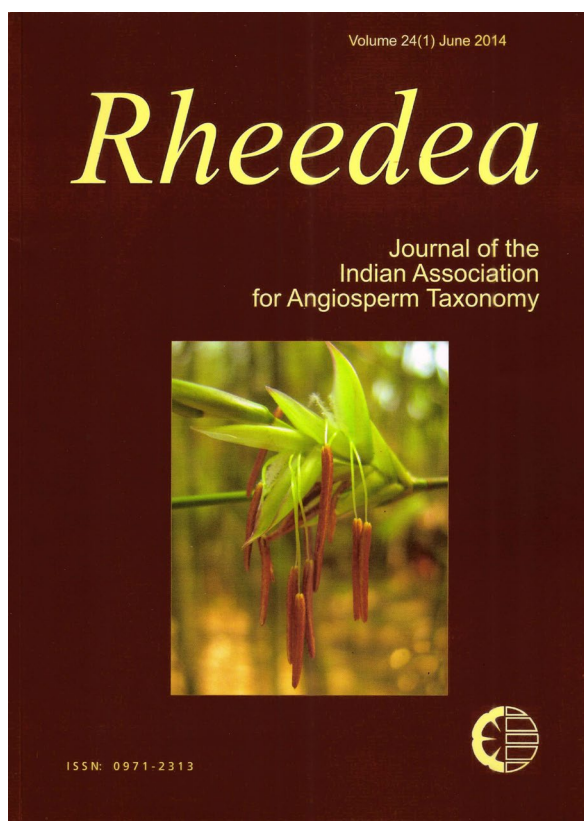




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Crypsis aculeata (Poaceae: Chloridoideae: Eragrostideae): a new record for Peninsular India

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Abstract

Crypsis aculeata (L.) Ait. is reported for the first time from Peninsular India. It occurs on mud in drying lake near Osmanabad town of Maharashtra state. A detailed description, illustration and key to the Indian species of *Crypsis* Ait. are provided here.

Keywords: *Crypsis aculeata*, Peninsular India, new record

Introduction

The genus *Crypsis* Ait. (Eragrostideae: Sporobolinae) comprises about 10 species mainly distributed in Africa, Asia, Australia, Europe and North America (Clayton *et al.*, 2006, 2012; Lu & Phillips, 2006). In India, this genus is represented by two species viz. *C. schoenoides* Lam. and *C. aculeata* (L.) Ait. (Hooker, 1896; Bor, 1960; Pal, 1992; Salunkhe *et al.*, 2002), the first one is recorded from Punjab, Kashmir, Madhya Pradesh, Maharashtra and Rajasthan while the latter is known only from Barmer, Rajasthan, which is an extension of Sind desert (Pal, 1992).

During a floristic survey of Balaghat Ranges of Maharashtra, the authors came across an interesting population of *Crypsis* on mud in a drying lake near Osmanabad town of Maharashtra. On critical examination and perusal of relevant literature (Bor, 1960; Pal, 1992; Salunkhe *et al.*, 2002; Lu & Phillips, 2006), it was identified as *C. aculeata* (L.) Ait. Its occurrence in Maharashtra forms a new distributional record for Peninsular India.

Key to the Indian species of *Crypsis*

1. Blade of uppermost leaf clearly demarcated from its sheath; lemma exceeding glumes; palea 2-veined ***C. schoenoides***
1. Blade of uppermost leaf continuous with its sheath; lemma not exceeding glumes; palea 0-1-veined ***C. aculeata***

Crypsis aculeata (L.) Ait., Hort. Kew. 1: 48. 1789 & Fl. Egypt. 1: 349. 1941; Bor, Fl. Iraq 9: 100. 1968;

Pal, Bull. Bot. Surv. India 32(1-4): 165-166. 1992. *Schoenus aculeatus* L., Sp. Pl. 1: 42. 1753. **Fig. 1, 2.**

Annual, prostrate, branched herbs, branches 1-5 cm long, free from base. Leaves glaucous-green; lamina ovate, acute or shortly acuminate, 1.5-3.5 × 0.3-0.6 cm, scabrous, hairy at apex, hairy on both surfaces and along margins, distinctly ribbed on lower surface; ribs 15-25, dark green, scabrid on nerves and sparsely pilose with long tubercle-based hairs between nerves and upper surface of leaves. Sheaths cylindrical, shorter than internodes, marked by 15-25 ribs, glabrous on outer surface, margins membranous, hyaline and ciliate; upper 2-3 leaf sheaths usually bract-like, all of them supports inflorescence as an involucre. Ligules thin, fringed with long whitish hairs. Inflorescence a dense capitate, ovate or elliptic, laterally compressed, 5-7 × 3-5 mm, usually of 15-25 fertile spikelets, subtended by inflated leaf sheaths; rachis glabrous or minutely hairy in lower half; spikelets in pairs, laterally compressed, fertile spikelet pedicelled or sessile, without rachilla extension, persistent. Glumes subequal, with dark green nerve, keeled, scabrid-pilose on keels and along margins; lower glumes linear-lanceolate, 1.8-3.2 mm long, keeled with dark green nerves, tinged with pink-purple at maturity, hyaline and ciliate along margins; upper glumes broader and slightly longer than lower glume, ovate-conduplicate, acute, keeled with dark green nerve, membranous, c. 3.2 × 1 mm. Lemma entire, laterally compressed, 1-nerved, mid-vein of lemma ciliate or scabrous on upper part, membranous, not exceeding glumes,

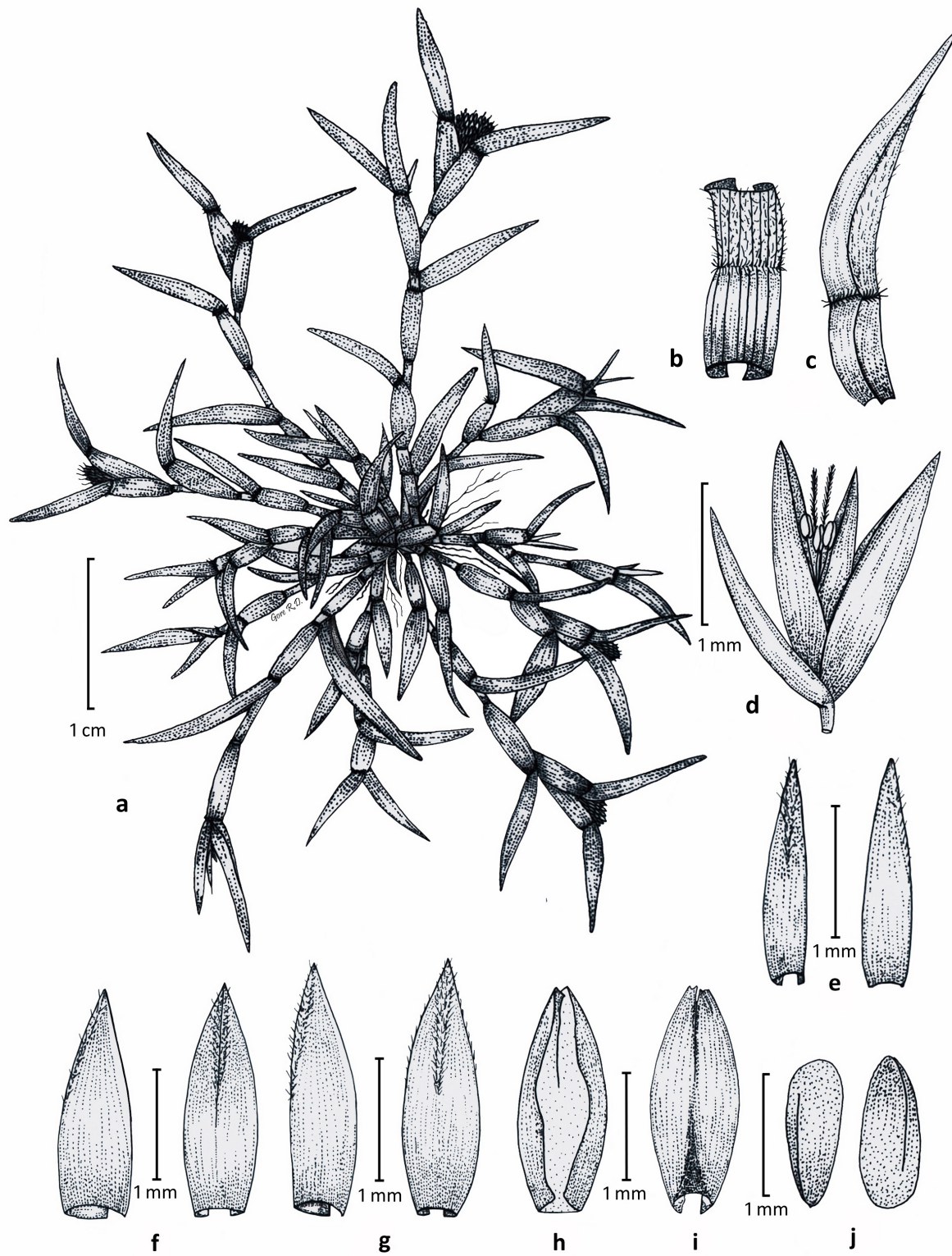


Fig. 1. *Crypsis aculeata* (L.) Ait.: **a.** Habit; **b.** Leaf sheath; **c.** Leaf blade; **d.** Spikelet; **e.** Lower glumes; **f.** Upper glumes; **g.** Lemma; **h.** Adaxial surface of palea; **i.** Abaxial surface of palea; **j.** Seeds (Drawn from RDG- 1027 by Ramchandra Gore, 05 Dec 2013).

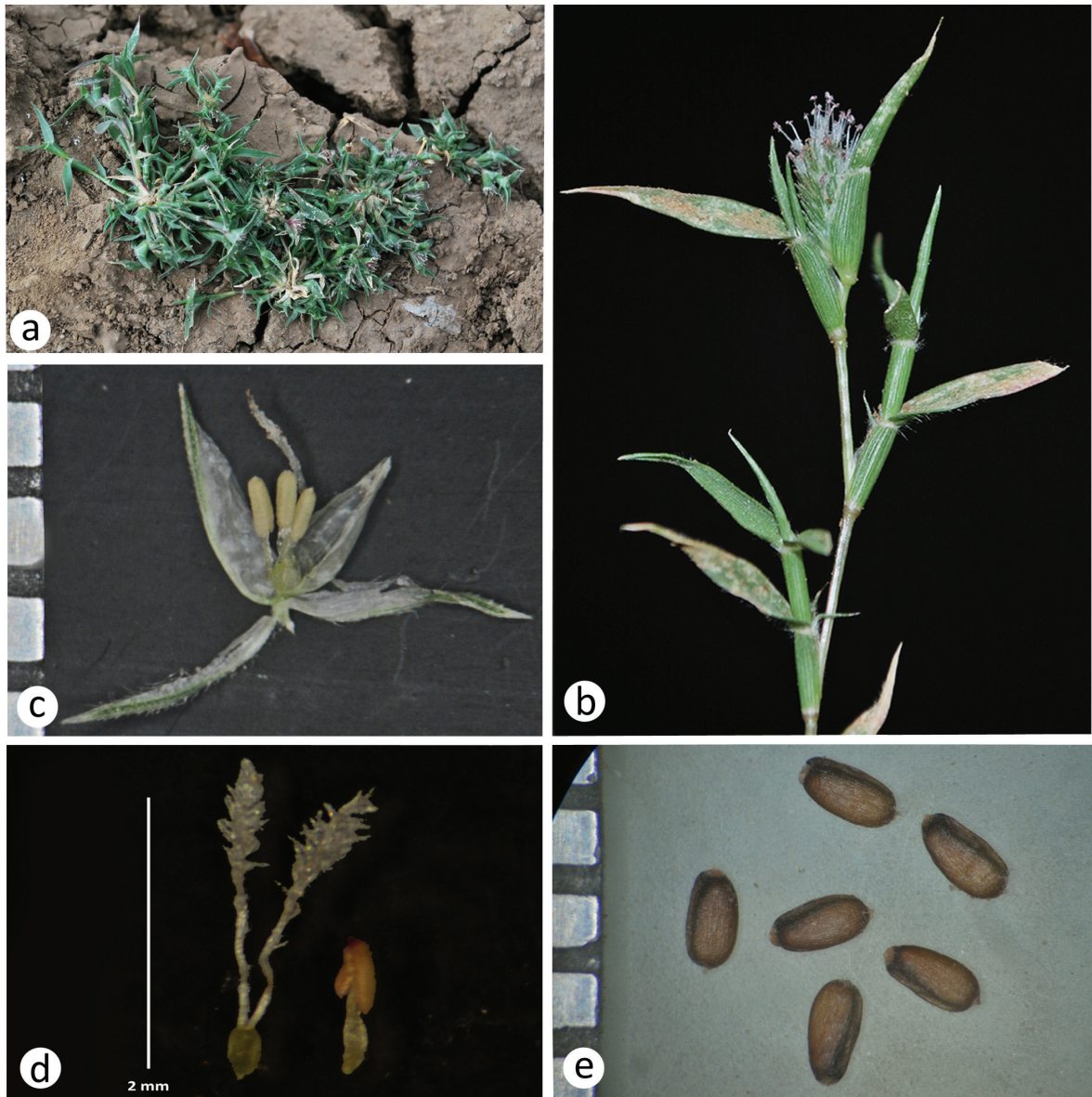


Fig. 2. *Crypsis aculeata* (L.) Ait.: **a.** Habitat; **b.** Flowering twig; **c.** Dissected spikelet; **d.** Style and anther; **e.** Seeds.

2–3 × 0.3–0.9 mm, ovate-lanceolate, acuminate at apex. Palea membranous, 0–1-veined, plicate, ovate or lanceolate, apex slightly notched at tip, 2.5–2 mm long, margins enfolding. Ovary glabrous; styles 2, filiform, 1.5–2.5 mm long; stigmas feathery. Stamens 3; filaments filiform, c. 2.8 mm long; anthers 0.5–0.7 mm long, yellow when young, pinkish-purple with age. Caryopsis oblong-ellipsoid, 0.8–1.2 × 0.5–0.8 mm, grayish, shiny; pericarp soft, free.

Flowering & Fruiting: November – January.

Habitat: Growing on mud in the drying lakes at 675

meter above mean sea level during post monsoon season.

Distribution: Africa, Asia (Afghanistan, Arabia, China, Caucasus, India, Iran, Mongolia and Siberia), Australia, Europe and North America.

Specimen examined: INDIA, **Maharashtra**, Osmanabad district, Papnas N18° 09.370' E76° 03.071', 02.11.2012, *Ramchandra D. Gore* 1027 (Walchand College Herbarium, Solapur).

Note: The type species, *C. aculeata*, was first placed among the Cyperaceae by Linnaeus, probably

mislead by the dilated or spathe-like upper leaf sheaths subtending the inflorescence (Lorch, 1962). Hubbard (1947) recognized the affinity of *Crypsis* with *Sporobolus* by noting the apparent apomorphies of fruits with a free pericarp, single-flowered spikelets, 1-nerved lemmas and ciliate ligules. These four characters clearly delineate the subtribe - Sporobolinae, of which *Crypsis* is a member.

C. aculeata is an indicator of saline and alkaline soils and is a good fodder grass (Lu & Phillips, 2006). It is also observed that this grass is relished by livestock.

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