

Gymnanthemum amygdalinum (Delile) Sch. Bip. ex Walp (Asteraceae) – A new report to the flora of Andaman and Nicobar Islands, India

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Abstract

Gymnanthemum amygdalinum (Delile) Sch. Bip. ex Walp., an angiosperm species belongs to family Asteraceae, the genus is hitherto unknown from Andaman and Nicobar Islands, which is reported here.

INTRODUCTION

The genus *Gymnanthemum* (Family: Asteraceae) which comprises c.49 species in the world (The Plant List 2013). The genus is commonly distributed in tropical Africa, America, and tropical Asia. In mainland India, the genus *Gymnanthemum* is represented by three species *G. extensum* (Wall. ex DC.) Steetz, *G. pectiniforme* (DC.) H. Rob., and *G. amygdalinum* (Delile) Sch. Bip. ex Walp.

During recent floristic survey of Great Nicobar Island, the authors collected a species from Gandhi Nagar village area (Fig. 1) in its flowering and fruiting stage. Later it's confirmed as *Gymnanthemum amygdalinum* (Delile) Sch. Bip. ex Walp., well known by its previous name *Vernonia amygdalina* Delile. Plant is commonly known as Bitter-leaf tree and its native to Africa. In India *G. amygdalinum* (Delile) Sch. Bip. ex Walp was reported from Madhya Pradesh, Bihar, West Bengal, Odisha and Telangana (Bhattacharjee *et al.*, 2013; Swamy *et al.*, 2015). Based on the available literature (Pandey and Diwakar 2008; Shina 1999; Lakshminarasimhan and Rao 1996; Prasad *et al.*, 2009) the genus is hitherto unknown from Andaman

and Nicobar Islands, which is reported here. A thorough description and color photographs are provided to assist identification in the field.

TAXONOMIC TREATMENT

Gymnanthemum amygdalinum (Delile) Sch. Bip. ex Walp., Repert. Bot. Syst. (Walpers) 2: 948. 1843. *Vernonia amygdalina* Delile, Cent. Pl. Afr. Voy. Meroe: 41. 1826. *Keringa amygdalina* (Delile) Raf. Sylva Tellur. 144. 1838. (Fig. 2).

Shrubs or small trees, grows upto 1.5-4 m tall; stem striate, fissured, light grey or brown, branches terete, older one almost glabrous, young one densely glandular pubescent. Leaves alternate, lanceolate-oblong, or ovate-elliptic, c. 5-15 × 2-5 cm, apex acute to sub-acuminate, base cuneate, margins sub-entire or serrate, adaxial surface glabrous or sparsely pubescent and abaxial surface densely pubescent, lateral veins 5-13 pairs, petioles 1-4 cm long, pubescent. Inflorescence capitulum, flowers sweetly scented; bracteoles 1-2, c. 0.1-0.2 cm long, peduncle short, densely puberulent and glandular. Florets 17-18 in each capitulum, pedicels 0.2-0.5 cm long.

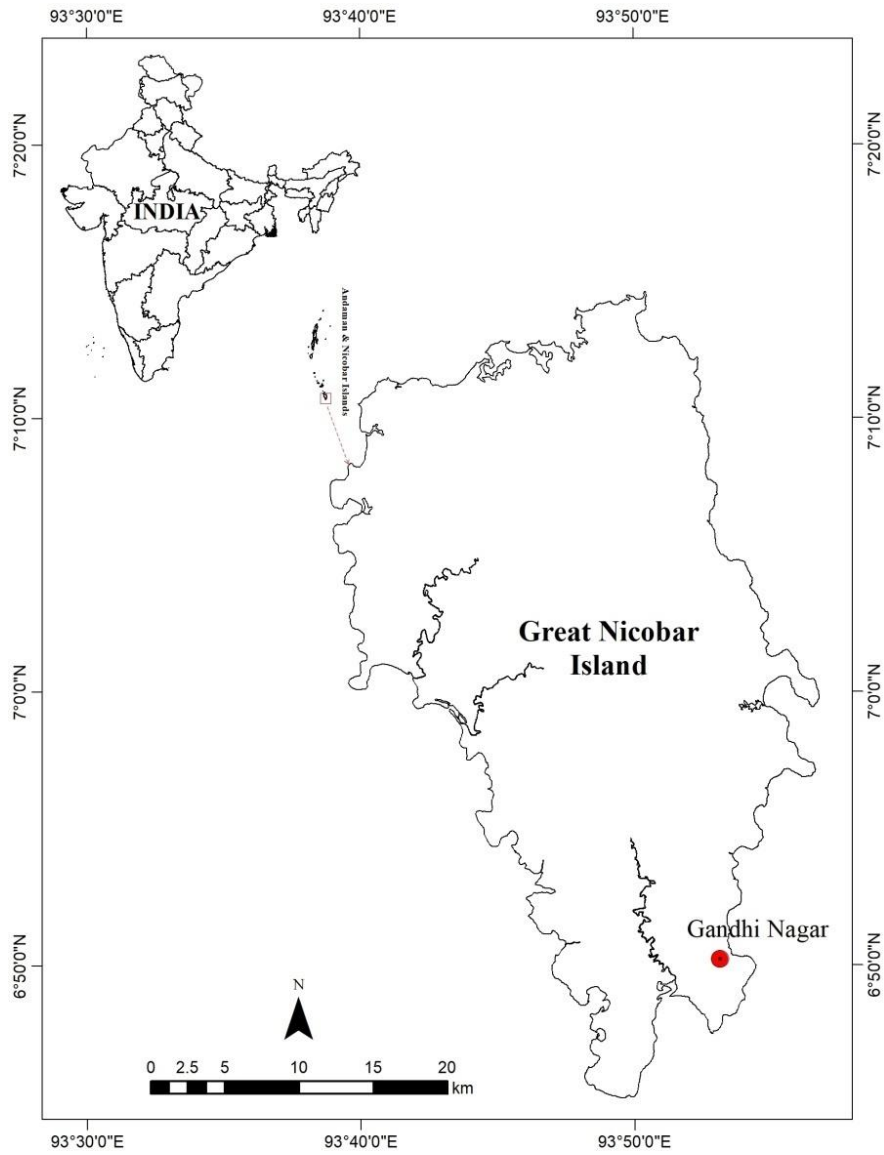


Fig. 1: Distribution of *Gymnanthemum amygdalinum* (Delile) Sch. Bip. ex Walp., in Great Nicobar Island.

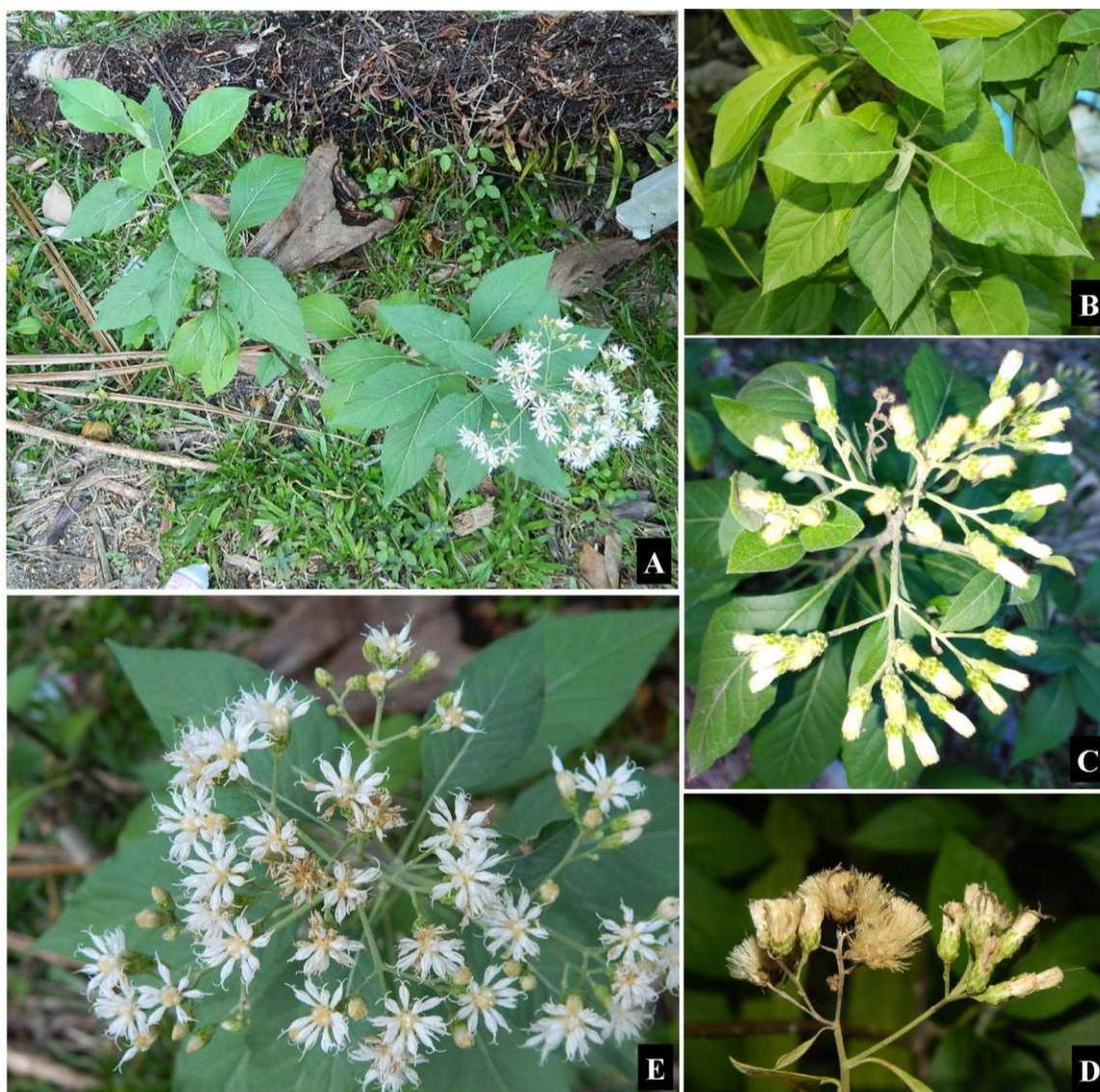


Fig. 2: *Gymnanthemum amygdalinum* (Delile) Sch.Bip. ex Walp. (Asteraceae): A- Habit; B- Leaf blade; C- Flowering twig; D-Head; E-Inflorescence.

Corolla small creamy white, *c.* 7-9 × 1-1.2 mm, tubular, 5-lobed. Stamens 5, epipetalous, *c.* 5 mm long, filaments glabrous, *c.* 2 mm long, anther 3-4 mm long, linear to linear-lanceolate. Ovary 1.5-2 × 0.2-0.6 mm, hairy; style 5-7 mm long, apex hairy, base glabrous, stigma hairy, *c.* 3-3.5 mm long. Cypsela oblong-ellipsoid, *c.* 2-4 mm long, 10-ribbed, with glands and bristly hairs. Pappus in 2-rows of capillary bristles, outer one short, *c.* 2-3 mm long, inner bristles 5-7 mm long, cream to pale yellowish-brown.

Phenology: November-April.

Habitat: Rare along the road side near the habitation mask of Great Nicobar Island.

Distribution: Native to tropical Africa, apparently introduced in India (Bihar, Madhya Pradesh, Odisha, West Bengal, Telangana) now from Andaman & Nicobar Islands, Brazil, Madagascar, southern Asia, America and Australia.

Specimen examined: India: Andaman and Nicobar Islands, Great Nicobar Island, Gandhi Nagar (6°50'17.54"N & 93°53'23.57"E), 03rd April, 2019. Apurba Kumar Das 004149 (PBL).

Ethnomedicinal uses: The plant is traditionally used in the treatment of diabetes in Africa (Atangwho *et al.* 2012). The plant is also used by the traditional medical practitioners to cure malaria, helminth, laxative, digestion, wounds, appetizer and febrifuge (Ijeh & Ejike 2011).

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