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***Ipomoea clarkei* Hook. f. (Convolvulaceae)–A new distributional record for Raigad District, Maharashtra, India**

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ABSTRACT:

The said species *Ipomoea clarkei* was collected for the first time from Kankeshwar forest, Alibag and hence is a new distributional record for Raigad, Maharashtra. Due to its rare nature of occurrence, less documentation and scrutiny of literature, the species is less known in taxonomic terms. The present paper thus provides a detailed taxonomic description and illustration of the species for its easy identification.

KEY WORDS: Endemic, Illustration, Rare, Record, Morphology.

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INTRODUCTION:

Ipomoea is one of the largest genera in the family Convolvulaceae (Morning Glory Family) represented by about 500 species of which 60 species are native to India¹. In India, the genus is represented by about 65 species^{2,3,4,5,6,7} while in Maharashtra state the number is about 38^{8,9}.

Ipomoea clarkei is endemic to India and has been reported from various regions of Maharashtra namely Western Ghats and Satpuda range of Khandesh region¹⁰. Recently Rasingamet al¹¹ reported the occurrence of species from Eastern Ghats in Nagarjunasagar-Srisailem Tiger Reserve.

EXPERIMENTAL SECTION:

The species was collected from semi evergreen forest of Kankeshwar at an elevation of about 1261 feet above sea level. Kankeshwar is a popular place for its cool climate, dense forest and famous Lord Shiva temple which is about 13 Km from Alibag, Raigad. After complete morphological studies from the literature, the species was identified as *Ipomoea clarkei* Hook. f. As this species is rare in occurrence, for confirmation the specimen was sent to Dr. George Staples, Singapore Botanic Garden, who confirmed the species identification as *Ipomoea clarkei*.

Taxonomic treatment:

Ipomoea clarkei

Hook¹². f, Fl. Brit India 4: 734.1885; Cooke¹³, Fl. Pres. Bombay 2: 314.1958 (Repr); Billore & Singh, In Indian Forester 98: 147.1972; P. Lakshminaras & Sharma, Fl. Nasik Dist. 357.1991; Almeida, Fl. Maharashtra 3B:323.2001; Venkanna & Das, Fl. Maharashtra (Dicot) 2:460.2001.

Annual slender twinning herb. *Roots* tuberous pendulous. *Stem* slender, less hairy as compared to other plant parts. *Leaves* 3.5-10.5 x 2.2-7cm, ovate-broad ovate-lanceolate with deeply cordate rounded 1-4 cm lobes at the base, entire margin, acuminate apex up to 1cm long, pubescent, lower surface is more hairy as compared to upper surface, 7 nerved at the base; petiole pubescent, 3-11 cm long. *Inflorescence* 1-2 flowered cyme; peduncle slender, pubescent, 0.5 -2.5 cm; bracts up to 4mm long, subulate; bractioles up to 2 mm long; pedicel 0.5 to 1.8 cm long, slender pubescent, slightly thickened towards the apex at fruiting stage. *Flowers* yellow, 3 to 4 cm long. *Calyx* 5 unequal, 5 -10 mm long, 0.1 mm diameter, hairy on outer side while glabrous at inner side, quincuncial, ovate-lanceolate, entire along the margin, acute to acuminate apex, slightly narrow at the base. *Corolla* infundibular form up to 3.5 cm long, tube up to 2.4 cm long, glabrous. *Stamens* 5 unequal, inserted, epipetalous, white; filament white, glabrous, tapering at the apex, slightly dilated and

pubescent at the base; anther white, 3mm long, sagittate shape, basifixed; pollen echinulate. *Styleup* to 2.7 cm long, white, glabrous, nectary disc at the base; stigma white, globose, slightly 2 lobed with a rough surface. *Ovary* ovate, bilocular, axile placentation. *Fruit* capsular, ovoid, glabrous up to 1.4 cm long, beaked, 4 valved, 4 seeded. *Seeds* puberulent, 4-5 mm long, dark brown.

Flowering and fruiting: August to November

Vernacular name: Sonpungali

Distribution: Eastern Ghat, Western Ghats of Maharashtra (Nasik, Pune and Thane district), MalshejGhat, Satpuda range of Khandesh region, and now from Raigad District.

Habitat and ecology: Mixed dry deciduous forest, open rocky grassland and now from an elevation of about 1200 feet in hilly rocky cliffs.

Specimen examined: Kew Barcode No. K000830816, Kew Barcode No.K001081777 and BSID No. 8005.

RESULTS AND DISCUSSION:

Ipomoea clarkei is one of the endemic species to India, particularly to the Western Ghats. The present collection adds one more distributional record for the state Maharashtra. The recent collection from the Eastern Ghats might prove its wide distribution, thus more and more floristic exploration are encouraged for the complete understanding of such rare species. The present collection also proves the high frequency of endemism of *Ipomoea clarkei* to India.

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REFERENCES:

1. Oudhia P. Major *Ipomoea* species of Chhattisgarh. Source: Botanical.com. 2001; 2002; 2003.
2. Santapau H. & Henry AN. A dictionary of the flowering plants in India. CSIR, New Delhi. 1973; 83.
3. Biju SD, Matthew P & Kumar VM. *Ipomoea mombassana* Vatke (Convolvulaceae) - A new record for India. J. econ. Tax. Bot. 1998; 22(2): 471-473.
4. Biju SD. *Ipomoea parasitica* (Kunth) G. Don (Convolvulaceae): A new record for India. Rheedeia. 2002;12(1): 77-79.
5. Shimpale VB et al. *Ipomoea ochracea* (Convolvulaceae)-a new record for India. Rheedeia. 2012;22(2):99-102.

6. Shimpale VB et al. On the occurrence of *Ipomoea tenuipes* (Convolvulaceae) in India. *Rheedea*. 2014;24(2):117-119.
7. Sarvalingam A, Rajendran A, Sivalingam R et al. *Ipomoea muelleri* Benth. (Convolvulaceae)- A new record for Asian Continent. *Jordan Journal of Biological Sciences*. 2014;7(4): 299-300.
8. Almeida MR. *Flora of Maharashtra*. Thomas Paul Almeida for Blatter Herbarium, St. Xavier's College, Mumbai 2001;3B: 317-337.
9. Venkanna P & Das SKD. Convolvulaceae. In: Singh, N.P., Lakshminarasimhan, P., Karthikeyan, S. & P.V. Prasanna (Eds.), *Flora of Maharashtra State. Dicotyledones. Vol. 2. Botanical Survey of India, Calcutta*. 2001; 437 – 489.
10. Khan T. *Ipomoea clarkei* Hook and *Spigeliaanthelmia* L.: New records in Satpuda range of Khandesh region, Maharashtra. *Bioinfolet*. 2017; 14 (4A);344-346.
11. Rasingam et al. Clarke's morning glory *Ipomoea clarkei* Hook. F. (Convolvulaceae): Addition to the flora of Eastern Ghats. *Journal of Threatened Taxa*. 2018; 10 (6): 11827-11829.
12. Hooker JD. *Flora of British India* L. Reeve & Co., London. 1882; 3: 86-92.
13. Cooke T. *The Flora of the Presidency of Bombay*. London (B.S.I. Reprint). Calcutta. 1958; 2: 310-320.
14. Mabberley DJ. *The Plant- Book: A portable dictionary of plants, their distribution and uses*. 3rd ed. Cambridge University Press, Cambridge, UK; 2008.
15. Naik VN. *Flora of Marathwada*. Amrut Prakashan, Aurangabad. 1998;1: 583-596.

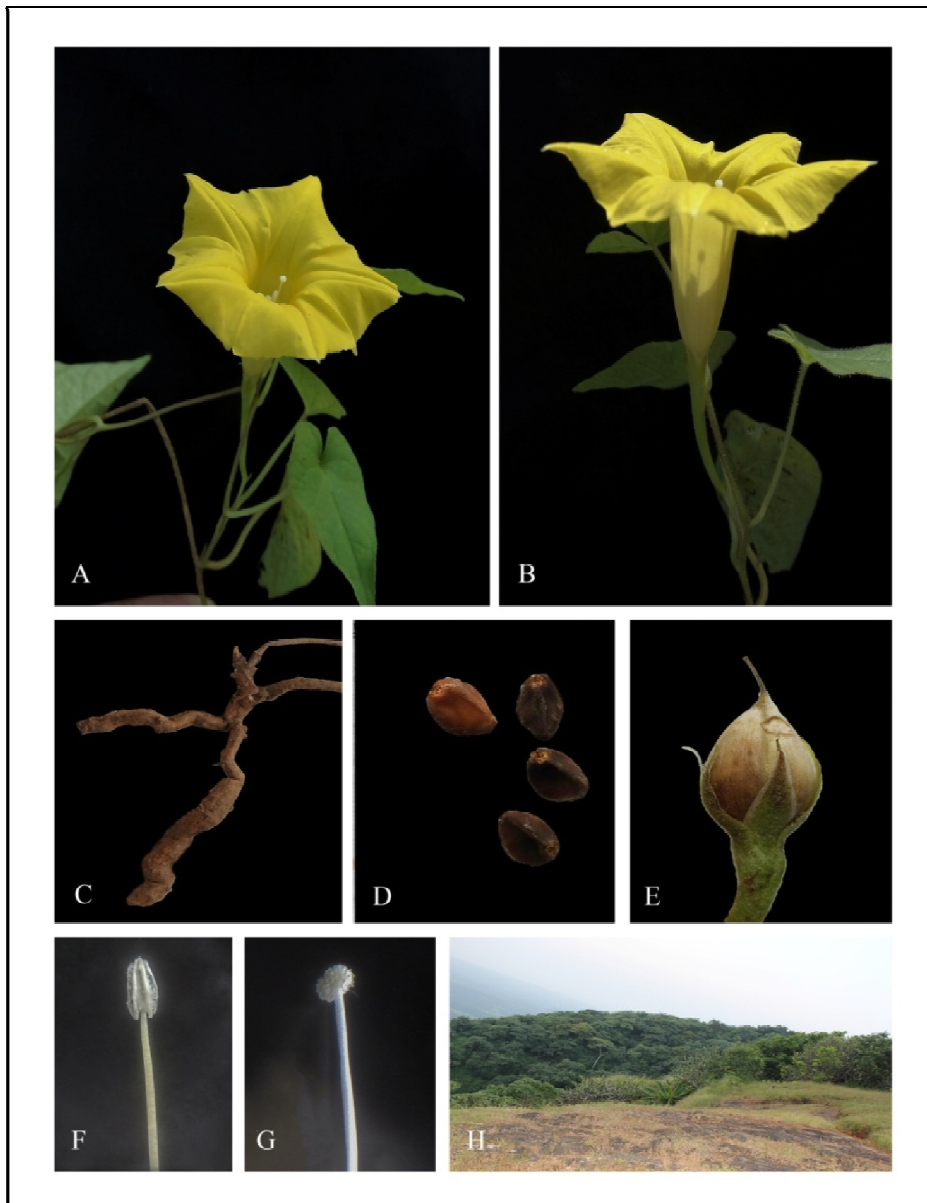


FIGURE 1.*Ipomoea clarkie*A. Flower upper view with leaves;B. Flower side view with leaves; C. Pendulous roots; D. Seeds; E. Capsule; F. Androecium; G. Gynoecium; H. Habitat Photographs: © Mr. Pravin Kawale and Miss. Preeti V. Phate

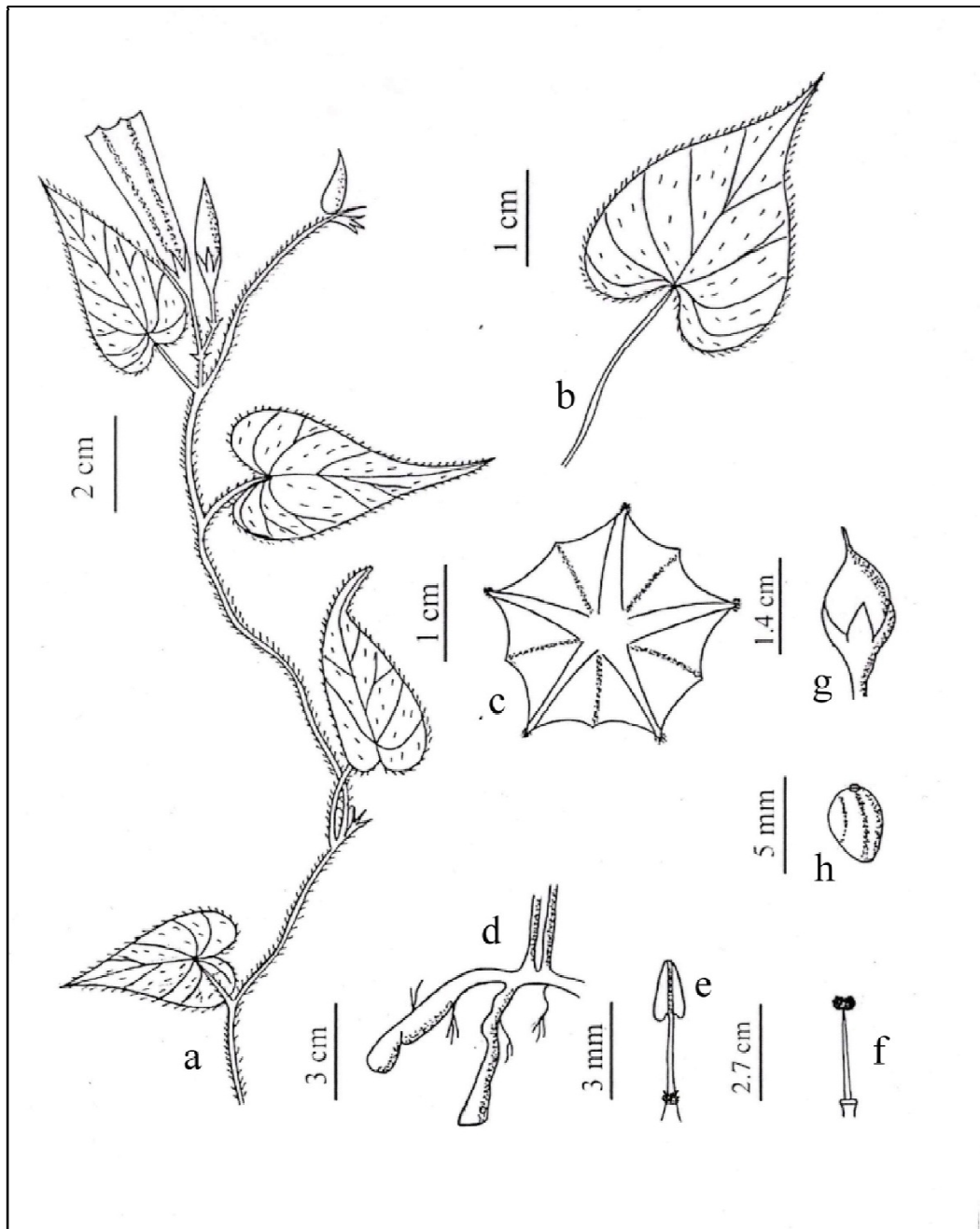


FIGURE 2. *Ipomoea clarkiea*. Habit; b. Leaf; c. Corolla front view; d. Root; e. Anther; f. Stigma; g. Capsule; h. Seed.

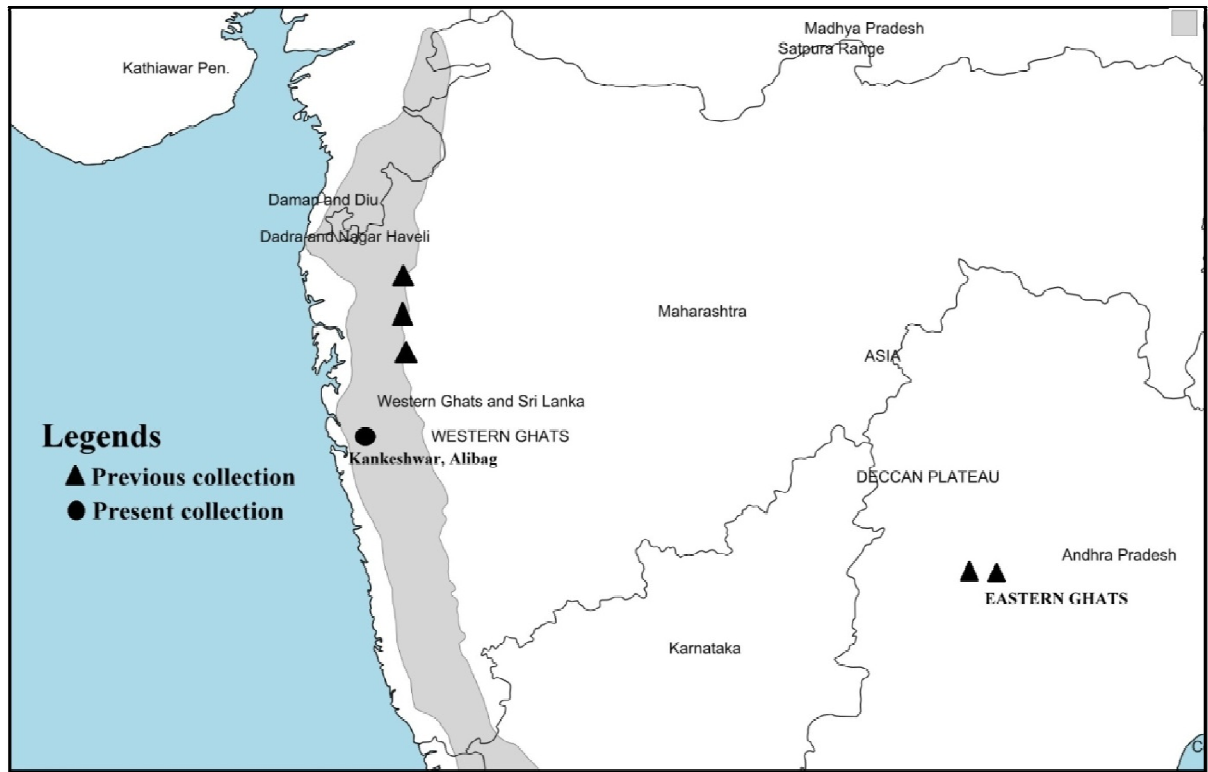


FIGURE 3. Distribution map of *Ipomoea clarkie*.