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SOME NEW REPORTS FOR THE FLORA OF WEST BENGAL

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ABSTRACT

Dichrocephala integrifolia subsp. *gracilis* (DC.) Fayed, *Prenanthes violifolia* Decne., *Saussurea gossypiphora* D. Don, *S. leontodontoides* (DC.) Sch.-Bip., *S. sughoo* C.B.Clarke belonging to the family Asteraceae are reported here for the first time from West Bengal.

INTRODUCTION

Darjeeling Himalaya falling within Eastern Himalayan phytogeographic region is one of the highly diverse and rich floristic areas of the state of West Bengal. Though many eminent botanists like Gamble (1875), Hara (1966, 1971), Biswas (1966), Ohashi (1975), and others have extensively explored this region from time to time yet this region still remains a unique habitat of many botanical curiosities. During several plants collection tours to Singalila National Park located in the Singalila ridge of Darjeeling district from the year 2003 to 2007 the author collected some interesting plant specimens, which after critical examinations were identified as *Dichrocephala integrifolia* subsp. *gracilis* and *Prenanthes violifolia*, hitherto unknown from West Bengal. Further studies of herbarium specimens available at CAL belonging to the family Asteraceae revealed three species of the genus *Saussurea* DC. collected from Phalut of Darjeeling district, namely, *Saussurea gossypiphora, S. leontodontoides, S. sughoo*. A scrutiny of the available literatures suggests that these species too are unreported from West Bengal. Hence, they are reported and described here for the first time from West Bengal along with the data on their phenology, ecology and distribution.

1. Dichrocephala integrifolia subsp. **gracilis** (DC.) Fayed in Mitt. B. Staatssam Munchen 15: 500. 1979; Hajra in Hajra & al. (ed.), Fl. India 12: 115. 1995; *D. gracilis* DC. Prodr. 5: 371. 1836.

Annual, erect herbs, c. 20 cm tall; stem branched. Leaves 35 – 60 × 20 – 35 mm, ovate, pinnatifid, terminal lobe ovate, lateral lobes in 2 pairs, subacute, attenuate, crenate-serrate, sparsely hairy on both surfaces, petiolate; petioles c. 12 mm long. Inflorescences with a few capitula; peduncle divaricating. Capitula 3-5 mm across, subglobose; involucral bracts minute, linear, margin scarious. Ray florets purplish. Female corollas c. 0.5 mm, tubular, 2-3 toothed, base narrowed, whitish. Corollas of disc florets yellow, tubular, 4-toothed. Achenes c. 1 mm long, puberulous. Pappus absent on female achenes; pappus of bisexual flowers 1-2 bristled.

Fl.: April - July.

Distribution: India : Uttarakhand, Sikkim, West Bengal; Madagascar; Nepal; Bhutan.

Ecology & Habitat : In open forests and forest clearings along with *Fragaria daltoniana* J. Gay, *Plantago erosa* Wall., etc.; around 2600 m.

Specimen examined : Gairibas, Darjeeling, 2640 m, 31. 05. 2006, *M.R. Debta* 40584 (CAL).

2. Prenanthes violifolia Decne. in Jacquem. Voy. 4. Bot. 100, t. 108. 1844; Hook.f., Fl. Brit. India 3(8): 412. 1881; Mamgain & Rao in Hajra & al. (ed.), Fl. India 12: 316. 1995. *Cicerbita violifolia* (Decne.) Beauv. in Bull. Soc. Bot. Genève ser. II, 2: 122. 1910; Grierson & Springate in Grierson & Long, Fl. Bhutan 2(3): 1473. 2001.

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Perennial herbs; stem c.18 cm tall, erect, slender, sparsely hairy. Leaves 15 – 30 × 10 – 19 mm, ovate, shortly acuminate, cordate-hastate, sinuate-toothed, hairy on both surfaces, petiolate; petiole c. 25 mm long, slender, winged towards base, with pellucid hairs throughout. Inflorescence laxly flowered at stem apex, pendulous; pedicel 0.5 – 25 mm long. Involucre c. 3 mm diameter; outer phyllaries 5; bract 1, 7 – 10 × 1 mm long, lanceolate, hairy; inner phyllaries 10-13 mm long, linear-oblong, obtuse, margin apex hairy. Corolla tube c. 8 mm long; ligules 8 –10 × 1 - 2 mm, narrowly lanceolate, violet.

Fl.: September November.

Distribution: India : Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Sikkim, West Bengal; Nepal; Bhutan; Myanmar.

Ecology & Habitat : In shady forest edges and on slopes; around 2700 m.

Specimen examined : Gairibas, Darjeeling, 2700 m, 17. 10. 2003, *M.R. Debta* 33106(CAL).

3. Saussurea gossypiphora D. Don in Mem. Wern. Nat. Hist. Soc. 3: 414. 1821; Hajra in Hajra & al. (ed.), Fl. India 12: 200. 1995; Grierson & Springate in Grierson & Long, Fl. Bhutan 2(3): 1436. 2001. *S. gossypina* Wall. nom. illegit.; Hook.f., Fl. Brit. India 3(8): 376. 1881.

Perennial herbs, up to 25 cm tall; stem hollow, leafy, densely woolly, club shaped. Leaves 35 – 120 × 0.6 – 25 mm, linear-oblanceolate, acuminate, sessile, deeply pinnatifid, segments toothed, glabrous at upper half, densely woolly at lower half on both surfaces; uppermost leaves densely woolly throughout. Capitula numerous, terminal, c. 20 mm long, covered with woolly hairs. Involucral bracts c. 8 mm long, linear, apex pubescent. Receptacles hairy; bristles c. 1.5 mm long. Corollas 10 – 12 mm long.

Fl. : August - September.

Distribution: India: Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Sikkim, West Bengal; Nepal; Bhutan; Tibet; China.

Ecology & Habitat: On open sub alpine slopes; between 3500 – 5700 m.

Specimen examined : Phalut, Darjeeling, *S. Kurz* s.n. (CAL, No. 252068).

4. Saussurea leontodontoides (DC.) Sch.-Bip. in Linnaea 19: 330. 1846; Hajra in Hajra & al. (ed.), Fl. India 12: 205. 1995; Grierson & Springate in Grierson & Long, Fl. Bhutan 2(3): 1449. 2001. *Aplotaxis leontodontoides* DC., Prodr. 6: 539. 1838. *Saussurea kunthiana* C.B.Clarke in Hook.f., Fl. Brit. India 3(8): 369. 1881.

Perennial, dwarf, tufted herbs, acaulescent. Leaves 35 – 90 × 0.5 – 10 mm, linear, deeply pinnatifid, densely pubescent above, white tomentose beneath, petiolate; lateral lobes in 5 pairs, ovate-triangular, apiculate, margin revolute with apiculate teeth; petiole c. 10 mm long. Capitulum solitary, c. 35 mm across, sessile; receptacle bristly. Involucral bracts c. 10 mm long, obscurely reflexed at the tip; outer ones ovate, shortly acuminate; inner ones narrowly lanceolate, sparsely hairy. Corollas c. 14.5 mm long; lobes c. 3.5 mm long.

Fl.: August - October.

Distribution: India : Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Sikkim, West Bengal; Nepal; China; Tibet.

Ecology & Habitat : on open sub alpine herbaceous vegetations; between 3550 – 5000 m.

Specimen examined : Phalut, Darjeeling, *S. Kurz* s.n. (CAL).

5. Saussurea sughoo C.B. Clarke, Comp. Ind. 225. 1876 & in Hook.f., Fl. Brit. India 3(8): 368. 1881; Hajra in Hajra & al. (ed.), Fl. India 12: 213. 1995; Grierson & Springate in Grierson & Long, Fl. Bhutan 2(3): 1445. 2001.

Perennial, acaulescent herbs, c. 10 cm tall. Leaves 75 – 100 × 20 – 40 mm, oblanceolate, deeply pinnatifid, coriaceous, scaberulous above, tomentose beneath, petiolate; lateral lobes in 4 – 5 pairs, ovate, denticulate; petiole c. 40 mm long. Capitulum solitary, c. 17 mm across, sessile; receptacle bristly. Outer Involucral bracts lanceolate, c. 25 mm long; inner ones linear, acuminate, scarious. Corolla c. 25 mm long. Achenes c. 5 mm long, obovoid, ribbed; pappus plumose.

Fl.: September November.

Distribution : India: West Bengal, Sikkim, Arunachal Pradesh; Nepal.

Ecology & Habitat : On open sub alpine regions; between 3550 4800 m.

Specimen examined : Phalut top, Darjeeling, 8.10.1857, *Anon.* s.n. (CAL, No. 251570).

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पश्चिम बंगाल वनस्पतिजात के लिए कुछ नयी रिपोर्ट

एम.आर. देवता

पश्चिम बंगाल से पहली बार एस्टेरेसी कुल के *डाइक्रोसेफेला इंटेग्रिफोलिआ* उपजाति *ग्रसिलिस, प्रेनेंथिस बायोलिफोलिआ, सॉसुरिआ, गॉसीपिफोरिआ, सॉसुरिआ लेओंटोडोंट्वाइडिस, सॉसुरिआ सुधू* रिपोर्ट किए गए हैं।