



Full Length Article

Luffa echinata Roxb. (Cucurbitaceae) – New Distributional Record for Vidarbha (Maharashtra)

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ABSTRACT

Luffa echinata Roxb. was first collected from Ramtirtha (Tq. Daryapur, Dist. Amravati) from Vidarbha during 2007. Over five years the species has successfully established itself and now is found to grow throughout the District. It is one of the important medicinal plants used in indigenous system of medicine.

Key Words: *Luffa echinata* Roxb., New record, Vidarbha,.

INTRODUCTION

Though continuously the floristic explorations are being made in different regions of all states and new species and new distributional reports are continuously being published (Karodpati *et al.*, 2011, Kamble *et al.*, 2013), still more remains to be explored especially regarding the distribution of ephemerals and seasonal.

Luffa echinata Roxb. was previously reported to have restricted distribution confined to Bengal (Hooker 1879), Gujarat (Cooke, 1967), Bihar and Orissa (Haines 1921) and Andhra Pradesh (Pullaiah 1997). Latter distributional records show its migration from Gujrat to the neighboring cities of Maharashtra like Mumbai and Pune (Singh *et al.*, 2001).

Plants were collected from different regions of Amravati district, identified with the help of standard floras and herbarium specimens made which deposited in the herbarium of Botanical Survey of India, Pune (voucher specimen No.PAD 403, 404, 405).

Luffa echinata Roxb Fl. Ind. 3:716. 1832; C.B.Cl. in Hook. f. Fl. Brit. India. 2:615. 1879; Cooke, Fl. Pres. Bombay 1:567. 1958 (Repr.); Chakr. in Rec. Bot. Surv. India 17: 77. 1959 & in Fasc. Fl. India 11: 71.

1982; Jeffrey in Kew Bull. 34:791. 1980. *L. echinata* var. *longistyla* C.B.Cl. in Hook. f. Brit. India. 2: 615. 1839.

Plants dioecious, herbaceous, extensive climbers, sparingly scabrous - pilose; tendrils bifid (sometimes 2 to 4 fid), striate. Leaf 6- 6.5 x 9- 9.5 cm, cordate, reniform to orbicular, 5- lobed, dentate, hairs mostly on nerves; petiole 7-9 cm or as long as leaf. Male peduncles normally paired, 1-flowered, the other forming many flowered, racemes, about 2.5 cm long male flowers bracteate; bracts small, 4 x 3 mm, ovate with 2 prominent nectaries; pedicels about 2.5 cm long with a joint little above half. Calyx green, 1 – 1.2 cm long; sepals free for 2/3rd length, ovate, acute, prominently veined, thinly hairy in bud, ciliate along margins; cilia short, dense. Corolla snow white, about 3 cm across; petals free up to base. Stamens 3, separating in to 5 after anthesis. Female flowers solitary, axillary, bracteate; bract ovate, with 5 prominent nectarines; pedicel 3 – 3.5 cm long, striate. Calyx teeth narrow, linear, 8-9 mm long, hairy, persistent. Corolla white, about 2.5 cm across; lobes spreading free up to the base, 1 x 1.5 cm, thinly hairy within and along margin, densely hairy at base but not as much as in male flower.

Ovary ellipsoid, densely bristly; bristles ciliate throughout, (giving woolly look to the young fruit) with bulbous base; stylar column about 3 mm long, stylar arms distinctly grooved. Five distinct staminodia present. Fruits broadly ellipsoid, covered with hard spiny bristles, operculate; operculum conical, without bristles, however in young condition reduced bristles can be seen on operculum. Seeds numerous, 4-5 x 3 mm, ovate to oval, compressed, dull blackish brown, covered with thin membrane when young; membrane on drying shrink, becomes black and impart verrucose appearance in the seed.

Flowers and fruits: - September - December

Occurrence: - Not common.

Additional specimen examined:- INDIA, Maharashtra, Amravati, (Ramtirth village PAD 403 27-10-2007, Walgaon PAD 404 12-09-2008, Chandur PAD 405 13-11-2009).

Singh *et al.*, (2001) described *Luffa echinata* from Maharashtra having yellow flowers. Flowers of this species described by previous authors (Hooker 1879, Cooke 1967, Shah 1978) are mentioned as white and not yellow. Populations studied presently also had snow- white flowers. *Luffa kleinii* W. & A. has the spiny fruits which when young are densely woolly; and anthers separating at maturity. According to Hooker (1879) *Luffa kleinii* is probably a variety of *L. echinata*. Young fruit/ ovary observed in present study also appears woolly and anthers distinct (5) at maturity, which supports Hooker's statement.

In Ayurveda it is known by several names e.g. Kantaphala, Jeemutaka, Devdali, Koshvrutta, Turangika, Devtandi etc. In traditional health practices whole plant is used as blood purifier, fruits are used in dropsy and inflammatory piles, fruit powder snuffed in jaundice; leaves used in dysentery and seed oil in skin diseases (Jain 1991). It is also used as anthelmintic, emetic and purgative, also used in bronchitis, cholera, colic and urinary trouble (Jain *et al.*, 1991). Anthers are given orally to facilitate delivery; root strengthens muscles of neck and is tonic for hairs, laxative, analgesic, cures tumors and vaginal discharges (Kirtikar and Basu 1918).

Chemistry of the plant is known to good extent (Nigam & Pandya 1949, Rastogi and Melhotra 1999, 2002, 2004, 2005)

The species is considered as threatened in Bihar. Locally the plant is used in treatment of diabetes. The whole plant is crushed in to fine powder and 1 teaspoon is given with water twice a day (Ali Ajmal 2010). Khare (2007) also has reported the 50 % ethanolic extract to exhibit hypoglycemic activity.

Hepatoprotective activity of fruits has been studied extensively (Bapat and Chandra 1968, Lauria *et al.* 1976, Vaidya *et al.* 1976). Clinical trials have shown that serum bilirubin gets significantly reduced within 2 – 7 days (Vaidya *et al.* 1976) when the drug was administered as nasal drops. Recently antioxidant property of whole plant was demonstrated by Kumar *et al.* (2000). Introduction of the species in Vidarbha is important, since the plant is highly valued as medicinal herb.

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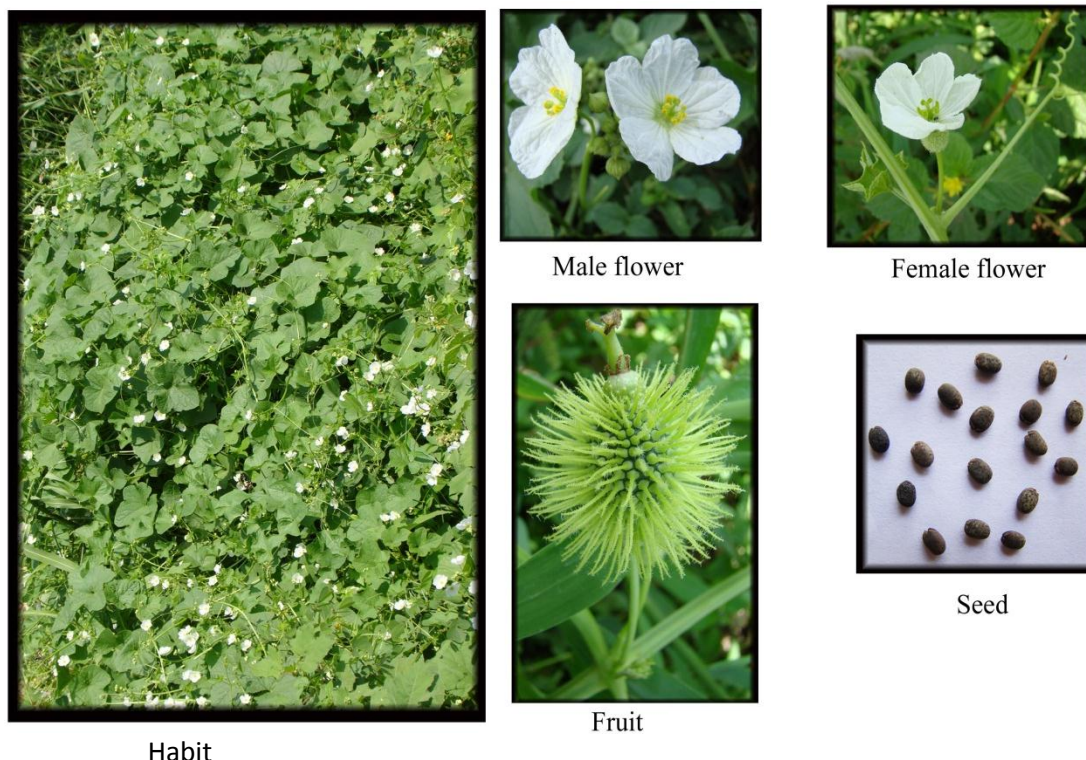


Fig. *Luffa echinata* Roxb.

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