

STRUCHIUM SPARGANOPHORUM (L.) O. KUNTZE

A NEW RECORD FOR INDIA

Struchium sparganophorum (L.) O. Kuntze belonging to the tribe Vernonieae, of the family Compositae, is of tropical American origin and common throughout the wetter parts of tropical America, Africa, and Malesia. In India, this plant has now become established at Trivandrum, Kerala; where it is spreading in wet localities.

This plant was first collected from Trivandrum, in 1959, by Prof. N. A. Erady, and identified with reference to Kew Herbarium; but its occurrence in India, was not validly recorded. In Kew Herbarium, there is no other record of this plant from India.

The plants forming the subject of this note, were collected by the author, in February 1965, and identified at Kew Herbarium (ref. H. 1518/65). Description and sketches given below, are based on fresh specimens.

DESCRIPTION

Semi-aquatic, erect herb, up to 60 cm tall, rooted from basal nodes. Stem cylindrical, greenish, hard at base, with lower internodes 4-5 cm long and 5-8 mm thick, upper shorter, narrower, sparsely puberulous (Fig. 1). Leaves simple, alternate, exstipulate, about 15 × 4-5 cm; petioles 2-2.5 cm long, base amplexicaul with minutely hairy margin; lamina elliptic, narrowing at both ends, acute, inconspicuously serrulate, minutely puberulous when young; pinnately reticulatè; ribs raised, sparsely puberulous on dorsal side (Fig. 2). Inflorescence axillary, of 4-5 subsessile, clustered, globose, homogamous capitula, hairy when young (Fig. 3). Mature head about 5 mm diam; involucre of 4-5 series of ascending, progressively larger bracts which are triangular to oblanceolate, acuminate, greenish at middle, scarious near hairy margin (Fig. 4). Receptacle convex, pitted. Florets all tubular, without paleae, 4-5 mm long, epigynous, actinomorphic, hermaphrodite, trimerous (Fig. 6). Calyx of three, white, spongy, acute scales united in varying degree, often lightly, unequally lobed at apex, valvate, persistent, about 0.5 mm long (Fig. 7). Corolla about 2 mm long, white, with narrow tube 1 mm long; and

campanulate limb divided into three, acute, spreading lobes, valvate, with glands on surface. Androecium of three epipetalous stamens; filaments short, filiform, white; anthers sagittate, with sterile apex and tails, syngenesious, slightly exerted into a cone (Fig. 9). Pollen white, spherical, exine regularly reticulate; reticulations minutely warty, meshes corrugated, germ-pores appearing as transparent circles in meshes (Fig. 10). Ovary about 1.5 mm long, with three or more vertical ridges and glands (Fig. 8) on surface. Ovule solitary, basal, anatropous, slightly flattened (Fig. 11). Style filiform, white, with a minute disc-like joint at base (Fig. 12). Stigma bifid, subulate, purple, outer surface shortly hairy, receptive surface papillose (Fig. 13). Fruits about 1.5 mm long, blackish, with three prominent vertical ridges, often with 1-3 extra secondary ridges, and glands dried up on the surface as white dots; persisting calyx as thick, spongy crown; wall thin, leathery. Seed about 1 mm long, obovate-lenticular; testa membranous, straw-coloured, or blackish; inconspicuous raphe as a line along one margin, rarely raphe dark. Embryo conical, radicle obtuse, cotyledons fleshy.

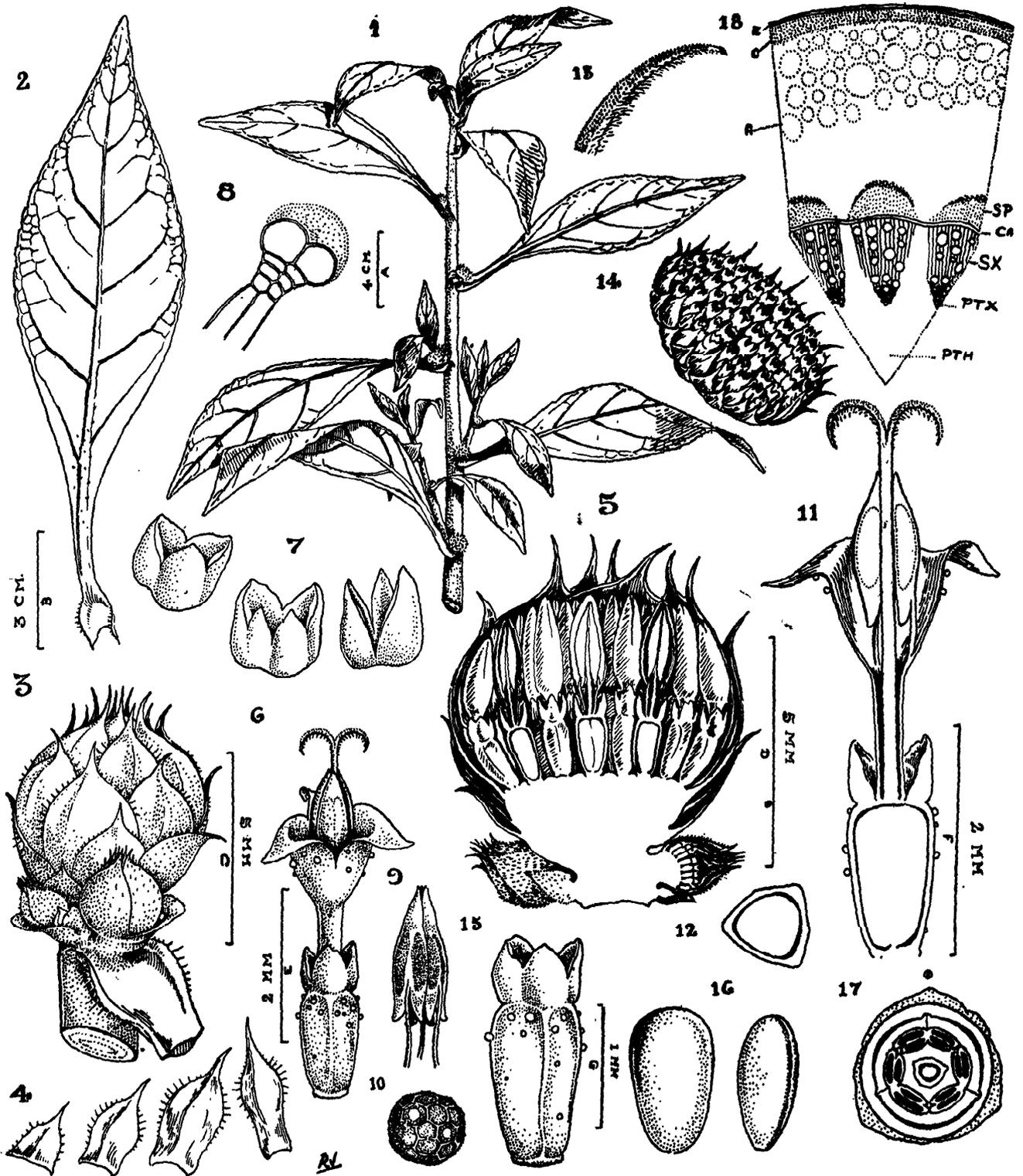
Plants were collected from the margin of a freshwater pond inside the Zoo at Trivandrum, Kerala. Probably the plant got introduced to this place, through the agency of foreign, wading birds brought into the Zoo. Distribution of the plant is restricted to low lying wet areas in the neighbourhood. The fruits with their spongy calyx, are buoyant and adapted for aquatic dispersal.

A point of special interest is the presence of two unequal ovules, in some central florets in all the heads examined. But two-seeded fruits have not been noted.

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Struchium sparganophorum (L.) O. Kuntze

Figs. 1-18 : 1. Twig (scale A). 2. Leaf (scale B). 3. Young heads (scale C). 4. Bracts. 5. V. S. of young head (scale D). 6. Open floret (scale E). 7. Calyx. 8. Gland. 9. Stamens. 10. Pollen. 11. V. S. of flower (scale F). 12. C. S. of ovary. 13. Stigma. 14. Fruits. 15. Single fruit (scale G). 16. Seed, side & marginal view. 17. Floral diagram. 18. C. S. of stem (diagrammatic); E—Epidermis; C—Collenchyma; A—Air canal; SP—Secondary phloem; CA—Cambium; SX—Secondary xylem; PTX—Protoxylem; PTH—Pith.