

**GYNURA NEPALENSIS DC. (ASTERACEAE) - A NEW ANGIOSPERM
RECORD FOR BANGLADESH**

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A perennial, terrestrial herb with yellow flowers was collected from Kendua under Netrokona district of Bangladesh in the month of March 2006 by a research student of the Department of Chemistry, Dhaka University and later from Comilla district in 2011, which after critical studies, has been identified as *Gynura nepalensis* DC., by referring to the descriptions of Hooker (1882), Davis (1979) and Hajra *et al.* (1995).

The genus *Gynura* Cass. consists of about 40 species distributed in tropical Asia and Africa (Airy-Shaw, 1897). From Indian subcontinent, *Gynura nepalensis* was earlier reported by Hooker (1882) from temperate Himalaya and Hajra *et al.* (1995) from Himalayas and the north-east regions of India. As this genus and any species belonging to the genus was not reported earlier in any of the relevant floristic literature covering Bangladesh territory, *viz.*, Prain (1903), Heinig (1925), Cowan (1928), Raizada (1941), Datta and Mitra (1953), Sinclair (1956), Khan and Banu (1972), Khan and Hassan (1984), Khan *et al.* (1994), Mia and Khan (1995), Rahman and Hassan (1995), Rahman and Uddin (1997), Uddin *et al.* (1998), Rashid *et al.* (2000), Khan and Huq (2001), Uddin *et al.* (2003), Rahman (2004a, b) and Ahmed *et al.* (2008), it is therefore being reported as a new generic and species record for Bangladesh.

Based on fresh specimens collected from Dhaka University Botanical Garden (planted earlier from the specimen of Kendua), a detailed descriptive note, illustration and photographs are given below. The voucher specimen has been preserved at the Dhaka University Salar Khan Herbarium (DUSH).

GYNURA Cass. in F. Cuvier, Dict. Sci. Nat. 34: 391(1825), *nom. cons.*

Succulent herbs, rarely undershrubs, glabrous or hispid. Leaves alternate, entire, toothed or pinnatisect. Heads solitary or corymbose, bracteate at the base, homogamous, disciform, yellow or purplish. Involucre cylindric or subcampanulate; bracts 10-12, 1-seriate. Anther bases entire or subauricled. Styler arms slender, tips long, subulate, hispid. Achenes narrow, many-ribbed; pappus hairs copious, slender, white.

The genus is distributed from tropical Africa to South Asia eastward through southern China, Japan, Southeast Asia and New Guinea into northern Australia (Vanijajiva, 2009).

Gynura nepalensis DC., Prodr. 6: 300 (1838). Hook. f., Fl. Brit. Ind. 3: 300 (1881). *Gynura foetens* Wall. *ex* DC., Prodr. 6: 300 (1838). *Gynura nepalensis* DC. var. *thomsoni* C.B. Clarke, Comp. Ind.: 171 (1876). **(Fig. 1, Plate 1).**

Type: Nepal, Noakote, Wall. cat. no. 3146 (*Holotype:* K-W!; *Isotype:* BM!, K!).

Perennial herb, hoary pubescent. Roots fibrous. Stems corymbosely branched above, lower part decumbent, c. 30-45 cm tall, woody at the base, c. 10 mm in diam. Leaves obovate or rhomboid, acute, margin incised with mucronulate teeth or shallow angular lobes, 3-20 × 1-6 cm,

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canescent or with scattered white hairs on the upper surface, base cuneate, petioles 0.5-5.0 cm long, upper leaves transitional to the bracts, becoming sessile and narrowing to linear. Inflorescence a discoid capitulum, campanulate, loosely arranged in terminal corymb, capitula 3-7 per corymb, 1.5-2.0 cm in diam. on peduncle with few linear bracts, peduncle 1-10 cm long, pubescent. Involucre campanulate, 10-13 × c 10 mm, with 7-8 linear calycular bracts, slightly longer than broad, bracteolate, bracteoles half the length of the involucre bracts, linear, subulate with spreading white hairs on the margin. Phyllaries uniseriate, 13-14, linear-lanceolate, 8-10 × 1-3 mm, densely fulvous tomentose or subglabrous, sometimes sessile glandular hairy, margin scarios, apically acuminate. Florets 25-45, orange-yellow; corolla 8-12 mm long; tube 4-5 mm long, slender; limb dilated, lobes triangular-ovate. Anthers 2.0-2.5 mm long, collars elongated, obtuse at base, filaments 2 mm long. Styler arms 3.0-3.5 mm long, branch tip conical, papillose. Fruit an achene, dark brown, cylindrical, 3-6 mm long, glabrate, deeply many ribbed. Pappus 10-12 mm long, white or dirty white.

Flowering and fruiting: March to August.

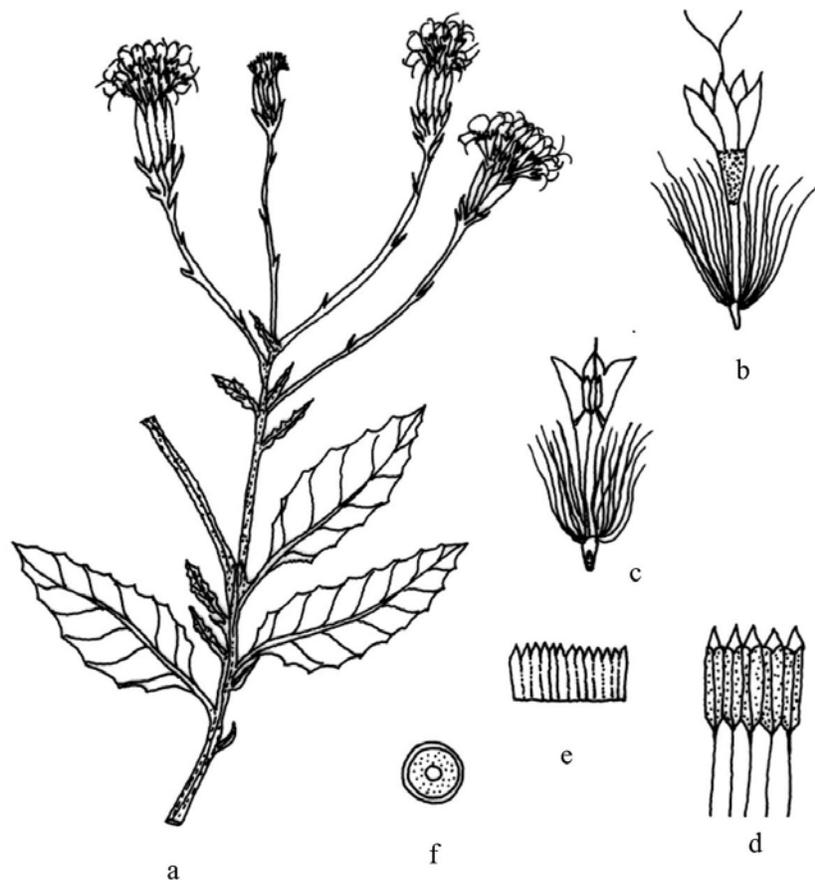


Fig. 1. *Gynura nepalensis* DC. (a) habit ($\times 0.5$), (b) hermaphrodite floret ($\times 3$), (c) L.S. of a hermaphrodite floret ($\times 2$), (d) androecium ($\times 7$), (e) phyllaries ($\times 0.5$), (f) T.S. of ovary ($\times 16$).

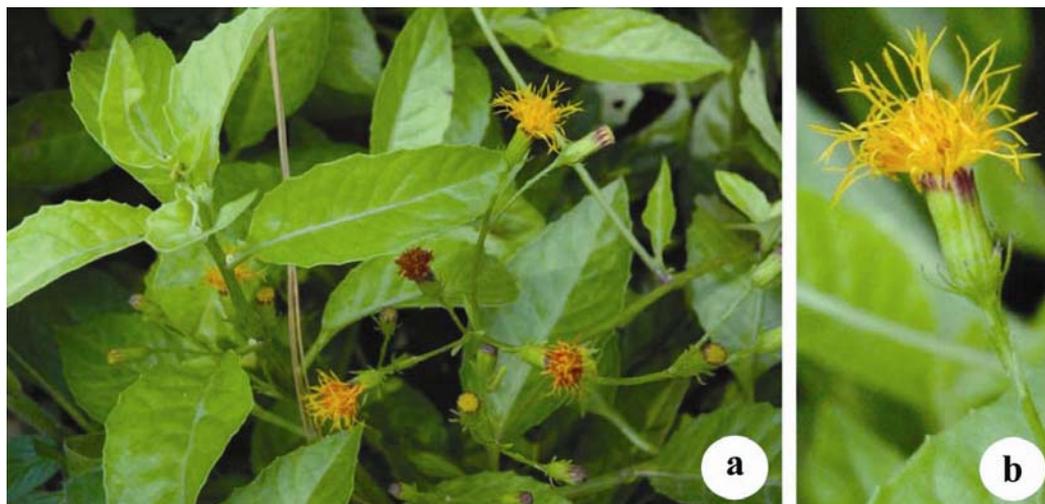


Plate 1. *Gynura nepalensis* DC. (a) habitat, (b) an inflorescence.

Specimens examined: **Dhaka:** Dhaka University Botanical Garden, 27.3.2007, Sumona 30 (DUSH); BCSIR Garden 26.3.2014, Nasima 1 (DUSH).

Distribution: Native to Nepal, distributed in India, China, Myanmar, Bhutan and Thailand.

Uses: In Hawaii, anecdotal evidence of its cholesterol lowering effects has given it 'miracle-cure' status. Flower extract of *Gynura nepalensis* is used for treatment the of hyperlipidemia along with its hepatoprotective effect (Nigam *et al.*, 2012). The juice of the plant is applied to heal cuts and wounds (Manandhar, 2002). In Bangladesh, the leaves of the plant are used in diabetes.

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