

He confirmed the identity of these specimens as *Corydalis pseudo-junceae* Ludlow. Ludlow and Stearn (1975), described this species from Nepal but it has not been recorded from the Indian Himalaya. The recent collection is of phytogeographic interest, and represents a new record from India.

A detailed description, line diagram and habitat of the species are given to facilitate identification. The voucher specimens are maintained at Herbarium, Department of Botany, H.N.B. Garhwal University, Srinagar (Garhwal), India (GUH).

Corydalis pseudo-junceae Ludlow. in *Bull. Br. Mus. nat. Hist. (Bot.)* 5(2): 62-64. t. 11. 1975; Liden, *Bull. Br. Mus. nat. Hist. (Bot.)* 18(6): 477. t. 4. 1989.

Slender erect herbs. Storage roots tuberous, fusiform, sessile. Stem slender, erect, glabrous, 10-40 cm long, green. Radical leaves 1-2, with long (upto 20 cm) filiform petioles, biternate with long leaflets; leaflets glabrous, lanceolate, acute, 1.0-2.5 cm long; cauline leaf solitary, sessile, in upper part of stem, linear, acute, 1.0-6.0 x 0.2-0.4 cm. Racemes few (2-6) flowered. Bracts linear, acute, erect, longer than pedicels, 0.8-1.8 cm long. Flowers on 0.4-0.8 cm long pedicels, lemon yellow, 1.0-1.6 cm long, not tipped with dark purple; sepals minute, caducous; posterior petal 15 mm long (including

7 mm spur), dorsal crest very narrow, anterior petal upto 9 mm long. Ovary linear 7.0 x 10 mm; stigma bilobed, papillose. Fruit linear on deflexed pedicel, 20-22 mm long including 2.5 mm style, 8-10 seeded (Fig. 1).

Fl. & Fr.: June-July.

Habitat: Alpine pastures, among tufts of grasses on gentle slopes or small grassy gullies. Usually solitary 3250-3350 m above msl.

Distribution: Alpine zones of West Nepal, South Tibet, Garhwal Himalaya (India).

Specimen Examined: India, Garhwal Himalaya, Kuari Pass area, 3250 m, vi. 1988, D.S. Rawat 19,902 (GUH); Garhwal Himalaya, Kuari Pass area, 3350m, vi. 1995, D.S. Rawat 26,101 (GUH).

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34. *CONYZA JAPONICA* (THUMB.) LESS. (ASTERACEAE): AN ADDITION TO THE FLORA OF ANDHRA PRADESH

(With one text-figure)

During the floristic studies on Asteraceae in Andhra Pradesh, *Conyza japonica* (Thumb.) Less. was collected from Anantagiri and Araku valley of Visakhapatnam dist. The identification was confirmed with the help of literature and herbaria (MH & CAL). Gamble (1921) reported it from Mahendragiri hills of erstwhile Madras Presidency which is now a part of Orissa state. As it was not

reported so far by earlier workers, it is reported as a new distributional record from Andhra Pradesh. Detailed description, line drawings, phenology and distribution are provided.

Conyza japonica (Thumb.) Less., Syn. Comp. 204. 1832; *FBI* 3: 258. 1881; Gamble, 682.1821; R.R. Rao *et al. Fl. Ind. Enum.-Ast.* 27. 1988. *Erigeron japonicum* Thumb. *Fl. Jap.* 312. 1784.

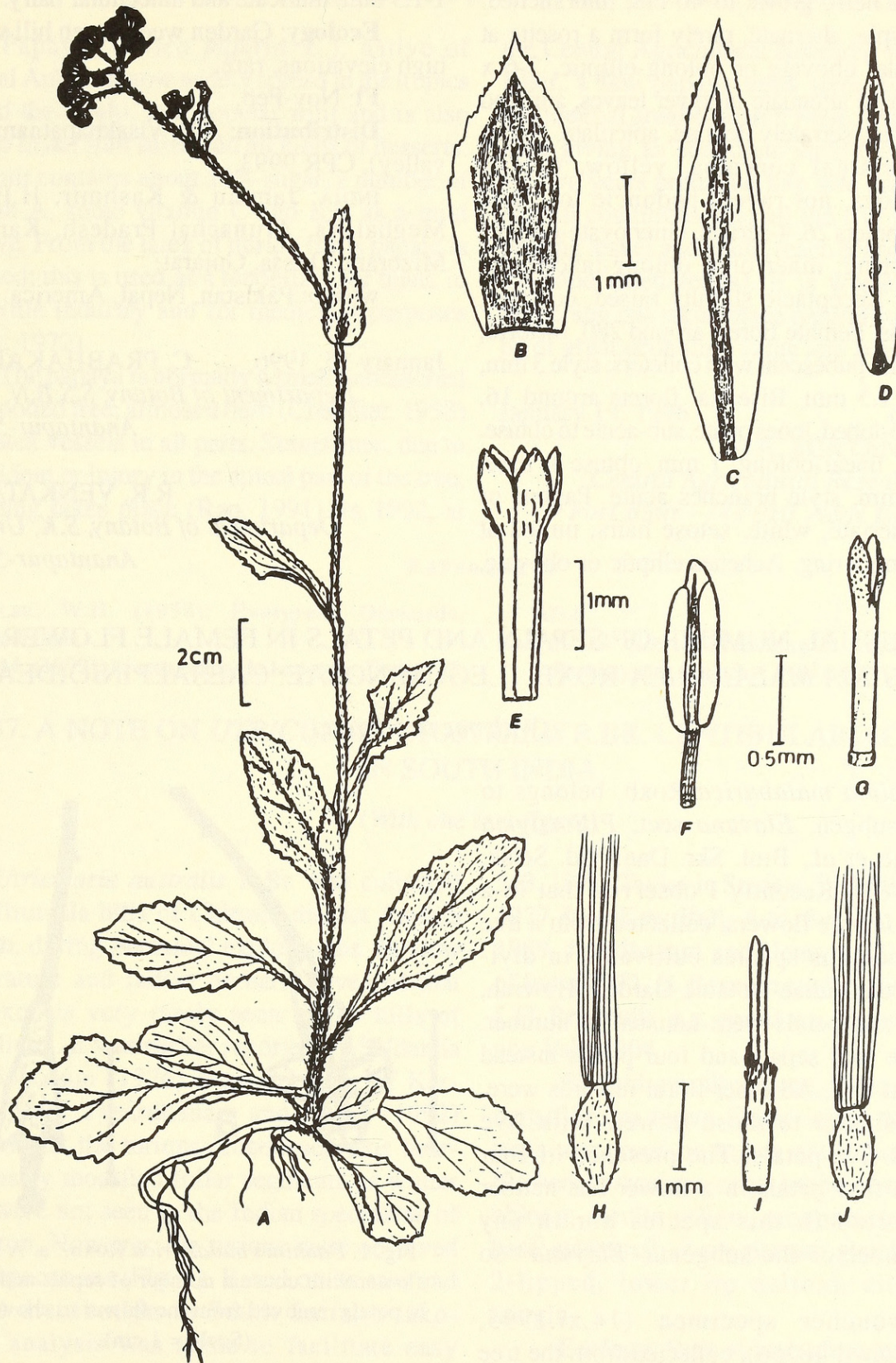


Fig. 1. *Conyza japonica* (Thumb.) Less. A. Twig; B, C & D. Outer, middle and inner involucral bracts; E. Bisexual floret; F. Anther; G. Style; H & J. Achene with pappus; I. Female floret.

Erect herb, grows to 40 cm, unbranched. Leaves simple, alternate, rarely form a rosette at base, sessile, obovate or oblong-elliptic, 2-6 x 1-2.5 cm, base attenuate in lower leaves, auricled in upper ones, serrately dentate, apiculate. Heads few in terminal corymbs, yellow, 6 mm, heterogamous, not rayed; peduncle to 1 cm. Involucral bracts 26, 4-seriate, outer ovate-elliptic, acute, tapering; inner ones oblong-lanceolate, acuminate. Receptacle slightly raised, concave, 3 mm across. Female florets around 280, filiform, corolla 3 mm, pubescent with colleters; style 3 mm, exerted to 1.5 mm. Bisexual florets around 16, 3-3.5 mm, 5-lobed, lobes ovate, sub-acute to obtuse. Stamens 5, linear-oblong, 1 mm, obtuse at base. Style 2.5 mm, style branches acute. Pappus of 20-24 uniseriate, white, setose hairs, united at base forming a ring. Achenes elliptic or obovate,

1-1.5 mm, muricate and unicellular hairy.

Ecology: Garden weed, open hill slopes at high elevations, rare.

Fl: Nov-Feb.

Distribution: A.P.: Visakhapatnam (Araku valley), CPR 9993.

INDIA: Jammu & Kashmir, H.P., U.P., Meghalaya, Arunachal Pradesh, Karnataka, Mizoram, Orissa, Gujarat.

WORLD: Pakistan, Nepal, America.

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35. UNUSUAL NUMBER OF SEPALS AND PETALS IN FEMALE FLOWERS OF *BAUHINIA MALABARICA* ROXB. (LEGUMINOSAE: CAESALPINIOIDEAE)

(With one text-figure)

Bauhinia malabarica Roxb. belongs to *Bauhinia* subgen. *Elayuna* sect. *Piliostigma* (Wunderline *et al.*, Biol. Skr. Dan. Vid. Selsk. 28: 18. 1987). Recently I observed that in a few of the female flowers, collected from a tree of this dioecious species cultivated in division 21 of the Indian Botanic Garden, Howrah, the sepals and petals were unusual in number. There were four sepals and four petals instead of the usual five. All other floral features were, however, similar to those flowers with five sepals and five petals. The presence of four sepals and four petals in a flower has neither been reported in this species nor in any other member of the subgenus *Elayuna* so far.

A voucher specimen (14.xi.1995, Bandyopadhyay 18366), collected from the tree with female flowers having usual and unusual number of sepals and petals, has been deposited in CAL.

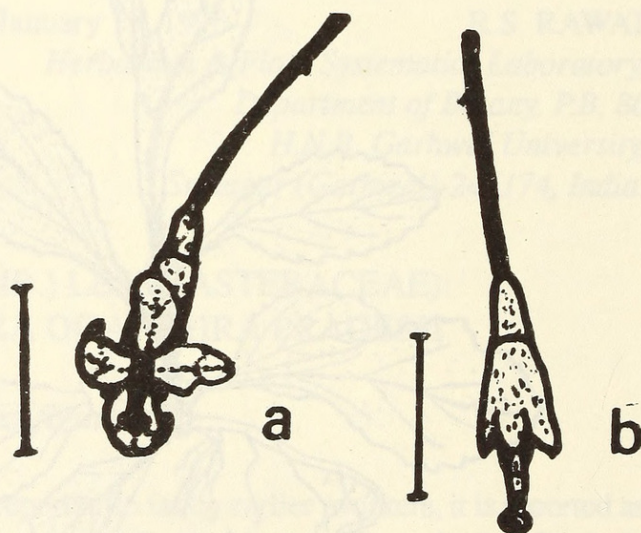


Fig. 1. *Bauhinia malabarica* Roxb.: a. A female flower with unusual number of sepals and petals; b. petals removed from the flower to show sepals. (Scale = 1 cm).

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Raju, C Prabhakar and Raju, R R Venkata. 1997. "Conyza japonica (Thumb.) Less. (Asteraceae): An addition to the flora of Andhra Pradesh." *The journal of the Bombay Natural History Society* 94, 436–438.

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