

**SOLIVA ANTHEMIFOLIA R. BR. (COMPOSITAE)—A NEW RECORD FOR INDIA**

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## A B S T R A C T

*Soliva anthemifolia*, a new record for India, is reported in this account from Northern Districts of U. P. Complete description of the plant is given, as there are no specimens of this species in either the F. R. I. Herbarium or the Calcutta Herbarium.

The genus *Soliva* of the Compositae with about 12 species, is distributed mostly in Australia and South America though a few species extend to Central America (Munz, 1959).

*Soliva anthemifolia* R. Br., is a species of tropical Australia (Queensland) and New South Wales where it is considered a good fodder. It is also found in South America (Bentham, 1866). The species has so far not been recorded from India and its recent discovery from two localities in northern districts of U.P. is of considerable interest. These collections are from wild populations. The possibility of their introduction into the area in the past cannot, however, be ruled out. Even if there has been introduction of the species, accidental or otherwise, the plant appears to have undergone perfect naturalization considering the conditions and habitat in which the present collections were made. It would be of interest to look for this plant in other parts of the country as it may give a clue to its distribution. There are no specimens from India in either the FRI Herbarium or the Calcutta Herbarium. In fact the only specimens in Indian Herbaria are from Rev. Scortechini's collection from Queensland (Australia). In view of its new record in India, a complete illustrated description of the plant is given below:

***Soliva anthemifolia*** (Juss.) R. Br. in Trans. Linn. Soc. 12 : 102 (1817). *Gymnostylis anthemifolia* A. Juss. in Ann. Mus. Par. 4 : 262 (1804). Near Ramnagar on sandy moist stream bank ; in flowers and mostly in fruits ; U. C. Bhattacharyya 20348, 19 April 1962. B. S. I., N. C. On exposed soil near water, Bahraich, Naipalgunge Rd. Mostly in flowers, few in fruits. C. L. Malhotra 26667, 17 Feb., 1963, B. S. I., N. C.

Flat, diffuse, annual herb, stem much shorter than the leaves, forming dense tufted growths ; plant body increasing radially by rigid stolons, rooting below the point of insertion of the sessile heads ; roots fibrous, tough. Leaves radical, petiolate, simple, oblong to oblong lanceolate, 3-10 cm

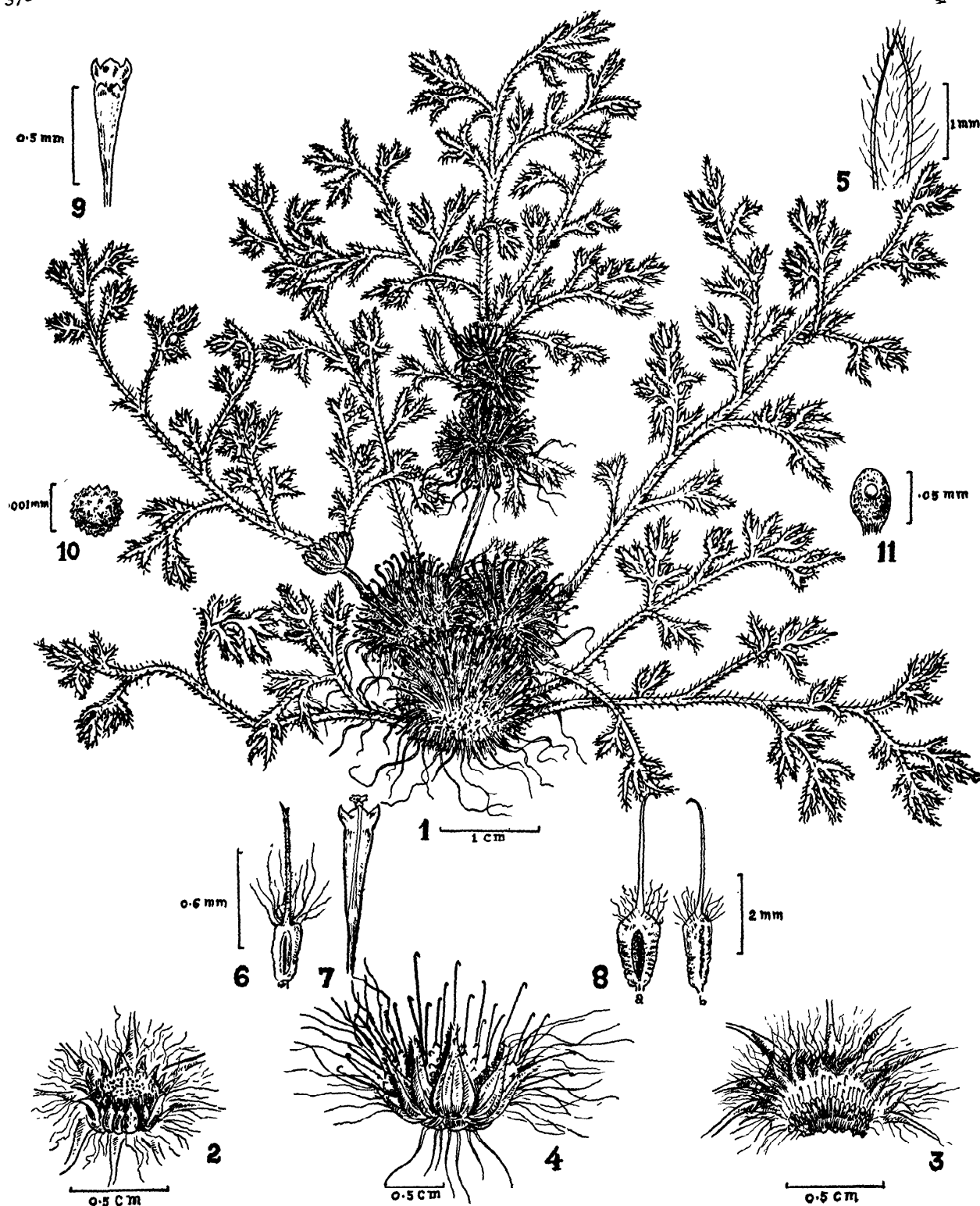
long, finely dissected into minute linear, 1-multifid segments simulating a decompound condition ; ultimate segments 1-3 mm long and 5-8 mm broad, covered with long strigose simple hairs or sometimes glabrous ; base sheathing, almost white, scarious, broadly ovate to nearly cordate, over-lapping and aggregating below the heads. Heads sessile, several together, greyish green, enclosed within leaf bases ; extremely villous hairy ; 2-3 mm in diameter ; fruiting heads much enlarged, becoming almost spherical, 8-1 cm in diameter ; involucre bracts several 2 mm long, ovate to ovate lanceolate, nearly equal, in two rows, covered with long simple strigose hairs ; margins scarious, white. Receptacle flat, without any scales, extremely villous within ; florets in the circumference in several rows, female, apetalous ; ovary oblong to elliptic, truncated at the tip, white, with hairs at this region ; ovule elliptic ; style filiform, fairly rigid with white papillate outgrowths, much longer than the ovary, straight, terminal slightly notched at the end. Disc florets mostly male or sterile, tubular, pale yellow, 2-3 toothed at apex, gradually tapering towards the base. Sterile florets with prominent pistillode, with or without anthers and mixed up with the fertile males ; anthers as many as petals, obtuse at base ; pollen worted. Achenes in mature spherical heads compactly arranged, 1.5-2 mm long, dark brown, lenticular, bordered by a thick, transversely rugose pale brown wing, devoid of pappus ; style rigid, persistent, with hooked tip ; mature achenes.

## ACKNOWLEDGEMENTS

The author expresses his thanks to Dr. H. Santapau for encouragement. He also wishes to express his indebtedness to Dr. S. K. Mukerjee, Keeper, Central National Herbarium, Calcutta, for identifying the specimen. His sincere thanks are also due to Dr. M. A. Rau and Dr. N. C. Nair for helpful suggestions.

## LITERATURE CITED

- BENTHAM, G. *Flora Australiensis*. London, 7 : 552, 1866.  
MUNZ, P. A. *A California Flora*. California, 1233, 1959.



*Soliva anthemifolia* (Juss.) R.Br.

Figs. 1—11.

1. Portion of plant showing habit ; 2. Immature head ; 3. Open head showing position of florets ;
4. Lower portion of a mature head, showing roots and flattened leaf bases ; 5. Involucral bract ;
6. Apetalous female flower with papillose style, notched above ; 7. Sterile disc floret with pistillode ;
8. Mature achene, a-front view, b-side view ; 9. Staminate disc floret ; 10. Pollen grain ; 11. Ovule.