

## SHORT COMMUNICATIONS

### SOME NEW DISTRIBUTION RECORDS FOR NORTH WESTERN HIMALAYAS

In the course of a floristic exploration of the inner valleys of Mahasu and Kinnaur Districts of Himachal Pradesh during August-September 1963, the authors collected the following plants which have not been mentioned in any of the published accounts of the flora of N.W. Himalayas. The specimens cited are deposited in the Herbarium of the Botanical Survey of India, Northern Circle, Dehra Dun unless otherwise indicated by the abbreviation F.R.I. for the sheets examined from the Herbarium of the Forest Research Institute, Dehra Dun.

**Tephrosia strigosa** (Dalz.) Santapau et Mahesh. in J. Bombay nat. Hist. Soc. 54:805, 1957. *Macronyx strigosus* Dalz. in Hook. J. Bot. 2:35, 1850. *Tephrosia tenuis* Wall. in Dalz. et Gibs. Bombay Pl. 61, 1861; Baker in Hook. f. Fl. Brit. India 2:111, 1876.

An annual herb with filiform branches clothed with adpressed hairs. Leaves alternate, simple, subsessile linear, long apiculate, sparsely hairy above, silky beneath, midrib very prominent on the lower side, lateral nerves obscure. Flowers solitary or two together in the axils of leaves. Calyx silky. Corolla bluish-yellow. Pod adpressedly hairy, 6-10 seeded. Common on the hill slopes. This taxon is previously known only from the plains. Neerath, H. P. 1100 m., N. C. Nair 28882.

**Tagetes minuta** Linn. Sp. Pl. 887, 1753.

An annual, strongly scented herb upto 4 m high. Branches leafy, glabrous. Leaves opposite or alternate, pinnate, 7 to 15 cm long. Leaflets 11 to 19, linear lanceolate, sharply serrate, conspicuously gland-dotted, 2 to 4.5 cm long, midrib very prominent underneath. Heads numerous in crowded cymes at the ends of branches. Involucral bracts united forming a cylindrical tube with 5 rounded free lobes; tube 10 mm long, about 3 mm broad. Ray florets 3 to 4, yellow, female, fertile, rays two lobed, extending 1 to 2 mm above the involucre, hairy on the back. Disc flowers few, fertile, yellow like the rays, corolla hairy outside, tubular with 5 acute lobes; anthers gland-tipped. Achenes angular flattened. Flowering time September to November.

This taxon is easily recognised and distinguished from the commonly cultivated French Marigold by its smaller and inconspicuous heads and flowers. It is a native of S. America and it is not known when this species was introduced into this country. There

is evidence that it was cultivated in the garden of the Forest Research Institute, Dehra Dun in 1922. There does not appear to be any record in the Central National Herbarium, Calcutta, of this species having ever been collected in any part of India. An examination of the sheets in the Herbarium of the Forest Research Institute and Botanical Survey of India, Northern Circle, reveals that the species is naturalised in several parts of the N.W. Himalayas. The plant has a preference for dry barren areas of hill slopes and waste lands near villages.

MATERIAL EXAMINED: Dehra Dun, R. N. Parker 27913 (F.R.I.), 28684 (F.R.I.); Sahya (on way to Chakrata), alt. about 1000 m, K. M. Vaid 54 (F.R.I.); Neerath, H.P. alt. 1300 m, M. B. Raizada 19681 (F.R.I.), N. C. Nair 30675; Between Neerath and Barogi, H.P. alt. 1300 m, N. C. Nair 30676; Tuini (Chakrata Forest Division) alt. 1070 m, K. C. Sahni 27093 (F.R.I.); Joshimath (N. Garhwal, U.P.), alt. 1800 m, M. A. Rau 31786.

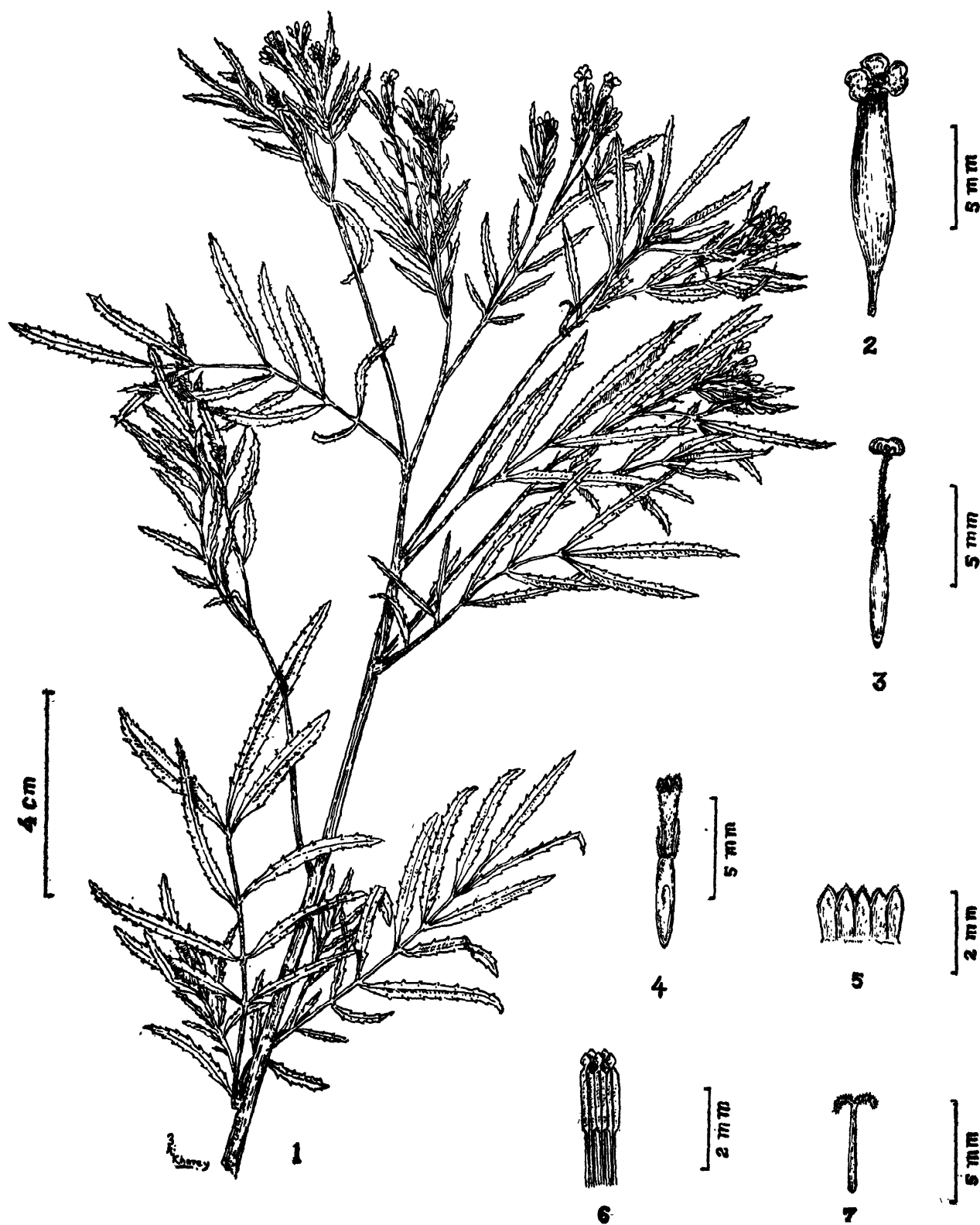
**Gomphrena celosioides** Mart. in Nov. Act. nat. Cur. 131:301, 1826; Raizada in J. Bombay nat. Hist. Soc. 48:675, 1949.

A much branched prostrate or decumbent herb; branches clothed with long white hairs, nodes swollen, reddish. Leaves opposite, ovate-oblong, elliptic, lanceolate or spatulate, glabrescent above, hairy beneath. Flowers dull greyish white, in axillary or terminal cylindrical spikes. Each flower has a membranous bract and two membranous bracteoles. Perianth, 5-segmented, woolly, persistent. Stamens monadelphous, tube long, five-fid at the apex. Style, short, bilobed. Fruit enclosed by the hardened perianth.

This is a native of S. Brazil, Paraguay, Uruguay and Argentiné and has been recently introduced in the country. It is spreading rapidly and has become a troublesome weed in several places in the plains. It has not, so far, been collected from the Himalayas. Neerath, H. P. alt. 1200 m, N. C. Nair 29814.

**Euphorbia prostrata** Ait. Hort. Kew. 2: 139, 1879; Hook. f. Fl. Brit. India 5:266, 1887; Santapau in J. Bombay nat. Hist. Soc. 46: 380, 1946; Bull. bot. Soc. Bengal 8:15, 1954.

This is a native of tropical America but is now widely spread in other warm parts of the globe. It is similar to *E. bombaiensis* Santapau but can



*Tagetes minuta* Linn.

Figs. 1-7 : 1. Flowering branch. 2. Capitulum. 3. Ray floret. 4. Tubular flower. 5. Tip of tubular corolla. 6. Androecium. 7. Upper position of style.

be easily distinguished by its capsule which is not glabrous. It has also many features in common with *E. thymifolia* Linn. but is distinguished from the latter by its capsule being hairy only on the angles and being glabrous elsewhere. Neerath, H.P. alt. 1100 m. N. C. Nair 28879, 29875.

#### ACKNOWLEDGEMENTS

We express our thanks to Dr. M. A. Rau, Regional Botanist, Northern Circle for going through the manuscript and to Dr. S. K.

Mukerjee, Keeper, Central National Herbarium, Calcutta for furnishing some useful information. We are also thankful to the authorities of the Forest Research Institute, Dehra Dun for facilities in their Herbarium.

N. C. NAIR

*Botanical Survey of India, Calcutta*

AND

P. C. PANT

*Botanical Survey of India, Dehra Dun*

## NEW DISTRIBUTION RECORDS OF PLANTS FROM THE UPPER GANGETIC PLAIN

### INTRODUCTION

During the course of recent botanical explorations in the district of Lakhimpur-Kheri on the Indo-Nepal border the author collected a large number of interesting plants among which the following two species—a terrestrial orchid and a sedge—are new records for the Upper Gangetic Plain.

The specimens mentioned are preserved in the Herbarium of Botanical Survey of India, Northern Circle, Dehra Dun.

***Eulophia graminea*** Lindl. Gen. et Sp. Orch. 182, 1833; Hook. f. Fl. Brit. Ind. 6:2, 1890; King & Pantl. Ann. Calc. 8: 176, Pl. 238, 1898.

Terrestrial orchid with tough fibrous roots. Pseudobulb large, thick, obpyriform, partly epigeal, green, 8-10 cm long and upto 4.5 cm thick at the broadest part. Crowned at the top with older sheathing leaf bases. Deciduous when flowering. Scape lateral, one to many, glabrous, 50-60 cm long, branched. Flowers racemose, pedicels 1-1.5 cm, distinct, glabrous, bracteate, bract triangular 1-2 cm, base broad, 0.75-1.5 cm tapering to the acute apex, veins many, dark brown, bracteoles 8 mm by 2 mm, acute. Sepals dull green, 1.3 cm by 0.2 cm, elliptic lanceolate, acute, with reddish brown veins. Petals slightly broader. Lip 3-lobed, white, cylindrically spurred, spur 2 mm with slightly swollen tip; side lobes 0.3 cm by 0.2 cm, blunt; middle lobe 0.6 cm by 0.5 cm, rounded and bluntly apiculate, with 5 pink fimbriate ridges on the upper surface, hairs more in the middle, margins wavy. Column with short foot. Pollinia exposed below the anther. Fruit glabrous, yellowish green, 2 cm long, 0.7 cm broad, elliptic oblong, drooping.

This taxon has been reported only from South India, Bengal and Assam.

Chandanchoki, growing amidst clumps of *Saccharum* and *Imperata* on the Mohana river bed. C. L. Malhotra 31544, Apr. 1964. (in flowers & fruits). ***Cyperus silletensis*** Nees in Wight Contrib. 79, 1834; Clarke in Hook f. Fl. Brit. Ind. 6:600, 1893.

Glabrous annual, upto 30 cm in height, stolons absent. Leaves much shorter than the stem. Stem base thickened by the leaf bases, slender upwards, finely furrowed. Spikes compound, umbellate, green, rays upto 3.5 cm, bracts 5-20 cm long. Rhachilla persistent, 1 cm long, angular. Spikelets distichous, 1 mm long. Glume subtriangular, keeled, incurved at the top, veins dark brown. Stamen 1. Nut trigonous, 0.5 mm, half the length of glume. Style 3-fid, branches linear, equal in length of style, base slightly thickened.

Hooker gives the distribution of the species as Bengal, Assam, Sikkim and Burma.

Mailani, along the water course. C. L. Malhotra 22883, Aug. 1962.

### ACKNOWLEDGEMENTS

I am grateful to Dr. M. A. Rau, Regional Botanist, for the facilities and encouragement and to Dr. S. K. Mukerjee, Keeper, Central National Herbarium for the identification of *Cyperus silletensis* Nees. I am thankful to Dr. U. C. Bhattacharyya for the help in the preparation of this note. Sri G. N. Madhwal helped me in the preparation of some of the drawings.

C. L. MALHOTRA

*Botanical Survey of India, Dehra Dun*