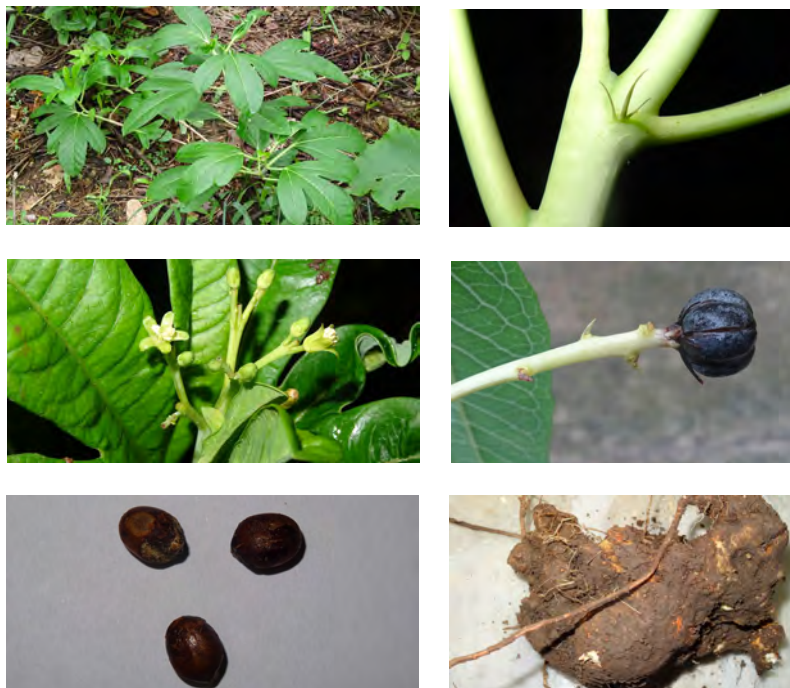


DWARF JATROPHA

New distribution record of Vulnerable taxon *Jatropha nana* (Magnoliopsida: Euphorbiaceae) to Odisha, India



Jatropha nana: (a) Habit (b) Stipule (c) Flowers (d) Fruit (e) Seeds (f) Tuber

Plantae
(Plant Kingdom)

Tracheophyta
(Phylum of Vascular plants)

Malpighiales
(Order of Eudicots)

Euphorbiaceae
(Family of Spurge or Croton)

Jatropha nana
(Dwarf Jatropha)

Species described by Dalzell
& A. Gibson in 1861

The genus *Jatropha* L. (Euphorbiaceae) is distributed mainly in Tropical America, Africa and Asia with ca. 186 species. In India, the genus is represented by 10 species and 8 varieties (Rao, 1995) and 11 species and 6 varieties (Balakrishnan & Chakrabarty 2007). Altogether five species of *Jatropha* have been reported from the state of Odisha (Balakrishnan et al. 2012). During the ethnobotanical survey, few specimens of *Jatropha* were collected from Malkangiri district of Odisha. After detail study, the plant identified as *Jatropha nana* Dalzell & A.Gibson, a threatened endemic species of India. *Jatropha nana* was considered endemic to the western part of Maharashtra state (Rao, 1995; Mishra & Singh 2001) until the discovery of its subpopulation in West Bengal which

IUCN Red List:

Global –
Vulnerable
(Nerlekar et al
2016)

described as *J. nana* var. *benghalensis* (Rahman & Mondal 2012). However, this new variety was merged with *J. nana* (Nerlekar 2015). Obviously, this species shows a disjunct distribution with two subpopulations (one in Maharashtra and other in Jharkhand, Bihar and West Bengal). The specimens of present collection from Odisha, resembles with subpopulations of Jharkhand, Bihar and West Bengal.

***Jatropha nana* Dalzell & A. Gibson**

Bombay Fl. 229. 1861; Hook. f., Fl. Brit. India 5:382. 1887; Khanna et al., Suppl. Fl. Madhya Pradesh 160. 2001.

Diagnosis: Glabrous undershrubs, up to 55 cm high; main root tuberous and fleshy with watery juice, 10-30 × 5-7 cm; stem terete, rarely branched. Leaves spiral, ovate or obtriangular, entire or 3-lobed up to middle; 10-17.5 × 9-17 cm, reticulately veined, glaucous beneath; lobes ovate, long and narrow, entire, apiculate at apex, acute to obtuse at base, central lobe the largest, cuneate at base with 3 distinct nerves; petiole 1-7 cm long; stipules paired; each with 2-8 linear-filiform branches of different lengths, 1-13 × 1.5-2 mm. Inflorescence few-flowered, terminal, paniculate cymes, with a central pistillate flower surrounded by staminate flowers, 2.5-5 cm long, flowers small green, unisexual, hypogynous, bracteates, pedicellate. Bracts lanceolate-subulate, acute, eglandular. Staminate flowers: 5-10 × 2.5-3 mm; calyx cup-shaped; lobes 5, ovate; petals 5, free, obovate-oblong, 4-8 × ca. 2 mm; stamens

7-8, 3.5-7 mm long; filaments connate above the middle;

glands 5, in a ring.

Pistillate flowers: calyx 5 × 4.5 mm; lobes 5, lanceolate, 4 mm long; petals 5, obovate-oblong, foliaceous, 7-9 × 2-4 mm; ovary subglobose, 3-loculed, 2-2.5 mm in diam.; glands 5, free, in a ring; styles 3, ca. 3 mm long, connate at base, stigmas 3, deeply 2-lobed. Capsules 2.0 × 1.5 cm, sulcate, obovoid-oblong, flattened at top, splitting into 3 cocci and 2 valves, with 3 seeds. Seeds oblong-ellipsoid, up to 1.0 × 0.5 cm, testa uniformly brown, ventral surface with groove, caruncle lobes light brown 2-lobed.

Global Distribution:

India (Bihar, Jharkhand, Maharashtra, Odisha, West Bengal)

Flowering and fruiting: May-September

Exsiccate: India, Maharashtra, Hills south of Peth (Pune): s.d., Anonymous s.n. [CAL0000026112, type]; Odisha state: Malkangiri District, Shendrimal forest, 18°27'02.4"N & 082°18'18.4"E, elevation 294 m, 03 July 2016, K. A. Sujana, M. Mishra & P. A. Dhole 38847 (CAL & Central Botanical Laboratory, BSI, Howrah).

Distribution and Habitat: *Jatropha nana* is endemic to India. It is reported from Bihar, Jharkhand, Maharashtra, Odisha (present report) and West Bengal. Plants of this species are found in dry deciduous forests of Malkangiri district, growing in association with *Catunaregam spinosa* (Thunb.) Tirveng., *Dioscorea pentaphylla* L., *Diospyros melanoxylon*

Roxb., *Hemidesmus indicus* (L.) R. Br. ex Schult., *Holarrhena pubescens* Wall. ex G. Don, *Tectona grandis* L.f. and *Terminalia cuneata* Roth. The species was found in three sites with 2-5 individuals in about 25 sq. m area. This plant sprouts in May after first rains and withers away by September (coinciding with the Indian monsoon/rainy season). Otherwise, it survives through the underground tuber.

threatens long term survival of this plant. Increasing fragmentation of habitat makes it harder for this plant to reproduce and makes populations more susceptible to disturbance. Unsustainable harvesting of tubers of this plant for ethnomedicine is observed in Malkangiri is also a cause of endangerment of this plant. This species is not reported to be grazed by any large herbivore either domestic or wild due to its latex.

Threat: The depletion and degradation of native vegetation communities

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