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## A Note on Occurrence of an Endangered Plant *Cleome rutidosperma* var. *burmanii* from Andaman & Nicobar Islands

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### ABSTRACT

*Cleome rutidosperma* DC. var. *burmanii* (Wt. & Arn.) Siddiqui & Dixit. (Cleomace), collected from Shadipur, Port Blair, South Andaman, India is reported as extended distribution and first time herbarium collection for flora of Andaman and Nicobar Islands. The description, images and other relevant details have been provided in this paper.

**Key words:** Extended distribution, *Cleome rutidosperma*, *burmanii*, endangered.

### INTRODUCTION

Genus *Cleome* L. belonging to family Cleomaceae is widely distributed in the in America, Europe, Africa, Asia, extending to Australia in tropical area and representing around 150 species. In India, this genus represents 15 species; out of these, 3 species (*Cleome gynandra* L., *Cleome rutidosperma* DC., *Cleome visocsa* L.) reported from Andaman & Nicobar Islands. *Cleome rutidosperma* var. *burmanii* is so far reported in India from Tamil Nadu and Kerala. But this variety is not reported so far from Andaman & Nicobar Islands. So this is reported as extended distribution and addition for flora of Andaman & Nicobar Islands.

During the course of field exploration of South Andaman during Nov. 2020, one of the author demarcated and collected a small scattered population of 15 – 20 individuals belonging to genus *Cleome* spp. with hairs on plant body, ovate-lanceolate leaflets, petiole longer than leaves, long gynophore in fruiting condition, after critical study and study of relevant literature (Mukherjee, 1963; Siddiqui & Dixit, 1974; Raghavan, 1984;), it was identified as *Cleome rutidosperma* var. *burmanii* and found that this species was so far not reported in

the flora of the Andaman and Nicobar Islands (Hazara *et al.*, 1999; Sinha, 1999, Pandey & Diwakar, 2008; Singh *et al.*, 2014, 2021; Murugan *et al.*, 2016; Purohit *et al.*, 2022, 2023a & 2023b). The voucher specimens have been deposited in the herbarium of Botanical Survey of India, Andaman and Nicobar Regional centre (PBL).

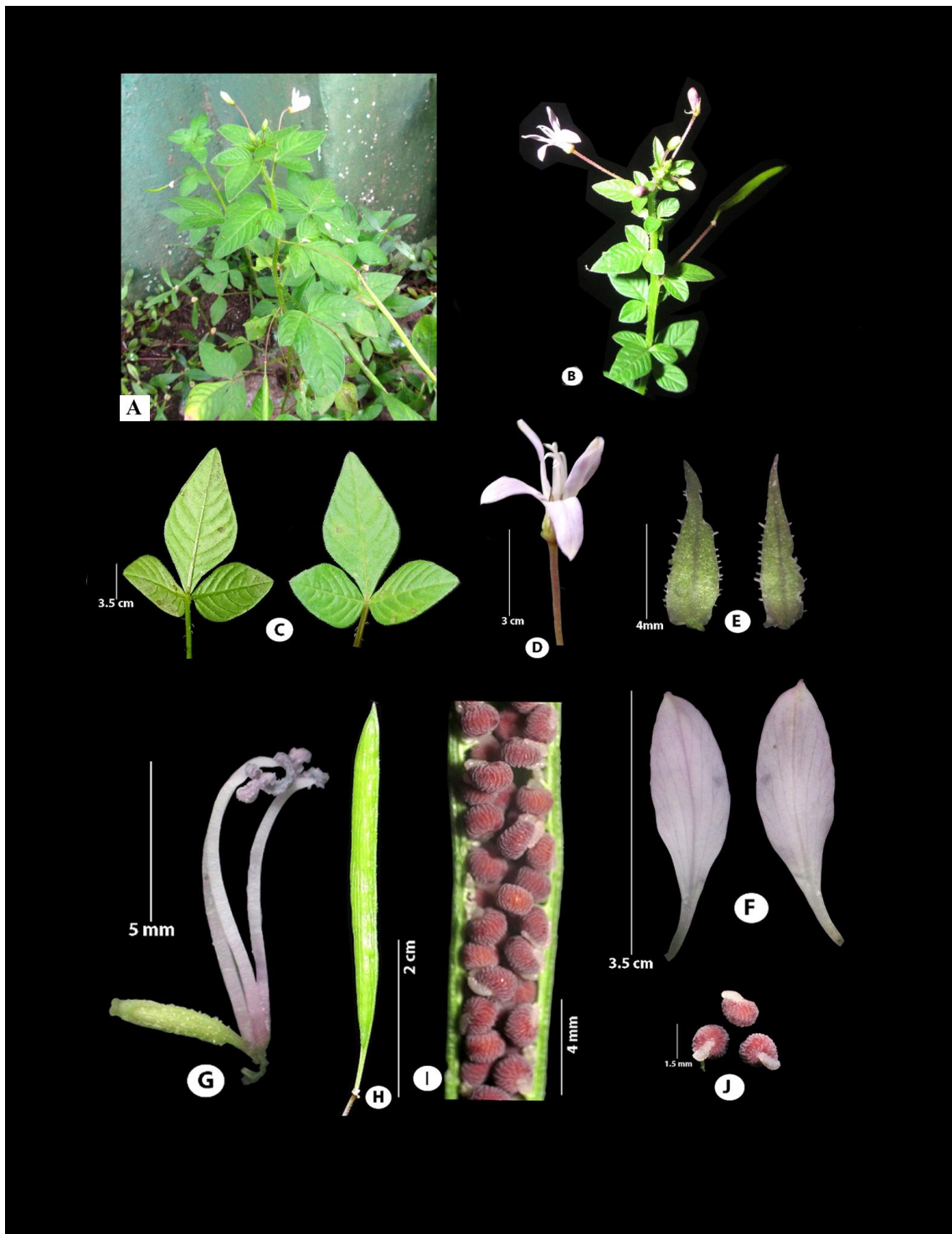
### TAXONOMIC TREATMENT

*Cleome rutidosperma* DC. var. *burmanii* (Wt. & Arn.) Siddiqui & Dixit. Pl. Sci. (Lucknow) 6: 67 – 69. 1974. *Cleome burmanii* Wt. & Arn. Prodr. 1: 22. 1834; Hook.f. & Thomson in Fl. Brit. India 1: 170. 1872.

Annual erect herb, up to 50 cm tall. Stem much branched, somewhat flattened, ribbed, clothed with scattered prickly soft appendages up to 2.5 mm long. Leaves as long as petiole, tri or penta-foliolate, lower petiole up to 4 cm long, upper one smaller; leaflets 3 – 5, 2 – 6 × 0.5 – 2 cm, sessile, ovate-lanceolate or rhomboid, membranous, glabrous, cuneate at base, acute or subacute or subrounded at apex, faintly crenate-serrulate margins, petiolules up to 1 mm long. Flowers white or pink, solitary, axillary, 6 – 8 mm across. Pedicels up to 1.8 cm long, glandular hairy. Sepals lanceolate, acuminate. Petals elliptic or oblong,

2 – 4 × 0.8 – 1.2 mm. Stamens 6. Gynophore short, up to 2 mm long, enlarge up to 1 cm in fruit. Ovary up to 2 mm long, glabrous. Capsule linear, 3.5 – 4.5 × 0.1 – 0.15 cm, beaked, terete, glabrous, beaked, narrowed at

both ends, Seeds 10 – 20, up to 1.5 mm across, reniform, reddish-brown, with concentric ribs and closed cleft (Fig. 1).



**Fig .1** *Cleome rutidosperma* DC. var. *burmanii* (Wt. & Arn.) Siddiqui & Dixit: (A) Close up of plant at natural location; (B) Inflorescence; (C); Leaf dorsal and ventral surface; (D): Close-up of flower; (E): Sepal; (F): Petal dorsal and ventral surface; (G): Androecium; (H): Fruit; (I) L.S. of fruit; (J): close-up of seeds.

Fl. & Fr.: August to December.

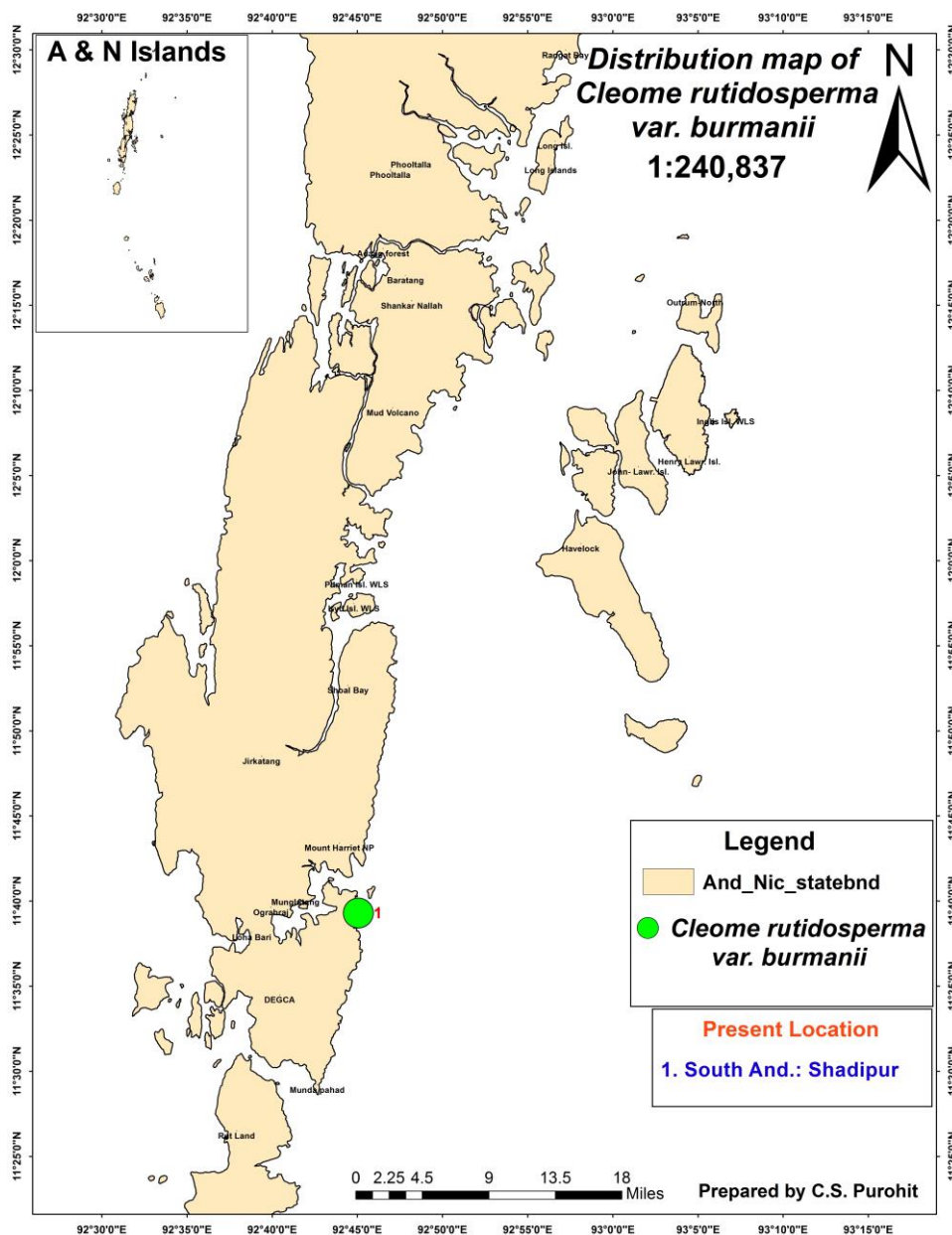
**Distribution:** India: Andaman and Nicobar Islands (present report, Fig. 2), Assam, Bihar, Gujarat, Karnataka, Kerala, Maharashtra, Tamil Nadu, Uttar Pradesh and West Bengal.

**Specimen examined:** Andaman & Nicobar Islands, South Andaman, Port Blair, Shadipur, 10.11.2020, C.S. Purohit 34003 (PBL).

**Status:** It is an endangered plant and found up to 600 m.s.l.

**Note:** Hooker (1872) remarked that *Cleome burmanii* Wt. & Arn. and *Cleome ciliata* Schum. & Thonn.

have been regarded as two distinct species but closely related. After that account of Siddiqui & Dixit (1974) on both species critically and found overlapping characters. They merge both species under *Cleome rutidosperma* DC. var. *burmanii* (Wt. & Arn.) Siddiqui & Dixit and type locality is Peninsular India. This taxa is endangered and besides type, there is only few notable collections was made from Kerala and Tamil Nadu States of main land India as mentioned in Raghavan (1984). In addition to the historic collections, the present study records this taxa from Andaman and Nicobar Islands, a group of 572 Islands and are isolated from main land of India by sea.



**Fig. 2** showing distribution map of *Cleome rutidosperma* DC. var. *burmanii* (Wt. & Arn.) Siddiqui & Dixit. in Andaman & Nicobar Islands

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## REFERENCES

- Babu CR and Majumdar NC 1974. Taxonomic notes on *Cleome aspera* Koen. Ex DC., *C. burmanii* Wt. & Arn. and *C. rutidosperma* DC. (CLEOMACEAE). J Bombay Nat His. So. 71(3): 629 – 632.
- Gamble JS 1915. Fl. Pres. Madras 1: 41. 1915 (repr. Ed. 1: 29. 1957).
- Hazara PK, Rao PSN and Mudgal V (Eds.) 1999. Flora of Andaman – Nicobar Islands (Ranunculaceae – Commbrretaceae), Botanical Survey of India Calcutta, Vol.1: 1-487.
- Hooker JD and Thomson T 1872. “Capparidaceae” in J.D. Hooker’s The Flora of British India, 1: 170. London.
- Mukherjee P.K. 1963. *Cleome rutidosperma* DC. a new record for India. Indian forester 95(4): 237.
- Murugan C, Prabhu S, Sathiyaseelan R and Pandey RP 2016. A Checklist of Plants of Andaman and Nicobar Islands. ENVIS Centre on Floral Diversity. Botanical Survey of India, Kolkata. [http://bsienvnis.nic.in/Database/Checklist-of-Andaman-Nicobar-Islands\\_24427.aspx](http://bsienvnis.nic.in/Database/Checklist-of-Andaman-Nicobar-Islands_24427.aspx)
- Nayar MP and Sastry ARK 1988. Red Data Book of Indian Plants = *Cleome burmanni* Wight & Arn. Vol. 2, page-84.
- Nicolson DH 1987. Araceae. A Revised Handbook to the Flora of Ceylon. In: M.D. Dassanayake and F.R. Fosberg (eds). Araceae.6:34-37, Oxford & IBH publishing Co. Pvt. Ltd., India.
- Pandey RP and Diwakar PG 2008. An integrated checklist of plants in Andaman & Nicobar Islands, India. J. Econ. Taxon. Bot. 32: 403–500.
- Purohit CS, Vivek CP and Singh LJ. 2022. *Lasia* (Arecaceae): A generic addition to the Flora of Andaman & Nicobar Islands, India. Phytotaxonomy. 21: 28-31.
- Purohit CS, Singh LJ, Vivek CP, Dey BC 2023a. A final project report on Ecological Niche modeling including GIS mapping of Endemic tree species of Andaman & Nicobar Islands, submitted to Director, Botanical Survey of India, Kolkata on April, 2023.
- Purohit CS, Vivek CP, Dey BC and Singh LJ 2023b. *Hygrophila auriculata* (Acanthaceae): A new addition for Flora of Andaman & Nicobar Islands. J New Biol Rep 12(1): 5 – 8.
- Raghavan RS 1984. On *Cleome burmanni* Wight & Arn. (CAPPARACEAE), its identity and distribution. J Econ Taxon Bot 5(2): 463 – 466.
- Shah GL 1978. Flora of Gujarat 1: 71. Sardar Patel University, Gujarat.
- Siddiqui MO and Dixit SN 1974. The taxonomic status of *Cleome burmanii* Wt. & Arn. Pl. Sci. (Lucknow) 6: 67 – 69.
- Singh LJ, Murugan C and Singh P 2014. Plant Genetic Diversity of Endemic Species in the Andaman and Nicobar Islands – In: Nat. Conf. On Islands Biodiversity, U. P. State Biodiversity Board, Lucknow 49-57.
- Singh LJ, Ranjan V, Sinha BK, Mishra S, Purohit CS, Vivek CP, Naik MC and Ekka GA 2021. An Overview of Phytodiversity of the Andaman and Nicobar Islands, India. vol.2: 381- 399 (In: eds. Singh, L.J. & Ranjan, V., New Vistas in Indian Flora. Bishen Singh Mahendra Pal Singh, Dehra Dun, India.
- Sinha BK 1999. In Hazara P.K. and P.S.N. Rao (eds) Flora of Great Nicobar Islands, Botanical Survey of India Calcutta.