



A new variety of *Bauhinia bassacensis* (Leguminosae: Caesalpinioideae) from Great Nicobar Island, India

UMESHKUMAR TIWARI^{*1}, KALIAMOORTHY RAVIKUMAR¹ & NATESAN BALACHANDRAN¹

¹Foundation for Revitalisation of Local Health and Traditions (FRLHT), Bangalore-560 106, Karnataka, India.

*Corresponding author: tigerumesh11@gmail.com

Abstract

Bauhinia bassacensis var. *nicobarica*, described here as a new variety from Great Nicobar Island, India. Diagnostic characters for the variety *nicobarensis* include exstipulate leaves and obtuse lobes of leaflets, bracts ovate rusty tomentose, corolla deltoid and blade margin undulating and pods rusty tomentose. A comparative table with diagnostic morphological features to distinguish between the following three varieties of *Bauhinia bassacensis*: var. *bassacensis* var. *backeri* and var. *nicobarica* is provided. A detailed description with nomenclature, distribution, photographs and an illustration of the species is also provided.

Key words: *Bauhinia bassacensis* var. *nicobarica*, new taxon, Great Nicobar Island, India

Introduction

The genus *Bauhinia* Linnaeus (1753: 374) comprises a wide range of life-forms from shrubs to trees and lianas. It comprises ca. 300 species, distributed in the pantropical regions of the world (Shu 2010). There are about 47 species found in China (Shu 2010) and 69 species reported from flora Malesiana (Larsen & Larsen 1996). In India this genus is represented by 36 species and two varieties of which four species are endemic and 13 species are planted for their ornamental values (Baker 1879; Sanjappa 1992; Bandyopadhyay *et al.* 2005). These are generally confined to Eastern (Sikkim, Arunachal Pradesh and West Bengal) and Western Himalaya (Kashmir, Himachal Pradesh and Uttarakhand), Central India, Western & Eastern Ghats, Peninsular India and Andaman and Nicobar Islands. In Andaman and Nicobar Islands five species are reported (Hajra *et al.* 1999).

During a recent botanical survey conducted to Great Nicobar Island, many interesting collections of plants were made. One such species of *Bauhinia* Linnaeus (1753: 374), on critical study and a thorough literature screening came close to *Bauhinia bassacensis* Gagnepain (1912: 168) var. *backeri* Larsen (1974: 122), a taxon distributed in Malaysia and Java (Larsen & Larsen 1996), but markedly distinguished from it by having exstipulate and rusty tomentose leaves, with the lobes of leaflets obtuse at apex. Based on these distinct characters the new variety is named as *Bauhinia bassacensis* var. *nicobarica*.

An analysis of literature (Drury 1864, Baker 1878, Cooke 1901, Brandis 1906, Gamble 1915, Parkinson 1923, Haines 1925, Osmaston 1926, Kanjilal 1928, Kanjilal & Bor 1938, Matthew 1981, Chawdhery & Wadhwa 1984, Haridasan & Rao 1985, Saxena & Brahmam 1994, Hajra *et al.* 1996, Pullaiah & Chennaiah 1997, Dagar & Singh 1999, Sinha 1999, Khanna *et al.* 1999, Moorthy 2000, Singh *et al.* 2000, Pullaiah & Ramamurthy 2001, Singh 2002, Bandyopadhyay *et al.* 2005, Nayar *et al.* 2006) revealed that this new taxa is not been described so far. Further scrutiny of literature as well as consultation in different Indian herbaria confirmed that this taxon is new to science.

financial support under CoE project. Thanks are also due to Dr. C. Murugan, Scientist C and the Officer in-charge of Botanical Survey of India, Andaman and Nicobar Circle; Curator of Kew herbarium for help in providing the information on the availability of the type specimens; Dr. Shashi Kumar, PCCF (HOFF), Andaman and Nicobar Islands for granting permission for plant collection in the Andaman and Nicobar Islands; Shri Agni Mitra, DFO, Great Nicobar, for help and co-operation; Shri Joginder Pal Singh, Commanding Officer, Campbell Bay, Great Nicobar Islands for providing permission for plant collection in the army areas; Shri Pandi Raj, Ferarganj, Port Blair for help during field surveys.

References

- Baker, J.G. (1879) *Bauhinia* L. In: Hooker, J.D. (ed.), *The Flora of British India* 2. L. Reeve & Co.Ltd., London, pp. 275–285.
- Bandyopadhyay, S., Ghoshal, P.P. & Pathak, M.K. (2012) Fifty new combinations in *Phanera* Lour. (Leguminosae: Caesalpinioideae) from Paleotropical region. *Bangladesh Journal of Plant Taxonomy*: 19(1): 55–61.
<http://dx.doi.org/10.3329/bjpt.v19i1.10942>
- Bandyopadhyay, S., Thothathri, K., & Sharma, B.D. (2005) The Genus *Bauhinia* L. (Leguminosae: Caesalpinioideae) in India. *Journal of Economic and Taxonomic Botany* 29: 766–801.
- Brandis, D. (1906) *Indian Trees: Leguminosae*. London, Archibald Constable & Co, 767 pp.
- Bruneau, A., Mercure, M., Lewis, G.P. & Herendeen, P.S. (2008) Phylogenetic patterns and diversification in the caesalpinioid legumes. *Canadian Journal of Botany* 86: 697–718.
<http://dx.doi.org/10.1139/b08-058>
- Chawdhery, H.J., & Wadhwa, B.M. (1984) *Flora of Himachal Pradesh* 1. Botanical Survey of India, Calcutta, 340 pp.
- Cooke, T. (1901) *The Flora of the Presidency of Bombay*, 1. Printed under the authority of the Government of India, Botanical Survey of India, Calcutta, 632 pp.
- Dagar, J.C., & Singh, N.T. (1999) *Plant resources of the Andaman and Nicobar Islands*, 1. Bishen Singh Mahendra Pal Singh, Dehradun, 987 pp.
- Drury, H. (1864) *Hand book of the Indian Flora*, 1: M. J. Higginbotham, Madras, 656 pp.
- Gagnepain, F. (1912) Leguminosae: *Bauhinia bassacensis*. *Notulae Systematicae*, 2: 168.
- Gamble, J.S. (1915) *Flora of the Presidency of Madras* 1. Adlard, London, 577 pp.
- Haines, H.H. (1925) *The Botany of Bihar and Orissa*, Part-III. Authority of the Government of Bihar and Orissa, 1350 pp.
- Hajra, P.K., Verma, D.M., Giri, G.S. (1996) *Materials for the flora of Arunachal Pradesh* 1. Botanical Survey of India, Calcutta, 693 pp.
- Hajra, P.K., Rao, P.S.N., & Mudgal, V. (1999) *Flora of Andaman and Nicobar Islands* 1. Botanical Survey of India, Calcutta, 487 pp.
- Haridasan, K., & Rao, R.R. (1985) *Forest Flora of Meghalaya* 1. Bishen Singh Mahendra Pal Singh, Dehradun, 451 pp.
- Kanjilal, U. (1928) *Forest flora of the Chakrata, Dehradun and Saharanpur Forest Divisions*. International Book Distributors, Dehradun, 568 pp.
- Kanjilal, U. & Bor, N.L. (1938). *Flora of Assam* 2. Omsons Publications, New Delhi, 409 pp.
- Khanna, K.K., Mudgal, V., Uniyal, B.P., & Sharma, J.R. (1999) *Dicotyledonous Plants of Uttar Pradesh: A Checklist*. Bishen Singh Mahendra Pal Singh, Dehradun, 455 pp.
- Larsen, K., & Larsen, S.S. (1996) *Flora of Malesiana* 12. Leiden Rijks herbarium, Hortus Botanicus, Leiden University, 784 pp.
- Larsen, S.S. (1974) Pollen Morphology of Thai species of *Bauhinia* (Caesalpiniaceae). *Grana* 14:114–131.
<http://dx.doi.org/10.1080/00173137409429902>
- Lewis, G.P. & Forest, F. (2005) Cercideae. In: Lewis, G., Schrire, B., Mackinder, B. & Lock, M. (eds) *Legumes of the World*. Royal Botanic Gardens, Kew, pp. 57–67.
- Linnaeus, C. (1753) Species Plantarum. L. Salvii, Stockholm, 1200 pp.
- Loureiro, João de (1790) *Flora cochinchinensis*. Ulyssipone, Lisboa, 745 pp.
- Matthew, K.M. (1981) *The flora of The Tamilnadu Carnatic* 1. The Rapinat Herbarium, St. Joseph's College, Trichirappalli, 688 pp.
- Moorthy, S. (2000) Fabaceae. In: Singh, N.P. & Karthikeyan, S. (ed.). *Flora of Maharashtra State- Dicotyledones*. Botanical Survey of India, Calcutta, pp. 777–782.
- Nayar, T.S., Rasiya Beegam, A., Mohanan, N., & Rajkumar, G. (2006) *Flowering Plants of Kerala: A handbook*. Tropical Botanic Garden and Research Institute, Thiruvananthapuram, 1069 pp.

- Osmaston, A.E. (1926) *A forest flora of Kumaon: Leguminosae*. Periodical Experts Book Agency, 605 pp.
- Parkinson, C.E. (1923) *The forest flora of the Andaman Islands: An account of the trees, shrubs and principal climbers of the Islands*. Government Central Press, Simla, 325 pp.
- Pullaiah, T. & Chennaiah, E. (1997) *Flora of Andhra Pradesh* 1. Compition Offset, New Delhi, 463 pp.
- Pullaiah, T. & Ramamurthy, K.S. (2001) *Flora of Eastern Ghats: Hill ranges of South East India* 2. Regency Publications, New Delhi, 387 pp.
- Rao, M.K.V. (1986) Preliminary report on the angiosperms of Andaman-Nicobar Islands. *Journal of Economic and Taxonomic Botany* 8: 107–184.
- Sanjappa, M. (1992) *Legumes of India*. Bishen Singh Mahendra Pal Singh, Dehradun, 338 pp.
- Saxena, H., & Brahmam, M. (1994) *The Flora of Orissa* 1. Regional Research Laboratory, CSIR, Bhubaneswar, 633 pp.
- Shu, Y.T. J. (2010) *Bauhinia: Flora of China* 10. Missouri Botanical Garden, St. Louis, MO & Harvard University Herbaria, Cambridge, MA, pp. 6–21.
Available from: http://www.efloras.org/florataxon.aspx?flora_id=2&taxon_id=103634 (accessed: 15/3/2013)
- Singh, A.N. (1993) Caesalpiniaceae. In: Verma, D.M., Balakrishnan, N.P. & Dixit, R.D. (eds.) *Flora of Madhya Pradesh* 1. Botanical Survey of India, Calcutta, pp. 412–416.
- Singh, D.K. (2002) *Bauhinia*. In: Singh, N.P., Singh, K.P. & Singh, D.K. (eds.). *Flora of Mezoram*, 1. Botanical Survey of India, Calcutta, pp. 506–510.
- Singh, N.P., Chauhan, A.S. & Mondal, M.S. (2000) *Flora of Manipur* 1. Botanical Survey of India, Calcutta, 600 pp.
- Sinha, K. (1999) Caesalpiniaceae. In: Hajra, P.K. & Rao, P.S.N. (eds.) *Flora of Great Nicobar Island*. Botanical Survey of India, Calcutta, pp. 216–220.
- Sinou, C., Forest, F., Lewis, G.P. & Bruneau, A. (2009) The genus *Bauhinia* s.l. (Leguminosae): a phylogeny based on the plastid trnL-trnF region. *Botany* 87: 947–960.
<http://dx.doi.org/10.1139/b09-065>
- Wunderlin, R., Larsen, K., & Larsen, S.S. (1987) *Bauhinia* subgen. *Phanera*. *Biologiske Skrifter, Kongelige Danske Videnskabernes Selskab* 28: 18.