

Cucumis dipsaceus Ehrenb. ex Spach. (Cucurbitaceae) - A New Record for India

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Abstract

Cucumis dipsaceus Ehrenb. ex Spach is recorded for the first time from India. A short description with illustration and relevant notes is provided.

Keywords: Western Ghats, India, Maruthamalai foot hills, uncommon, climber.

Introduction

The genus *Cucumis* L. with ca. 35 species is distributed in the world (Kirkbride, 1993). There are only 6 species in India (Chakravathy, 1982). During the floristic explorations in the Western Ghats, we came across an interesting specimen of *Cucumis* growing along the scrub forest of Maruthamalai foot hills, Coimbatore District, Tamil Nadu, India. After critical studies and consultation with specimens deposited at MH (Botanical Survey of India) Coimbatore, it was identified as *Cucumis dipsaceus* Ehrenb. ex Spach. (Fig.1 & 2). Perusal of literature revealed that this climber only known from the countries of Africa, Ethiopia, Kenya, Somali, Tanzania, Uganda, Sudan and Southern Egypt (Kirkbride, 1993). It has neither been collected nor reported from India so far and is therefore, an addition to Indian flora.

The present communication includes a detailed description with illustration of this naturalized climber to facilitate its further collection and easy identification. The voucher specimen has been deposited in the Bharathiar University Herbarium (BH, 006145) Coimbatore, Tamil Nadu, India.

Description

Cucumis dipsaceus Ehrenb. ex Spach. Hist. Nat. Veg. 6: 211. 1838.

Herb, annual, without a woody rootstock, lacking tubers, monoecious. Stems procumbent or climbing, on the ridges hispid and in the grooves hispidulous (with the longer hairs 0.8- 1.5 mm long and the shorter ones ca. 0.3 or 0.8-1.5mm long. Nodes not geniculate. Internodes 2-6 (-9) cm long. Leaves: Petioles 1.5 -5(-14)cm long; pubescence, weakly hispidulous to hispid; with nonbreakaway hairs. Leaf blades entire or trilobed (rarely

broadly); with the margin regularly serrate to entire, ovate to broadly ovate in outline, cordate at the base, with a basal sinus, 0.5 -2 (-3) cm deep, broadly acute or obtuse (rarely) at the apex; 3-7.5 (-12.5) × 2-7(-12)cm; 1.1- 1.5 times longer than wide, hispidulous and hispid on the upper surface, not aculeate on the veins below, hispid on the veins below, hispidulous on the intervenium below, with nonbreakaway hairs. Central leaf-blade lobe entire, broadly ovate to shallowly ovate, broadly acute or obtuse (rarely) at the apex; 2-4(-6.5) × 1.5- 3.5(-7) cm. Lateral leaf- blade lobes asymmetrical, entire, shallowly ovate, obtuse at the apex; 0.5- 1.5(-3) × (0.5-)2-3 (-5)cm. Tendrils: present, solitary, simple 1.5-6 cm long, not aculeate, basally hispidulous and apically glabrate. Inflorescence: Unisexual. Male inflorescence: A solitary flower or fasciculate; 1-5-flowered, sessile. Male flower: pedicel terete in cross section, 5- 20mm long; hispidulous, without bracteoles. Hypanthium narrowly infundibular; 3.6- 5.2 mm long; 2.4- 2.8mm in diam; hispidulous. Calyx lobes narrowly oblong to linear in outline, narrowly acute at the apex; 1.6-4 × 0.1-0.3 mm sparsely hispidulous. Corolla infundibular, sparsely hispidulous outside, globose inside. Corolla tube 1-1.5mm long; ca 3mm in diam; sparsely hispidulous outside. Corolla lobes obovate in outline, acute at the apex; 5.5- 8.5 × 3-5mm, sparsely hispidulous outside, glabrous inside. Stamens separating from the hypanthium. Filaments terete in cross section; 0.4- 0.8 mm long; ca. 0.2mm Wide (in diam), glabrous: Anther thecae ca. 2.5mm long; globose. Anther connective transversely broadly oblong; unilobate; obtuse at apex, 0.6- 0.8 × 0.6- 1mm, disc cylindrical; ca. 1.2mm long; ca. 1.5mm in diam. Female inflorescence: A solitary flower. Female flowers: pedicel; 5-15mm long, hispid and hispidulous, with

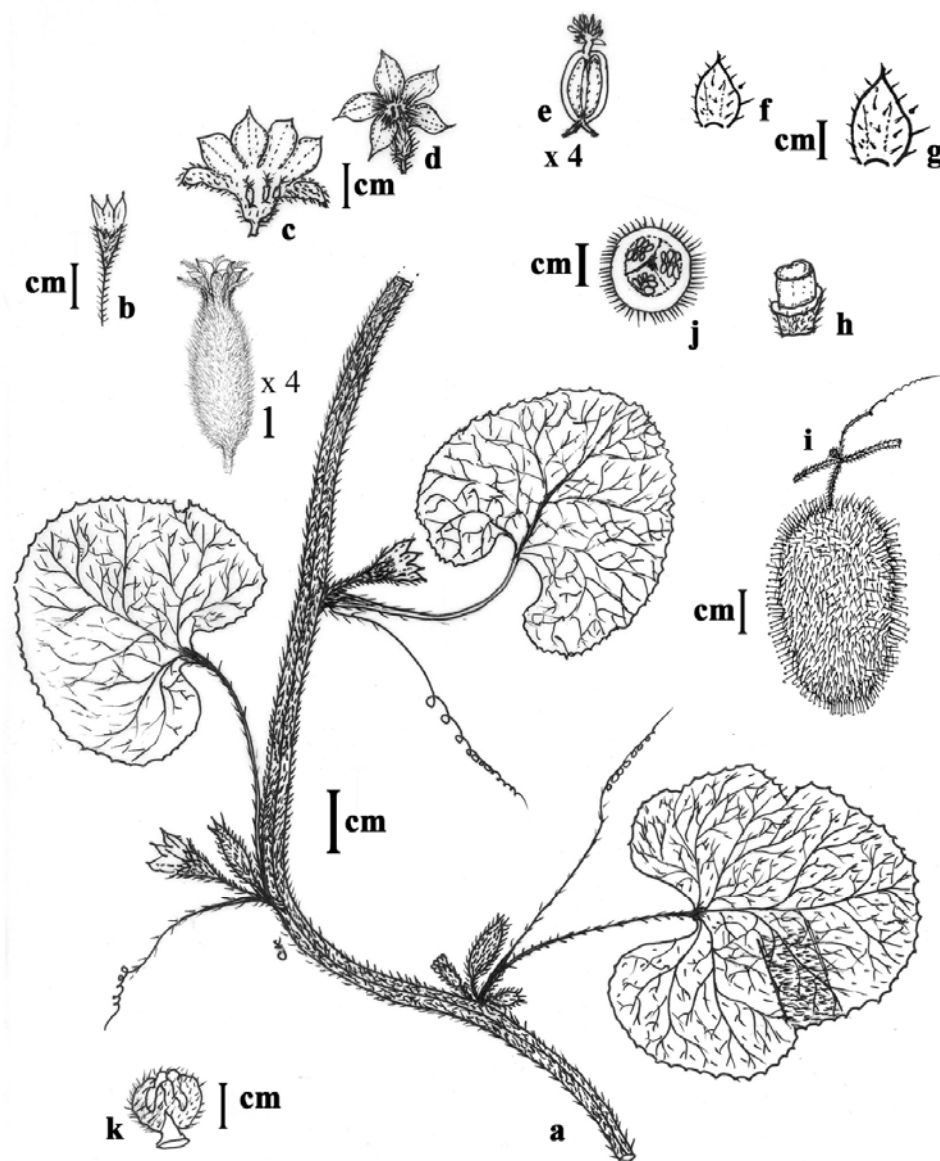


Fig. 1: *Cucumis dipsaceus* Ehrenb. ex Spach: a. twig; b. flower bud; c. male flower; - d. flower entire; e. stamen; f. sepal; g. petals; h. pistil; i. berry; j. t.s. of ovary; k. stigma; l. female flower.

non breakaway hairs, cylindrical. The lower $\frac{3}{4}$ of hypanthium ellipsoid; 8-19 mm long; 4-8 mm in diam; densely aculeate, glabrous. The upper $\frac{1}{4}$ of hypanthium free from the ovary. Free portion of hypanthium 4-10mm long; 3-5mm in diam; not aculeate outside; hispidulous outside; glabrous inside. Calyx lobes linear in outline; narrowly acute at the apex; 4.8 -5.6 (-11) \times 0.4 - 0.6 (-1) mm; sparsely hispidulous.

Corolla sparsely hispidulous outside, glabrous inside, corolla tube present; ca. 1.5mm long ca. 2.5mm in diam; sparsely hispidulous outside. Corolla lobes obovate in outline; acute at the apex; 6.5-15 \times 3- 8.5 mm, sparsely hispidulous outside; glabrous inside. Staminodes persent, separating from the free portion of the hypanthium ca. 1.2mm above the ovary; 0.4-0.8mm long; ca. 1.3mm in

diam; glabrous. Style *ca.* 1.5mm long; *ca.* 0.6mm in diam; subtended by a circular disc. Disc *ca.* 0.8mm long, *ca.* 1.8mm in diam. Stigma *ca.* 2.5mm long, *ca.* 2.8mm in diam, lobate, with 5 finger – like stigmatic projections 0.8-1mm long, *ca.* 0.4mm in diam; smooth. Fruit: Not geographic. Maturing above ground and readily visible. Pedicel

sulcate in cross section; 1-3(-4)cm long, hispid, with nonbreakaway hairs; cylindrical. Fruit monocolored; pale yellow; ellipsoid to globose; 3- 6.5cm long; 2.5-4cm in diam; densely aculeate; glabrous blunt at the apex. Seeds: Elliptic; 4-5× *ca.* 2mm; *ca.* 1mm thick; unwinged.

Fig: 2



a) *Cucumis dipsaceus* Ehrenb. ex Spach. in its Natural habitat



b) A flowering twig of *Cucumis dipsaceus* Ehrenb. ex Spach.



c) An immature fruit of *Cucumis dipsaceus* Ehrenb. ex Spach.



d) T.S. of *Cucumis dipsaceus* Ehrenb. ex Spach. fruit

Flowering

September – November. Fruiting: November – January.

Ecology

Uncommon in the scrub forest between 430 - 480 MSL of Maruthamalai foothills, Coimbatore District, Tamil Nadu, India.

Distribution

A native of Sudan and Southern Egypt Africa and widely spread in Ethiopia, Kenya, Somali, Tanzania, Uganda (Kirkbride, 1993), probably recently introduced into India in the state of Tamil Nadu.

Specimens Examined

India: Tamil Nadu, Coimbatore District, Maruthamalai. Sarvalingam, Sivalingam & Rajendran, 006145(BH).

Conclusion

The species is found growing abundantly in its new habitat in India and therefore, it is likely that it may soon become naturalized and may occupy larger areas in the near future.

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References

- Chakravarty, H. L. 1982. Cucurbitaceae. *Fascicles of the Flora of India*. 11: 1-136.
- Kirkbride, J.H. 1993. Biosystematic Monograph of the Genus *Cucumis* (Cucurbitaceae). Parkway publishers, Boone, North Carolina, pp.159.