

A new distributional record of *Acmella ciliata* (Kunth) Cassini [Asteraceae] from Assam, India

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Abstract

The *Acmella ciliata* (Kunth) Cassini [Asteraceae] is collected from both Kamrup district (metro) & Kamrup district, Assam and is reported as new record for the State. Detailed description, photographs, distributional and ecological details are provided.

Key words: *Acmella*, *Spilanthes*, radiate head, Assam

INTRODUCTION

Traditionally the genus *Spilanthes* Jacquin (Asteraceae) has been divided into two sections, *Spilanthes* and *Acmella*. *Acmella* was described by L.C. Richard (1807) to include five radiate and epappose species. Cassini (1822) improved the characterization of the genus and discussed its relationship to *Spilanthes* Jacquin, which has discoid heads and a pappus of awns. He concluded that *Acmella* differs from *Spilanthes* only in having radiate heads and he indicated that two genera can not be separated reliably by differences of the pappus. Cassini (1822) transferred many radiate species of *Spilanthes* into *Acmella* and he suggested that it might be best to treat these two taxa as congeneric sections. de Candolle (1836) followed these suggestions and also described many new species in both sections *Spilanthes* (called sect. *Salivaria* by de Candolle) and section *Acmella*. Moore (1907) followed de Candolle by assigning sectional status to *Acmella* and further subdivided it into subsections *Magnoradiatae* and *Parvoradiatae*.

Recent studies (Jansen & Stuessy 1980; Jansen 1981) provided convincing morphological and chromosomal evidences for the recognition of *Acmella* and *Spilathes* as distinct genera. Jansen (1981) has sought to resurrect *Acmella* Richard as a distinct genus and to exclude *Spilanthes* from most of the Old World areas including India. The two can be distinguished as follows:

- 1a. Pappus of stiff awns; achenes monomorphic, rhombic in cross-section, with a massive, stramineous, cork-like margin at maturity; leaves sessile; heads discoid; corolla white to purplish white **Spilanthes**
- 1b. Pappus of soft bristles or lacking; achenes dimorphic with the outer series 3-angled and inner series 2-angled in cross-section, without a massive cork-like margin at maturity; leaves petiolate; heads usually radiate, occasionally discoid; corolla orange-yellow to yellow **Acmella**

In the present paper, however, the author has preferred to keep *Acmella* Richard as more inclusive genus following Jansen (1985). The genus *Acmella* Richard consists of 30 species and 09 additional infraspecific taxa those are mainly distributed in the tropical and subtropical regions around 1 (Jansen 1985; Mabberley 2005). In India, we have two species with rayed heads, viz. *A. ciliata* (Kunth) Cassini, *A. uliginosa* (Swartz) Cassini and four species with discoid heads viz. *A. paniculata* (Wallich ex DC.) R.K. Jansen, *A. calva* (DC.) R.K. Jansen, *A. radicans* (Jacquin) R.K. Jansen and *A. oleracea* (Linnaeus) R.K. Jansen (Sheela 2010).

In Assam the number of species of *Acmella* varies from 01 (Kanjilal 1938) to 03 (Kar *et al* 2011). Those are *Acmella calva* (DC.) R.K. Jansen, *A. paniculata* (Wallich ex DC.) R.K. Jansen, and *A. oleracea* (Linnaeus) R.K. Jansen.

While working on the herbaceous angiospermic flora of both Kamrup district (Metro) and Kamrup district, Assam an interesting species of *Acmella* Richard was collected. After a thorough survey of literature, critical examination and expert opinion, this species is determined as *Acmella ciliata* (Kunth) Cassini belonging (Asteraceae), a species so far not recorded from Assam by the earlier workers from Assam (Kanjilal 1938; Barua 1992; Chowdhury 2005; Sarmah 2006; Borah 2008 and Kar *et al* 2011). A detailed taxonomic description, photographs along with phenology and ecological notes of the same has been provided in the present communication to facilitate its easy identification.

Acmella ciliata (Humboldt, Bonpland & Kunth) Cassini, Dict, Sci, Nat 24: 331. 1822. *Spilanthes ciliata* Humboldt, Bonpland & Kunth, Nov. Gen. Sp. ed. fol. 4: 163. 1820. *Ceratocephalus ciliatus* (Humboldt, Bonpland & Kunth) Kuntze, Revis. Gen. Pl. 1: 326. 1891.

Perennial herbs, 30 – 80 cm tall. Stems usually decumbent to ascending, rooting at nodes, green to purple, glabrous to sparsely pilose. Petioles 0.7 – 4 cm long, narrowly winged; lamina ovate to broadly ovate, denticulate to coarsely dentate, acute, base usually truncate or cordate, glabrous to sparsely pilose above and below. Peduncles 1 – 7.4 cm long, 0.7 – 2.2 mm in diameter, sparsely to moderately pilose. Capitula radiate, solitary or 2 or 3, terminal or axillary, broadly ovoid, 6 – 10.5 mm high, 5.5 – 9.5 mm in diameter. Receptacle 3.8 – 7.4 mm high, 0.8 – 1.9 mm in diameter, apex acute to acuminate. Phyllaries 7 – 10, biseriata, outer series 3 – 5, 4 – 6.9 mm long, 1 – 2.3 mm wide, narrowly to broadly ovate, apex rounded to acute, margin entire to sinuate, moderately ciliate; inner series 3 – 6, lanceolate to ovate or elliptic, 2.8 – 6.1 x 1 – 2.9 mm. Pales 3 – 4.5 mm long, 0.4 – 0.8 mm wide, apex rounded or obtuse, stramineous. Ray florets 5 – 10, bisexual; corolla yellow-orange, 2.5 – 6.5 mm long; tube 0.9 – 2 mm long, 0.2 – 0.9 mm in diameter, sparsely to densely pilose; limb 1.2 – 4.7 mm long, 1.1 – 3 mm wide; achenes 1.4 – 2 mm long, 0.5 – 1.1 mm wide, moderately to densely ciliate with straight-tipped hairs, with an evident cork-like margin, lacking shoulders; pappus usually absent. Disc florets 90 – 177, bisexual; corolla 1.5 – 2 mm long, yellow orange, 5-merous; tube 0.3 – 0.6 mm long, 0.3 – 0.5 mm in diameter; throat 1 – 1.5 mm long, 0.4 – 0.7 mm in diameter; lobes triangular, 0.2 – 0.4 mm long, 0.2 – 0.3 mm wide; stamens 0.7 – 1.2 mm long, anthers black; styles 1.1 – 1.8 mm long, the branches 0.3 – 0.6 mm long; achenes 1.6 – 2.2 mm long, 0.5 – 1 mm wide, moderately to densely ciliate with straight-tipped hairs, with an evident cork-like margin, lacking shoulders; pappus usually absent or sometimes of 2 very short sub-equal bristles, the longer bristle 0.4 – 1 mm long, the shorter 0.3 – 0.7 mm long.

Flowers & Fruits: Throughout the year

Ecology: *Acmella ciliata* is naturalized on moist weedy habitats especially along roadside, cultivated fields, stream banks and hilly areas.



PLATE I. *Acmella ciliata* (Humboldt, Bonpland & Kunth) Cassini: A. & B. Habit; C. A branch with radiate heads; D. Single radiate head

Distribution: Native to northern South America and has naturalized in Celebes, India, Sumatra and Thailand (Jansen 1985).

Exsiccatae: India: Assam, Kamrup district (Metro), Bara Bazar, Pandu (Guwahati), *K.K. Das* 786, dated 29.11.2011; Kamrup district, D.K.College campus, Mirza, *K.K. Das* 609, dated 25.04.2011.

Notes: Sometimes *Acmella ciliata* is misidentified as *A. paniculata*. *A. ciliata* is easily distinguishable from *A. paniculata* by its larger, broadly ovoid capitula, conspicuous ray florets (5 – 10), and shorter achenes (1.4 – 2.2 vs. 2.2 – 2.9 mm long) that lack ciliated margins at the mature stage.

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