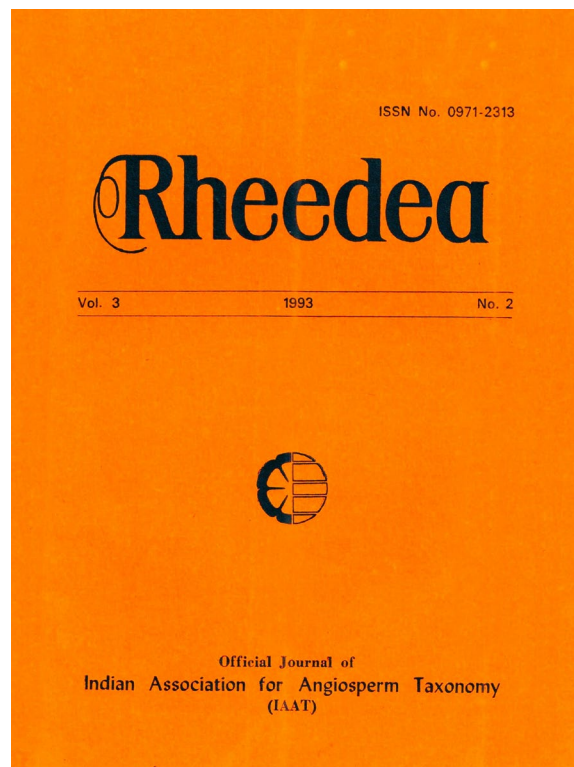




Notes on *Euphorbia atoto* G.Forster and its allied species (Euphorbiaceae)

Binojkumar M.S. & N.P. Balakrishnan



How to cite:

Binojkumar M.S. & N.P. Balakrishnan 1993. Notes on *Euphorbia atoto* G.Forster and its allied species (Euphorbiaceae). *Rheedeia* 3(2): 113–116.

<https://dx.doi.org/10.22244/rheedeia.1993.03.02.03>

Published in print: 31.12.1993

Published Online: 01.01.2022

**Notes on *Euphorbia atoto* G. Forster and its allied species
(Euphorbiaceae)**

M. S. Binojkumar and N. P. Balakrishnan

Botanical Survey of India, Coimbatore - 641 003.

Abstract

During our revisionary work on Indian Euphorbias, it is found that *E. atoto* G. Forster does not occur India. The Indian specimens in the herbaria, labelled as *E. atoto*, actually belong to *E. articulata* Dennst. (= *E. halophila* Miq.),

Miquel (1852) described *Euphorbia halophila* from Malabar, based on the specimen, "Mahe et Tellissery, *Hohenacker* 725", as type. J. D. Hooker (1887) merged this species under *E. atoto* G. Forster, an Australian species, and was followed by authors of subsequent Floras. During our revisionary work on Indian Euphorbias we examined the type photograph and authentic specimens from Indian and Australian herbaria and found that both are distinct species. From our study it is also found that *E. atoto* G. Forster does not occur in India, whereas *E. halophila* Miq. distributed in coastal regions of Orissa, Northern Kerala and Southern Karnataka, extends its distribution to Andaman & Nicobar Islands, Sri Lanka and in Australia.

Dennstedt (1818) published *E. articulata* based on Rheede's, 'Ven-pala' (Hort. Malab. 10: 115, f. 58 1690). A comparative study on Rheede's illustration with the type photograph of *E. halophila* Miq. shows that both are one and same. Hence, the correct name of the Indian species should be *Euphorbia articulata* Dennst. A key is provided to distinguish both species, and a detailed description is provided for *E. articulata* Dennst.

Key to the Species

- 1a. Stems linear towards apex; leaves acute at tip; stipules triangular, entire; cyathia solitary or 2 - 3, never in clusters.....*E. atoto*
 b. Stems not linear towards apex; leaves obtuse at tip; stipules broad, fimbriate; cyathia in fascicles.....*E. articulata*

***Euphorbia articulata* Dennst., Schlüssel, Hort. Malab. 37. 1818.**

Type: *Ven-Pala*, Rheede, Hort. Malab. 10: 115. f. 58. 1690 (Iconotype).

E. halophila Miq., Anal. Bot. Ind. 3: 16. 1852.

Type : Malabar, Mahe et Tellissery, *Hohenacker* 725 (Holotype in K, Photo !).

E. atoto auct. non G. Forster; Hook. f., Fl. Brit. India 5: 248. 1887; Cooke, Fl. Pres. Bombay 2: 572. 1906; Rama Rao, Fl. Pl. Travancore 351. 1914; Gamble, Fl. Pres. Madras 1275. 1925; Sharma et al., Fl. Karnataka 249. 1984; Nicolson et al., Interpr. Hort. Malab. 109. 1988.

Shrubs or undershrubs, up to 2 m high, erect or ascending, glabrous or sparsely hairy. Stems many from a thick rootstock, stout, dichotomously branched; nodes thickened; internodes 1–3 cm long. Leaves opposite, shortly petiolate, ovate or ovate-oblong, oblique at base, acute to obtuse at apex, entire, $2-3 \times 1-1.5$ cm, sparsely hairy on lower surface, coriaceous; mid-nerves prominent; petioles *ca* 2 mm long, channelled above; stipules united, broad, fimbriate. Cyathia in terminal clusters; involucre turbinate, *ca* 2×1.5 mm; lobes 5, triangular, oblong, lacinate, hairy, as long as the glands; glands 4, rounded, *ca* 1×1 mm; limb of glands obovoid, slightly larger than the gland; peduncle *ca* 1 mm long, glabrous. *Male floret*: Pedicels *ca* 0.5 mm long; filament articulate over the pedicels; anthers subglobose, transversely dehiscent; bracteoles filiform, *ca* 1.5 mm long, peripheral bracteoles deeply lacinate. *Female floret*: Gynophore *ca* 2 mm long, glabrous; ovary *ca* 4×2 mm, glabrous; styles 3, free from base, each bifid at apex; stigma capitate. Capsules obtusely keeled, 4–6 mm across, glabrous. Seeds oblong-ovoid, $2-2.5 \times 1.5-2$ mm, smooth (Figs 1a-f).

Fl. & Fr.: Throughout the year, mainly during Jan.-April.

Habitat: Occurs in moist sandy soil along sea-shores, amidst coconut trees, or often along roadsides, upto an altitude of 50 m.

Distribution: India (Andaman & Nicobar Islands, Karnatka, Kerala and Orissa), Sri Lanka and Australia.

Specimens examined: INDIA : Andaman & Nicobar Islands - Katchal Is., Kadoo village, *P. Chakraborty* 5265; South Andaman Is., Escape Bay, *Kurz s.n.* (CAL); Car Nicobar Is., Kakana, *N. G. Nair* 1595 (PBL); North Uge Is., *C. E. Parkinson* 523 (CAL, DD); Car Nicobar Is., *Prajin s. n.* (CAL); South Andamans, Rutland Is., *Rogers* 461; Katchal Is., West Bay, *Vasudeva Rao* 7498 (CAL); KARNATAKA : Coondapur, Seashore, *Bhiva s. n.* (BSI) Mangalore Dt. Suratkal, *Saldanha* 2011 (CAL, IIS) South kanara, Someshwar-Ullar, *Saldanha* 12041 (IIS). KERALA : Kasaragode Dt. Seashore. *T. A. Rao* 10043 (HIEP).

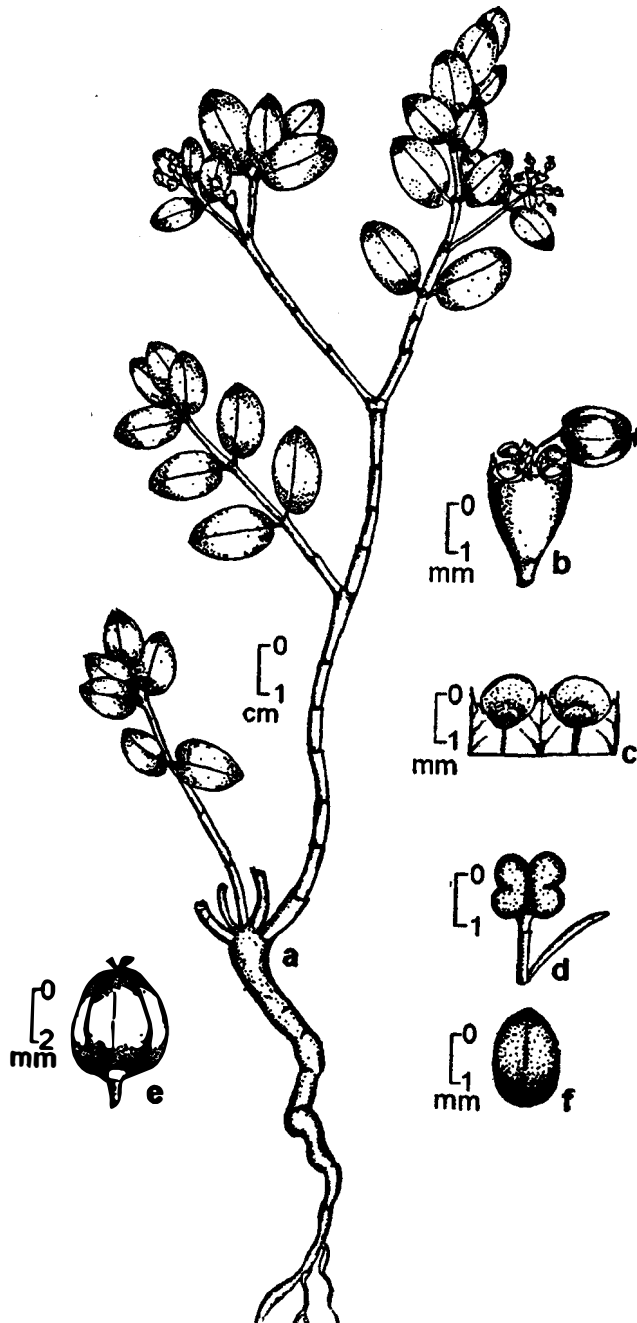


Fig. 1 *Euphorbia articulata* Dennst.: a. habit; b. cyathium; c. portion of involucre showing glands with limb; d. male floret with bracteole; e. fruit; f. seed.

AUSTRALIA : Old North Kennedy, Dunk Island, *E. J. Banfield* s. n. (NSW); Queensland, Cook Dist., Muffe Hend, Cape York, Beach dune, *Forster* 6435 (BRI).

Acknowledgements

We are thankful to the authorities of BRI, NSW and PDA for sending us specimens for this study on loan.

Literature cited

- Dennstedt, A.W. 1818. *Schlüssel zum Hortus indicus Malabaricus*. Weimar.
Miquel, F.A.W. 1852. *Analecte Botanica India*, Amsterdam Vol. 3.
Hooker, J. D. 1887. "Euphorbiaceae" In: Hooker J. D., *Flora of British India*. London Vol. 5.