

Ipomoea ochracea (Convolvulaceae) – A new record for India

Vinod B. Shimpale*, P.R. Kshirsagar¹ and Nilesh V. Pawar

Department of Botany, The New College, Kolhapur – 416 012, Maharashtra, India.

¹Sahyadri GENES, Kawala Naka, Kolhapur – 416 003, Maharashtra, India.

*E-mail: shimpale@yahoo.com

Abstract

Ipomoea ochracea (Lindl.) G. Don (Convolvulaceae), an African species is reported here for the first time from the Western Ghats of India. A detailed description, illustration and relevant notes are provided for easy identification.

Keywords: Convolvulaceae, India, *Ipomoea ochracea*, New Record

Introduction

Ipomoea L. is one of the dominant genera in the family Convolvulaceae. It is represented by c. 650 species and mainly distributed in tropical and warm temperate regions of the world (Mabberley, 2008). In India, the genus is represented by c. 60 species (Santapau & Henry, 1973), and in Maharashtra state by c. 38 species (Almeida, 2001; Venkanna & Das, 2001).

During our visit to Pateshwar hill ranges of Western Ghats in Satara district of Maharashtra state, an interesting specimen of the family Convolvulaceae was collected. After preliminary laboratory studies it has been identified as a species of *Ipomoea*. Since the specimen was not matching with any species of the genus reported from India, it was sent to Dr. George Staples, Singapore Botanic Garden, who identified it as *Ipomoea ochracea* (Lindl.) G. Don. The identity was further confirmed by referring Verdcourt (1958), Stefanovic *et al.* (2003) and by browsing the Kew database (<http://apps.kew.org/efloras/key>). As its occurrence not reported by the earlier workers (Hooker, 1882; Cooke, 1905; Johari, 1983; Fang & Staples, 1995; Biju, 1997; Das & Mukherjee, 1997; Naik, 1998; Almeida, 2001; Venkanna & Das, 2001), it is being reported here as a new record to India and a detailed description, illustration and relevant notes are provided for identification of the species.

Ipomoea ochracea (Lindl.) G. Don, Gen. Hist. 4: 270. 1837; Baker & Rendle in Dyer, Fl. Trop. Afr. 4(2): 166. 1905, p.p.; Hutch., Fl. W. Trop. Afr. 2: 216. 1931; A. Meeuse, Fl. Pl. Afr.: 31, t. 1221. 1956;

Verdc., Kew Bull. 13: 210. 1958; Verdc. in C.E. Hubb. & Milne-Redh., Fl. Trop. E. Afr.: 115. 1963. *Convolvulus ochraceus* Lindl., Bot. Reg.: 64, t. 1060. 1826.

Fig. 1

Climbers, perennial; roots tuberous, pendulous, slender. Stems with long hairs. Leaves broadly ovate, 3 – 6.5 × 2.5 – 5 cm, cordate with rounded lobes at base, entire at margins, acuminate at apex, thinly hirsute with long hairs; petioles 1 – 5 cm long, densely hirsute. Inflorescences a cyme, 1 – 3-flowered; peduncles 0.7 – 1 cm long, slender, hairy; bracts linear-lanceolate, 0.3 – 0.5 × c. 0.1 mm, near joint of pedicel with peduncle, hairy; pedicels 0.7 – 1.2 cm long, hairy, elongated in fruits. Calyx subequal, oblong-acute, 0.9 – 1.2 × 0.2 – 0.3 cm, white-ciliate at margins, faintly-veined, glabrous inside, hirsute outside. Corolla infundibuliform, 3 – 3.6 cm long, sulphur-yellow; tube c. 2 cm long, glabrous; limb 3 – 3.2 cm across. Stamens 5, subequal, included, adnate to corolla at c. 5 mm above base; filaments 8 – 9 mm long, hairy at base; pollen grains globose, echinate. Ovary ovoid, to 4 mm long, glabrous; style slender, 1.3 – 1.5 cm long, glabrous, included; stigma 2-lobed. Capsules ovoid, 0.8 – 1.2 × 0.7 – 0.9 cm, acute with persistent style, glabrous, brown, 4-valved, 2-celled; seeds 2 – 4, c. 5 × 4 mm, hairy, dark brown.

Flowering & Fruiting: August – September.

Habitat & Ecology: Rocky crevices of hill slopes, c. 890 m. It was found twining on *Ischaemum* sp. and *Apluda mutica* L. and mostly associated

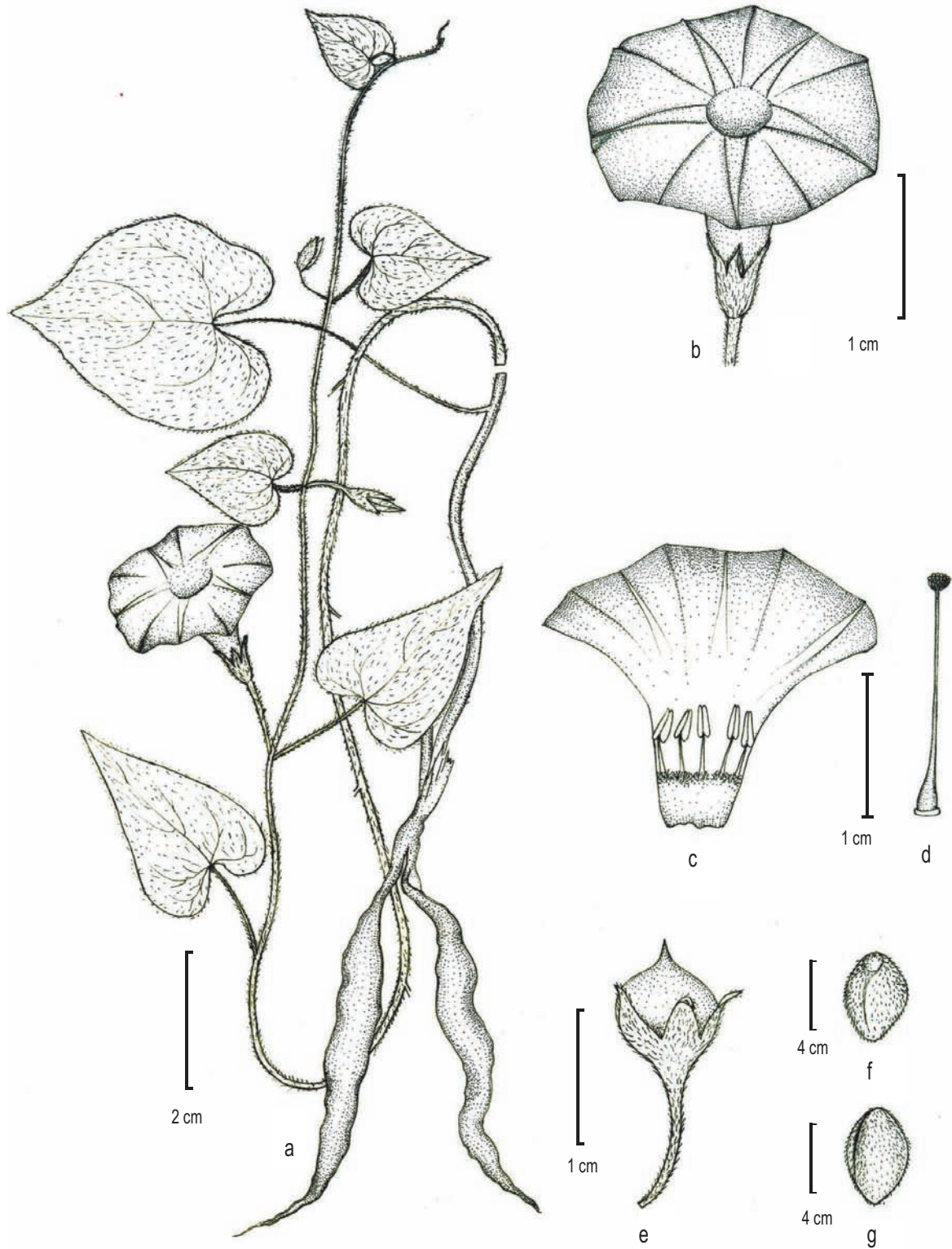


Fig. 1. *Ipomoea ochracea* (Lindl.) G. Don: a. Habit; b. A flower; c. Corolla split open; d. Pistil; e. Fruit; f. & g. Seed (Drawn from Shimpale 8658 by G.G. Potdar).

Table 1: Differences between *I. obscura* (L.) Ker Gawl., *I. obscura* f. *concolor* Naik & Zate and *I. ochracea* (Lindl.) G. Don

<i>Ipomoea obscura</i>	<i>I. obscura</i> f. <i>concolor</i>	<i>I. ochracea</i>
Annual	Annual	Perennial
Leaves and petioles glabrous or so	Leaves and petioles glabrous or so	Leaves and petioles hirsute
Peduncles 2.5 – 5 cm long	Peduncles 2.5 – 5 cm long	Peduncles 0.7 – 1 cm long
Sepals pubescent	Sepals pubescent	Sepals densely hirsute
Corolla with shallow apiculate lobes	Corolla with shallow apiculate lobes	Corolla without apiculate lobes
Corolla 2 – 2.5 cm long	Corolla 2.2 – 3.5 cm long	Corolla 3.1 – 3.6 cm long
Corolla white or yellow with purple centre	Corolla uniformly yellow without purple centre	Corolla uniformly yellow without purple centre

with *Boswellia serrata* Roxb. ex Colebr., *Diospyros melanoxylon* Roxb., *Anogeissus latifolia* (Roxb. ex DC.) Wall. ex Guill. & Perr., *Senecio bombayensis* Blatt., *Evolvulus alsinoides* (L.) L., *Leucas indica* (L.) R. Br. ex Vatke, *Crotalaria nana* Burm.f., *Lavandula bipinnata* (Roth) Kuntze, *Striga densiflora* (Benth.) Benth., *Polygala persicariifolia* DC. and *Cyanotis fasciculata* (B. Heyne ex Roth) Schult. & Schult.f.

Distribution: Africa; the present record of this species from Western Ghats shows its extended distribution in India.

Specimen examined: INDIA, Maharashtra, Satara district, Pateshwar hills, 17° 36'997" N & 074° 03'281" E, 889 m, 11.9.2010, Shimpale 8658 (Department of Botany Herbarium, The New College, Kolhapur).

Notes: Among the Indian taxa it resembles *Ipomoea obscura* (L.) Ker Gawl. and *I. obscura* f. *concolor* Naik & Zate from which it can be distinguished as shown in Table 1.

Acknowledgements

The authors are thankful to Dr. George Staples, Singapore Botanic Garden, for confirmation of identity, to Dr. Girish G. Potdar, Y.C. Science College, Karad, for illustrations, to the Head, Department of Botany and the Principal, The New College, Kolhapur, for laboratory facilities.

Literature Cited

Almeida, M.R. 2001. *Flora of Maharashtra*. Vol. 3B. St. Xavier's College, Mumbai. pp. 317 – 337.

Biju, S.D. 1997. *Taxonomic and Morphologic Studies in Family Convolvulaceae of Southern Peninsular India*. Ph. D. Thesis (unpublished), University of Calicut, Calicut.

Cooke, T. 1905. *The Flora of the Presidency of Bombay*. Vol. 2. Taylor & Francis, London. p.p. 222 – 261.

Das, S. & K.K. Mukherjee 1997. Morphological and biochemical investigations on *Ipomoea* seedlings and their species interrelationships. *Ann. Bot.* 79: 565 – 571.

Fang, R.C. & G. Staples 1995. *Flora of China*. Vol. 16. p.p. 271 – 328.

Hooker, J.D. 1882. *The Flora of British India*. Vol. 3. L. Reeve & Co. Ltd., London. pp. 86 – 92.

Johari, S.C. 1983. Genus *Ipomoea* L. in India. A Ph. D. Thesis (unpublished), University of Rajasthan, Jaipur.

Mabberley, D.J. 2008. *The Plant-Book: A portable dictionary of plants, their classification and uses*. Third Edition. Cambridge University Press, Cambridge.

Naik, V.N. 1998. *Flora of Marathwada*. Vol. 1. Amrut Prakashan, Aurangabad. p.p. 583 – 596.

Santapau, H. & A.N. Henry 1973. *A Dictionary of the Flowering Plants in India*. Council of Scientific & Industrial Research, New Delhi. p. 83.

Venkanna, P. & S.K.D. Das 2001. Convolvulaceae. In: Singh, N.P., Lakshminarasimhan, P.,

Karhikeyan, S. & P.V. Prasanna (Eds.), *Flora of Maharashtra State. Dicotyledones*. Vol. 2. Botanical Survey of India, Calcutta. pp. 437 – 489.

Stefanovic, S., Austin, D.F. & R.G. Olmstead 2003. Classification of Convolvulaceae: A Phylogenetic Approach. *Syst. Bot.* **28(4)**: 791 – 806.

Verdcourt, B. 1958. Notes from the East African Herbarium: VII. *Kew Bull.* **13**: 199 – 217.

Received: 24.3.2012

Revised and Accepted: 12.6.2012