobes and those of *B. crenata* five. In our survey we found that perianth lobes of female flowers commonly vary from 5 – 7 even within apopulation (**Fig. 2i – l**).

Begonia crenata Dryand., Trans. Linn. Soc.: 162, t. 14, f. 3. 1791; C.B. Clarke in Hook.f., Fl. Brit. India 2: 651. 1879; A. DC., Prodr. 15(1): 356. 1864; Dalzell & A. Gibson, Bombay Fl.: 104. 1861; Woodrow, J. Bombay Nat. Hist. Soc. 11: 641. 1898; Gamble, Fl. Madras: 546. 1935; T. Cooke, Fl. Bombay 1: 584. 1958 (Repr. ed.); K.M. Rao in N.P. Singh *et al*., Fl. Maharashtra 2: 77. 2001. *B. minima* Bedd., Madras J. Lit. Sci. 3, 1: 48, t. 15. 1864. *B. aliciae* C.E.C. Fisch., Bull. Misc. Inform. 1939: 247. 1939; K.D. Kumar & U.C. Bhattach. in M.P. Nayar & Sastry, Red Data Book Ind. Pl. 3: 66. 1990; E.S.S. Kumar *et al*., Rheedea 12: 185 – 188. 2002; T.S. Nayar *et al.,* Fl. Pl. Kerala: 141 – 142. 2006. – Type: BM000944671 and BM000944672.

Acknowledgements

We are very much thankful to Dr. William Milliken and Nicola Biggs, The Herbarium, Library, Art & Archives, Royal Botanic Gardens, Kew, for providing an image of the type specimen of *Begonia aliciae* C.E.C. Fisch. and also for granting permission to use it in this article. The authors are also thankful to Dr. E.S. Santhosh Kumar, TBGRI, Thiruvananthapuram, for providing literature and the Head, Department of Botany, Shivaji University, Kolhapur, for providing necessary facilities.

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Received: 30.4.2012
Revised and Accepted: 21.7.2012