

***Oxalis debilis* var. *corymbosa* (Oxalidaceae): A new plant record for Kashmir valley (J & K), India**

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Abstract

Oxalis debilis var. *corymbosa* (A.P. de Candolle) Lourteig (Oxalidaceae) is reported as a new plant record for the Kashmir valley, India. Detailed description of the species supplemented with photographs of diagnostic characters is provided here to authenticate the record for this region.

Key words: Taxonomy, New record, *Oxalis debilis* var. *corymbosa*, Kashmir valley

INTRODUCTION

Worldover, the genus *Oxalis* Linnaeus (Oxalidaceae) includes about 700 species mainly distributed in Africa and South America (Lourteig 2000; Mabberley 2005). In India, the genus is represented by 10 species (Manna 1997). In the Indian Himalayan State of Jammu and Kashmir (J & K), different workers have reported a number of *Oxalis* species. Stewart (1972) reported 02 species (*O. acetosella* Linnaeus and *O. corniculata* Linnaeus) from temperate province of Kashmir valley in the Jammu & Kashmir State. Sharma & Kachroo (1981), while working on the sub-tropical flora of Jammu province in the State, reported the occurrence of *Oxalis maritiana* Zuccarini (current valid name: *O. debilis* var. *corymbosa* (DC.) Lourteig) and *O. latifolia* Kunth in addition to *O. corniculata* Linnaeus. Subsequently, Swami & Gupta (1998) reported *O. acetosella* Linnaeus as an addition to the flora of Jammu from Udhampur district. Mathur & Uniyal (2002) added *O. richardiana* Babu as one more addition to the flora of Jammu.

During a recent floristic trip, while working on the urban flora of Srinagar city, the authors collected the specimens of an unknown *Oxalis* species growing in wild. On close study, using relevant taxonomic literature, online e-flora illustrations and expert scrutiny, it was identified as *Oxalis debilis* var. *corymbosa* (DC.) Lourteig - hitherto unknown from the temperate region of Kashmir Himalaya. Therefore, the present paper reports the occurrence of this plant as a new record to the flora of Kashmir. A detailed taxonomic description, supplemented with comparison of diagnostic characters with related species (Table 1) and their photographs (Plate 1), is provided to validate the new plant record and facilitate its easier identification in the field.

Taxonomic treatment:

Oxalis debilis Kunth var. *corymbosa* (DC.) Lourteig in Ann. Miss. Bot. Gard. 67:840. 1980. *Oxalis corymbosa* DC., Prodr. 1: 696. 1824; *O. maritiana* Zuccarini in Sharma & Kachroo, Fl. Jammu 1: 120. 1981; *O. debilis* H. B. & K. var. *corymbosa* (DC.) Lourteig in Swami & Gupta, Fl. Udhampur 1: 85. 1998; *O. corymbosa* DC. in Mathur & Uniyal, Fl. of J & K 1: 784. 2002. [PLATE - I, Fig. 1]

Perennial herb with subterranean bulb, 16 – 20 cm tall, pubescent, scales of bulb loose, papery, 3-veined, sessile; bulbils 0.2-0.6 cm long, numerous; stemless; leaves basal, trifoliolate; petioles 15-25 cm, with long sparse to moderately dense spreading white trichomes; lamina of leaflet obcordate, 1.7 × 2.3 cm, both surfaces covered with trichomes, adaxial surface punctate with dark spots especially near margin, deeply emarginate; cymes corymbose, irregularly branched, 8-15 flowered; peduncle ± 29 cm long; bracts lanceolate, membranous, pubescent; pedicel 0.5-2.5 cm, pubescent; sepals 5, lanceolate, 0.5 cm long, apex with 2 reddish brown spots; petals 5, purplish pink with dark veins, obcordate, 1.6 cm long; stamens 10, filaments fused at base; ovary 5-locular, pubescent, placentation axile; fruit not seen.

Specimens examined: INDIA, J & K, **Kashmir, Srinagar**, 23.05.2014, 1607 m, *Insha & Khuroo*, 258 (KASH); 23.04.2015, 1607 m, *Insha & Khuroo*, 501 (KASH).

Flowering period in Kashmir: April – May

Habitat: Grows in shade with loose sandy soil and drainage.

Distribution: Native to Southern America; naturalized in Africa, Asia, Australasia, Europe and Northern America; widely naturalized in different subtropical and tropical parts of India.

Table 1. Comparison of diagnostic characters between *Oxalis debilis* var. *corymbosa*, *O. acetosella* and *O. corniculata* growing in Kashmir Himalaya, India

Diagnostic characters	<i>Oxalis debilis</i> var. <i>corymbosa</i>	<i>Oxalis acetosella</i>	<i>Oxalis corniculata</i>
Stem	Stemless	Stemless	Creeping with runner
Leaves	Radical leaves directly arise from bulb	Radical leaves arise directly from rhizome	Cauline leaves alternate on stem
Leaflets	3-4.5 cm wide, broadly obcordate, brown spots on abaxial side along margin, deeply emarginate	1.5-3.5 cm wide, obcordate, emarginate	0.5-1.5 cm wide, roundly obovate-obdeltoid, emarginate
Inflorescence	Irregular corymbose cymes	Solitary flowers on long peduncles	Axillary, sub-umbels
Sepal shape	Lanceolate	Oblong-lanceolate	Linear-lanceolate
Petal colour	Purplish-pink	White to light pink	Yellow
Fruit	Rarely formed	Ovoid capsule	Sub-oblong capsule
Perennating organ	Bulbs and bulbils	Rhizome	Rootstock

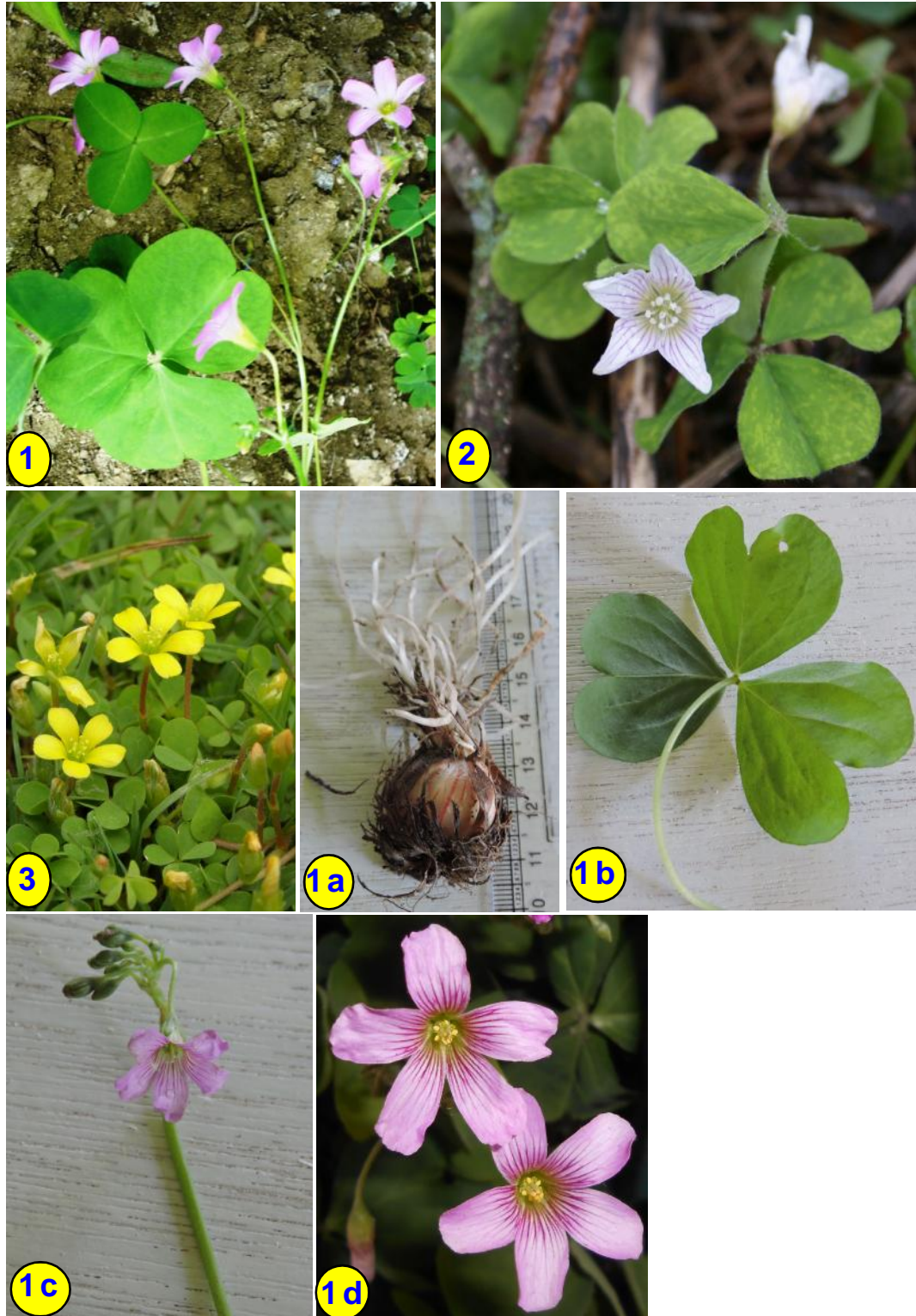


PLATE - I: (1) *Oxalis debilis* var. *corymbosa*; (2) *O. acetosella*; (3) *O. corniculata*; (1a) Bulb; (1b) Abaxial side of trifoliolate leaf; (1c) Inflorescence; (1d) Flowers in close-up.

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