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Research Article

A Brief Account of The Genus Cordia (Boraginaceae) in Maharashtra

Rajendra D. Shinde and Neha Gupte

Department of Botany, St. Xavier's College, Autonomous, Mumbai

Abstract

In Maharashtra the genus *Cordia* L. is represented by 8 species among which *Cordia macleodii* Hook. f., and Thomson is an endangered species found in Indian subcontinent (Chandrakar, *et al*., 2017). Majority of the congeners in Maharashtra are under gardening and ornamentation. Most of the species like Cordia alba are introduced. This paper deals with the taxonomic and nomenclatural update in *Cordia* L. The specimens of the plants collected in the field and also existing at BLAT, BSI were morphologically studied. There is a considerable variation in shape and colour of the calyx and corolla thus we used the characters of insertion of the stamens and type of stigmas for species delimitation. The present work ascertains the occurrence of two species viz. *Cordia dichotoma* G. Forst. and *C. macleodii* Hook. f., & Thomson in wild, which previously were not recorded. Others are found to be cultivated. A generic description and key to the species is provided.

Keywords: *Boraginaceae, Cordiaceae, Endangered, Taxonomy, Nomenclature.*

Introduction

Cordia L. sensu lato belonging to subfamily Cordiaceae of family Boraginaceae APG IV (2016). There are 250–300 species of trees and shrubs (Verdcourt, 1991; Miller, 2001; Gottschling & Miller, 2006), in which 16 species are found in India (J. D. Hooker, 1885) and 8 in Maharashtra (N. P. Singh & S. Karthikeyan, 2001; Almeida, 2001). In literature such as: Almeida, (2001), N. P. Singh and S. Karthikeyan, (2001) are among the most useful contributions of Boraginaceae (Cordia) for Maharashtra. However, the taxonomic group is not revised for a long period.

The eight species in Maharashtra are viz., *Cordia dichotoma, C.macleodii*, C. *alba, C.subcordata, C.sebestena, C. sinensis, C. domestica* & *C. crenata.*The former two species have also been found in wild, whilst, others chiefly occur in cultivation, rarely as escapes.

Hitherto, in India, *Cordia alba* was misidentified either as *C. sinensis* or *C. crenata*. We, here, correct its identity as *C. alba*. This plant is introduced in India.

The aim of this study is to revise the genus Cordia for Maharashtra, study distinguishing characters for the identification of taxa and to provide an identification key for the species.

Material and Methods

Morphological data were based on the thorough examination of the herbarium specimens deposited in BLAT, BSI in addition to the study of samples collected by the authors during the field visits in different seasons. Digital images of the specimens were examined from theherbaria, such as: BM, MO, K.

For each species up to date nomenclature, type information & global distribution is given.

Results

***Cordia* L.**

Species Plantarum 1: 190. 1753; nom. et typ. cons., Taxon 44: 611-612 (1995).

Type Species: *Cordia sebestena* L.

Shrubs, sometimes scandent, or trees, sometimes functionally dioecious, strigose to softly pubescent. The majority of the leaves are alternating, very infrequently subopposite,

***Corresponding Author:**
Rajendra D. Shinde;
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simple, petiolate, and have an entire to crenate-dentate margins. Regular, hermaphrodite, polygamous or unisexual (plant dioecious), subsessile or pedicellate flowers, typically white, cream, yellow, red, or orange, are carried in terminal or axillary dichotomous corymbs, panicles, or subglobose clusters of cymes, and have scorpoid, bract-free branches. Male flowers with 4 – 8 stamens, the filaments often hairy at the base; ovary rudimentary but style absent. Female flowers with sterile anthers, otherwise similar to male flowers. Calyx tubular-campanulate, smooth to deeply ribbed, 2 to 5 (or more) lobed, persistent, and accrescent in fruit. Corolla small to large, salver-shaped or funnel-shaped, typically glabrous; lobes 4–5(–8), tube cylindric or expanded. Stamens as many as corolla lobes, epipetalous, exserted or included; the filaments filiform fused to corolla tube in lower half; anthers dorsifixed, dehiscing longitudinally. Ovary superior, ovoid, tapering upwards, four loculed, with one upright ovule in each locule; style terminal, twice bifid, the final stigmatic portions four-branched linearly or ended by one capitate or peltate stigma, seldom with four independent styles. Fruit drupe, white, greenish-yellow, yellowish-orange or orange, ovoid, globose or ellipsoid, included in or residing in the persistent accrescent calyx, exocarp thin, mesocarp pulpy, endocarp bony (pyrene), ellipsoid, occasionally with corky mesocarp or nutlike without fleshy mesocarp. Seeds 1– 2 without endosperm.

Global Distribution: Tropical and subtropical climate in Central and South America, India, Asia and Africa.

Key

1. Flowers bright red orange…… 2
   2. Anther filaments hairy at base ..... *Cordia sebestena*
   2. Anther filaments glabrous at base ..... *Cordia subcordata*
1. Flowers white cream or yellow ..……. 3
   3. Leaves opposite or sub-opposite ..... *Cordia sinensis*
   3. Leaves alternate …….. 4
4. Calyx with prominent ribs; corolla funnel shaped …….. 5
   5. Leaves scabrous, with crenate margin ..... *Cordia dentate*
   5. Leaves tomentose, undulate margin …… 6
   6. Leaves 1 – 3 cm long, Stamens 5 ..... *Cordia domestica*
   6. Leaves 5 – 15 cm long, Stamens 6 ..... *Cordia macleodii*
4. Calyx without ribs or fairly if present, Corolla salverform 7
   7. Stigma linear ..... *Cordia crenata*
   7. Stigma flattened and subfoliaceous ..... *Cordia dichotoma*

Cordia alba (Jacq.) Roem. & Schult

Cordia alba (Jacq.) Roem. & Schult., Syst. Veg. (ed. 15 bis) 4: 466 – 467(1819).

Varronia alba Jacq., Enum. Syst. Pl. 14. (1760).

Synonym
*C. dentata*Poir., Encycl. 7: 48 (1806)
*C. calyptrata*Bertero ex Sprengel, Syst. Veg. 1: 649. (1825).
Carpiphea dentata (Poir.) Raf., Sylva Tellur.: 39 (1838).
Varroniacalyptrata (Bertero ex Sperngel) DC., Prodr. 9: 469. (1845).

Type: Curacao "Curasao": 1799 Von Rohr s.n. (P-Juss., holotype; MO). Shrub or trees to 25 m tall, bark with lenticles. Leaves alternate, petiolate, exstipulate, scabrous, ovate, margin dentate, slightly oblique base. Terminal and axillary pedunculate cymose panicles. Calyx with 5 lobes, strongly ribbed, glabrous on outer side, slightly hairy on inner side, persistent.

Corolla white to cream campanulate, lobes broader than long. Stamens 5, borne on the corolla throat. Ovary bottle – shaped, style divided and the branches redivided near the apices, 4 capitate stigma. Fruit ovoid.

Vernacular Name: White manjak

Phenology: January – September

Distribution in Maharashtra: cultivated in gardens in Mumbai. No other garden visited during the studies records its presence.

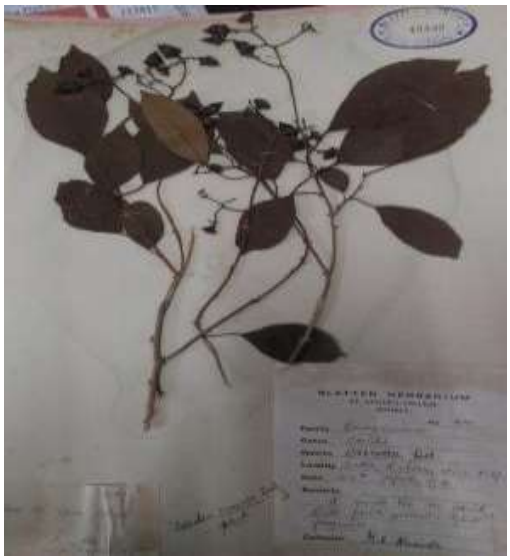
Distribution in India: Cultivated in gardens.

Global Distribution: Northern America (Mexico, USA: Florida & West Indies), Caribbean, Mesoamerica, NS America (Venezuela), and WS America (Colombia) in Southern America (Wafaa, M. A. *et al*., 2016)

Specimen Examined: COLOMBIA, Valley of the Magdalena, April, *S.coll*., 7347, (KEW!). NICARAGUA, 28.05.1980, W. D. Stevens & B. A. Krukoff 17245 (RBGE!).

IUCN Status: Least Concern (Botanic Gardens Conservation International (BGCI) & IUCN SSC Global Tree Specialist Group. 2019)

Note: This plant is probably introduced in India. Cultivated in gardens. Often misidentified as
C. sinensis or *C. crenata* in India.



Cordia crenata Deli;e.

Cordia crenata Delile, Descr. Égypte, Hist. Nat. 2: 56, 195, pl. 20, fig. 1, 51 (1813)

Synonym
Cordia lawiana Brandis, Ind. Trees 479, 1906
C. myxa Forsk., Fl. Agyept. – Arab. 63, 1868 (non Linn., 1753)

Type: Egypt: cultivated in Cairo gardens; Deliles.n. (MPU-5433, holotype!).

Shrub or small tree up to 9 m. tall. Leaves al-

ternate; lamina elliptic-ovate, obovate, rarely suborbicular or rhombic, 3 – 8 X 2.5 – 4.5 cm.; apex obtuse, apiculate, round or rarely retuse; base round to cuneate; margin entire or frequently crenate to dentate at least on apical half, pubescent. Inflorescence lax - dense, in terminal or lateral cymes. Flower unisexual, pedicellate. Calyx tubular campanulate, without prominent ribs, 3.5 – 6 mm. long, sparsely to densely covered with short hairs, sometimes intermixed with few to many long hairs outside, fairly densely pubescent inside. Corolla salverform, cream or greenish yellow; tube exserted, lobes 4 – 5, ovate oblong or spathulate, entire or shallowly undulate margins with obtuse apex. Male flower Stamens 4(-5), filaments exerted, ovary very reduced. Ovary ovoid to rhombic. gradually tapering upwards, style exserted; stigma linear. Filaments of male or female flower have patches of hairs at point of attachment. Fruit ovoid-oblong to globose, red, apiculate, held in the accrescent cup shaped calyx. Pyrene ovoid to globose.

Vernacular Name: Not known.

Phenology: December – February.

Distribution in Maharashtra: Sawantwadi.

Distribution in India: Uttar Pradesh.

Global Distribution: Northeast Tropical Africa (Ethiopia, Somalia, Sudan), Western Asia (Iran), Arabian Peninsula (Oman, Saudi Arabia, Yemen) in temperate Asia (Wafaa, M. A. *et al*., 2016).

Specimen Examined: INDIA, Maharashtra, Tiroda, 20.12.1982, S.M. Almeida, 4312, (BLAT!). Uttar Pradesh, Duthie, J.F., 4754 (K!). OMAN, Arabian Peninsula, 03.09. 1993, McLeish, Ian 2461 (E!).

IUCN Status: Least Concern (Ntore, S., Beentje, H.J., Nshutiyayesu, S., Luke, W.R.Q., Kayombo, C., Kalema, J., Kabuye, C. & Fischer, E, 2019.)

Note: In Mumbai and many other regions of Maharashtra this plant is cultivated in gardens.

Cordia dichotoma G. Forst

Cordia dichotoma G. Forst., FlorulaeInsularumAustraliumProdromus 18, n.110. 1786.

Synonyms

Cordia obliqua Willd., Phytogr. 4, t. 4, 1794; Clarke in Hook.f., Fl. Brit. Ind. 4: 137, 1883; Kazmi, J. Arn. Arbor. 51:142, 1970

Cordia sebestena Forsk., Fl. Ageypt – Arab. 63, 1768 (non Linn., 1753)

Cordia latifolia Roxb., Fl. Ind. 2: 330, 1824; Graham, Cat. Bombay Pl. 136, 1839; Dalz. & Gibs., Bombay Fl. 173, 1861.

Argyreia arborea Lour., Fl. Cochinch. 135, 1790

Verronia sinensis Lour., Fl. Cochinch. 138, 1790

*Cordia myxa*auct. (non Linn., 1753); Wight, III. t. 169, 1850; Cooke, Fl. Pres. Bombay 2: 199, 1904; Dalz. & Gibs., Bombay Fl. 173, 1861; Clarke in Hook.f., Fl. Brit. Ind. 4: 136, 1883, Graham, Cat. Bombay Pl. 440, 1839

Type: New Caledonia: Coll. ignot. (BM, holotype).

Philippines, A. Llanos 72, 9.1958; (A, Neotype; verified by G. Forst. 1786).

A polygamous tree up to 15 m tall. Leaf base is rounded to widely cuneate, edge is typically undulate, and apex is mucronate. Leaf is ovate to broadly ovate or elliptic. Sessile blooms in dichotomous cymes. Campanulate, 5–6 mm, and five lobed calyx. White corolla with lobes shorter than the tube, an undulate edge, and hairs inside. Tube is as long as the calyx. Bisexual flower filaments range in size from 1 to 2 mm, whereas staminate flower filaments are 3.5 mm. Base is hairy. Rudimen-

tary pistil is globular. Stigma is spatulate; style is branched. Drupe ovoid, pinkish-cream in hue, 1 to 2.5 cm long. sticky mesocarp with persistent calyx surrounding it (saucer-shaped).

Vernacular Name: Clammy cherry - Indian cherry - Sebesten.

Phenology: January – May.

Distribution in Maharashtra: Thane, Mumbai, Pune, Raigad, Sindhudurg

Distribution in India: Throughout India.

Global Distribution: Eastern Asia (Japan & Taiwan) and China in Temperate Asia; Pakistan, Sri Lanka of Indian subcontinent, Indo - China, Malaysia in Tropical Asia; Australia and New Caledonia in Southwestern Pacific (Wafaa, M. A. *et al*., 2016).

Specimen Examined: INDIA, Maharashtra, Madh Island Bombay, 03.03.1957, G. L. Shah Shah 8691 (BLAT!). AUSTRALIA, Muller,

F.J.H.Von, s.n. (KEW!). INDONESIA, Malay Islands, 12.03.2001, Kessler,
P.J.A 3002 (RBGE!)

IUCN Status: Least concern (Botanic Gardens Conservation International (BGCI) & IUCN SSC Global Tree Specialist Group. 2021).

Note: often misidentified with Cordia myxa. In India *Cordia myxa* is found in the northern parts whereas this plant occurs throughout.

Cordia domestica Roth

Cordia domestica Roth, Nov. Pl. Sp. 123, 1821

Synonyms
Cordia myxa Linn. Var. *domestica* Clarke in Hook.f., Fl. Brit. Ind. 4: 137,1883
Cordia fulvosa Wight, Icon. t. 1380, 1850; Clarke in Hook.f., Fl. Brit. Ind. 4: 140, 1883; Cooke, Fl. Pres.Bombay 2: 201, 1904; Talbot, Tress Bombay ed. 2, 244, 1902.

Type: Not found.

Trees up to 5 meter tall. Leaves small, broadly ovate-elliptic, young ones minutely pubescent above, closely grey-tomentose beneath, 1 – 3 cm long, 1– 2.5 cm broad, repand — crenate, base truncate or rounded, apex obtuse to acute; lateral nerves about 5 pairs, petioles about 2 cm long, mature nearly glabrous. Corymbs small, grey-tomentose, about 6 cm long. Calyx 7 mm long, fulvous-tomentose outside, lobes 5, 2 mm long. Corolla 1.5 cm across; tube 8 mm long, lobes 5, 1 cm long. Stamens 5; filaments 6 mm long; anthers 3.5 mm long. Ovary 1.5 mm long, style 9 mm long. Berries (when nearly ripe) rostrate — acuminate, drupe 1.5 cm long. Fruiting calyx ribbed.

Vernacular Name: Assyrian plum, lasura, laveda, pidar.

Phenology: June – August.

Distribution in Maharashtra: Cultivated in gardens in many regions ofMaharashtra.

Distribution in India: Cultivated in gardens.

Global Distribution: Iran, Pakistan, Sri Lanka, Bangladesh, Myanmar, Laos,Vietnam.

Representative Specimen Examined: BPT garden Colaba, Victoria garden Byculla, Joggers parks of Pune.

Specimens Examined: INDIA, Maharashtra, Law, M., 128 (KEW!).

IUCN Status: No records in IUCN Red List of Threatened Species

Note: Many specimens were collected and deposited in BLAT herbarium by many contributors. Today however the plants found are only cultivated ones.Infrequent in forests.

Cordia macleodii Hook. f. & Thomson

Cordia macleodii Hook. f. & Thomson, J. Proc. Linn. Soc., Bot. 2:128, 1858

Synonym
Hemigymina macleodii Griff. In Cal. Journ. Nat.Hist. 3: 363, 1843

Type: In vicinity of Jubbulpore woods, in association with Tectona, Hb.Griff. (K)

A 10- to 12-meter-tall tree. The leaves are alternating, oblong, and the upper surface is pubescent when young, rough but shining. The lower surface of the leaves is thickly covered with grey or tawny woolly tomentum . Flowers are in dense paniculate terminal and axillary cymes. Calyx has short, acute ribbed lobes that are heavily tomentose. spathulate, oblong, and acute corolla lobes that extend beyond the tube. Male flowers typically have six exserted stamens and lengthy filaments.

Vernacular Name: Dahoiman, Dahipalas.

Phenology: March – April.

Distribution in Maharashtra: Thane, Mumbai, Pune, Raigad, Vidarbha,Marathwada.

Distribution in India: Southern parts of India.

Global Distribution: Indian subcontinent - Pakistan (eFloras, 2008).

Representative Specimen Studied: Tansa dam, Arrey Colony, Suryamal,Ganeshpuri.

Specimen Examined: INDIA, Maharashtra, Mumbra Thane, 30.03.1954, K. V. Shenoy K.V.S. 2502, (BLAT!). West Bengal, Griffith, W., 5996, (KEW!).
Campbell, A. (Rev.) Lace 9403 (RBGE!).

IUCN Status: No records in IUCN Red List of Threatened Species.

Note: Tomentose leaves specifically lower surface and exserted stamens. This tree is treated as an endangered species (Chandrakar, *et al*., 2017)

Cordia sebestena Linn.

Cordia sebestena Linn., Sp. Pl. 190, 1753.

Synonyms
Cordia speciosa Salisb., Prodr. Stirp. Chap. Allerton 111 (1796).
Sebestena sebestena (L.) Britton in Small. Fl. Miami: 200 (1913).

Type: typified by Miller: Sloane, Voy. Jamaica 2: pl. 164 (1725). [Lectotype by Miller in Cafferty & Jarvis, Taxon 53(3): 801 (2004)]

TypoType: [Jamaica] ''on a rocky Bank over Mr. Batchelor's House near the Black River Bridge….'', Herb. Sloane 5: 71 (BM-SL).

Tree or shrub up to 8 m. tall; bark dark brown. Leaves alternate; lamina mostly ovate, sometimes elliptic, apex obtuse to acuminate; base round to obtuse, often slightly oblique; margin entire or occasionally slightly undulate or dentate; rough, sparsely hairs on both surfaces. Inflorescence lax, in terminal paniculate cymes. Flower bisexual, pedicellate, pedicel, large, (5-)6- 8 flowers per cyme. Calyx tubular, brown, without prominent ribs, densely long adpressed white translucent hairs outside, short white hairs inside; teeth 3 – 5, unequal. Corolla funnel-shaped, crinkly, bright reddish-orange; tube exserted; lobes, 5 –7, rhombic to obovoid, undulate to crenellate margins with retuse apex, sparse hairs on both sides. Stamens 5 –7; filaments inserted, hairy at base. Ovary conical, glabrous; style inserted; style branched; stigmatic branched; stigma clavate. Fruit whitish, ovoid completely enclosed in the accrescent calyx.

Vernacular Name: Geiger tree.

Phenology: January – March.

Distribution in Maharashtra: Cultivated in gardens of Mumbai, Marathwada and other regions.

Distribution in India: Throughout India this plant is cultivated in gardens. Observed in gardens of Bengaluru, Ahmedabad, Goa etc.

Global Distribution: South eastern United States and Southern Mexico in Northern America; Caribbean and Mesoamerica in Southern America (Wafaa, M. A. *et al*., 2016)

Representative specimen studied: BPT garden Colaba, Victoria Garden, ISER Pune, Mumbai – Nasik highway.

Specimen Examined: INDIA, Maharashtra, Victoria Garden Bombay, 12.07.1956, R. R. Fernandez R2442 (BLAT!). Gujrat, Baroda, 15.04.1989,
Rajendra Shinde B (BLAT!).

IUCN Status: Least Concern (Linsky, J, 2014).

Note: The species is easily distinguished by its large bright reddish-orange flowers and fruit completely enclosed in the accrescent calyx. This species is distinguished by the phenomenon of distyly. This phenomenon is mentionedearlier by Percival (1974)

Cordia sinensis Lamk., Encyclop. 1: 423, 1792.

Synonym
Cordia gharaf (Forsk.) Ehrenb. Ex Ashers., Sitzujsber Ges. Naturf. Freunde Berlin 4: 47, 1879; Kazmi, Journ. Arn. Arbor. 51: 140, 1970; Naik, Fl. Osmanabad 212, 1979.

Cordia rothii Roem. &Schult., Syst. 4; 789 1819; Wight, Icon. t. 1379, 1848; Dalz. & Gibs., Bombay Fl. 174, 1861; Clarke in Hook.f., Fl. Brit. Ind. 4: 138, 1883; Cooke, Fl. Pres. Bombay 2: 202, 1904; Dalgado, Fl. Savantwadi& Goa 127, 1898; Talbot, Trees Bombay ed, 2, 244, 1902; Woodrow, JBNHS 12: 169, 1898; Ugemuge, Fl. Nagpur Dist. 246, 1986

Cordia angustifolia Roxb., Fl. Ind. (Carey ed.) 2: 338, 1832 (non R. & S., 1891); Graham, Cat. Bombay Pl. 36, 1839; Voight, Hort. Suburb. Cal. 441,
1845.

Cornus gharaf Forsk., Fl. Aegypt. – Arab. 95, 1775 (nom. nud.).

Type: India, Sonnerats.n. (P-LAM 633460 holotype, microfiche) [see Verdcourt, 1991].

Arabia: Hadie, Forsskals.n. det. As Cornussanguinea, Forssk. (C)

A 5–12 metre tall little tree with grey, wrinkled bark. Subopposite leaves that are oblanceolate-oblong, 6–10 cm long, and 2–3 cm wide. They are rough on top and mostly pubescent on the underside. Small, white, typically tetrandrous flowers appear in lax terminal or axillary pedunculate cymes; peduncles measure 2–2.5 cm in length, and pedicels are short. Male flower filaments exserted 3.5 mm. Female flower styles are 2.5 mm long and branching. Drupes are typically 1-seeded, ovoid, acute, mucronate, 9–10 mm long, glabrous, longitudinally striate, and yellow or reddish-brown when mature. The edible pulp is a gelatinous, transparent substance.

Vernacular Name: Grey -leaved saucer berry, Grey-leaved Cordia, Marer, Mnya mate, Mkamasi and Tadana.

Phenology: March – November.

Distribution in Maharashtra: Sindhudurg, Pune, Marathwada, Solapur, Gardens of Mumbai.

Distribution in India: Western India.

Global Distribution: Africa [N (Egypt), Tropical (E, NE, W, S), Southern and Western Indian Ocean (Madagascar)]. Arabian Peninsula (Saudi Arabia), Western Asia (Iran, Israel & Jordan) in Temperate Asia, Pakistan & Srilanka of Indian subcontinent in Tropical Asia (Wafaa, M. A. *et al*., 2016).

Representative Specimen Examined: BPT garden Colaba, Solapur. Specimens examined: INDIA, Maharashtra, Peddar Road Bombay, 30.04.1957, R. R. Fernandez R 4044 (BLAT!). ETHIOPIA, 25.09.1838, Schimper 789 (KEW!). PAKISTAN, 16.05.1990, Gafoor, A. & Goodman,S.M., 5259 (RBGE!).

IUCN Status: Least concern (Oldfield, S, 2020)

Note: Female flowers were not seen by author and described according to Warfa, (1990) and Verdcourt, (1991). The species was distinguished by opposite to sub-opposite leaves, narrowly oblongo - lanceolate lamina and small orange fruit.

Cordia subcordata Lamk

Cordia subcordata Lamk. Tabl. Encycl.1: 421, 1792.

Synonym

*Cordia b*analo Blanco, Fl. Filip.: 124, 1837

*Cordia campanulata*Roxb., Hort. Bengal. 17; Fl. Ind. i. 593; 1814.

*Cordia hexandra*Willd. ex. Roem. &Schult., Syst. Veg., ed. 15 bis (Roemer &Schultes) 4: 799, 1819.

Cordia orientalis R. Br., Prodr. Fl. Nov. Holland.: 498; 1810.

Cordia sebestena G. Forst ., Fl. Ins. Austr. 18; 1786.

Type: Not found.

Shrub up to 4 m. high. Leaves alternate, subglabrous; ovate or widely ovate to circular, glabrous, obtuse to round at apex, obtuse to truncate rarely subcordate at base with entire margin or slightly wavy. Inflorescence cymose, loosely branched, terminal. Flowers hermaphrodite, heterostylous. Calyx cylindric or slightly conical, coriaceous, glabrous or sparsely strigose outside densely strigose inside. Corolla infundibuliform, orange, gla-

brous or nearly so. Corolla lobes rounded, sometimes with crenate margin, spreading. Stamens inserted, glabrous. Ovary conical, glabrousfirst branching and stigmatic branches are seen, long and flattened. Fruit a nut, subglobose, smooth, shining, completely enclosed in enlarged urceolate calyx.

Vernacular Name: Snottygobbles, Glueberry, Narrow-leafed bird lime tree, Beach Cordia, Sea Trumpet, Kerosene wood.

Phenology: Throughout the year.

Distribution in Maharashtra: Cultivated in gardens of Mumbai, Marathwada and other regions.

Distribution in India: Cultivated in gardens.

Global Distribution: Eastern Africa, South Asia, Southeast Asia, northern Australia and the Pacific Islands (J. B. Friday and Dana Okano, 2006).

Representative Specimen Studied: Gardens of Mumbai

Specimen Examined: INDIA, Maharashtra, Victoria Garden Bombay, 12.07.1956, R. R. Fernandez, R2437, (BLAT!). THAILAND, S. Coll. 9063,
(KEW!). THAILAND, 19.12.2006, Pooma, R; Pattharahirantricin, N; Sirimongkol, S 6450 (RBGE!).

IUCN Status: Least Concern (Oldfield, S, 2019).

Note: Water helps in seed dispersal.

Discussion and Conclusion

The genus Cordia is revised here for the state of Maharashtra. Current study provides the taxonomic aspects of the taxonomic group. During the study the distribution of the members of the group provided by the earlier literature and our personal field visits showed some variations which are recorded here.

Since in a certain time period along with the rapid development of various districts of the state, it is difficult to conclude the distribution of the species of the genus. Further excursions are needed to give the details of the distribution of the species. This taxonomic revision work will provide the basic records of the taxonomic group for further research.

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