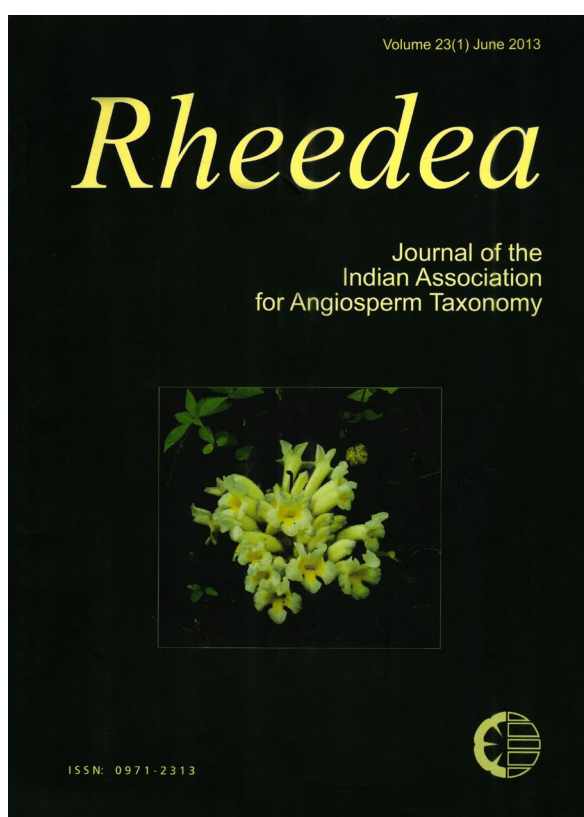




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## *Carex leporina* (Cyperaceae), a species new for Indian Subcontinent

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### Abstract

*Carex leporina* L. is reported here as a species new for Indian subcontinent from the Kashmir Himalaya. A brief description, synonyms, illustration and photographs are provided to validate this record.

**Keywords:** Kashmir Himalaya, New record, Vigneae, Ovaleae, *Carex leporina*.

### Introduction

Cyperaceae, the seventh largest family of vascular plants, are represented by c. 105 genera with about 5,000 species worldwide (Goetghebeur, 1987; Reznicek, 1990). One of its sub-families is Caricoideae, to which belongs the tribe Cariceae. This tribe comprises 5 genera, including *Carex* L. with about 2,100 species, (Reznicek, 1990), thus constituting nearly half of the whole family.

*Carex* is one of the largest and the most widespread genera of flowering plants, with c. 2,100 species in the world (Reznicek, 1990). In India, it is represented by c. 230 species (Karthikeyan *et al.*, 1989). The genus is clearly distinguished from other genera of the Cyperaceae in having consistently unisexual flowers and a perigynium; the latter is a sac-like structure of prophyllar origin that surrounds the naked gynoecium (Blaser, 1944). The variations in the structure of perigynium are used as the key features in *Carex*. This is largely due to its subtle differences in shape, size, texture and nervation that the delimitation of many species in *Carex* has been achieved (Nelmes, 1951).

The subgenus *Vigneae* (Beauv. ex Lestib.) Peterm. to which *C. leporina* belongs is characterized by the lack of prophyll around the base of axis of partial inflorescence (cladoprophyll) (Hendrichs *et al.*, 2004); spikes mostly bisexual; stigma usually 2, rarely 3-branched; perigynium planoconvex, rarely biconvex or inflated; achene biconvex, with a rachilla at the base. This subgenus includes as many as 25 sections with c. 320 species. The section *Ovaleae* (Kunth) Christ, the largest section in the subgenus *Vigneae*, contains about 80 species, 70 of

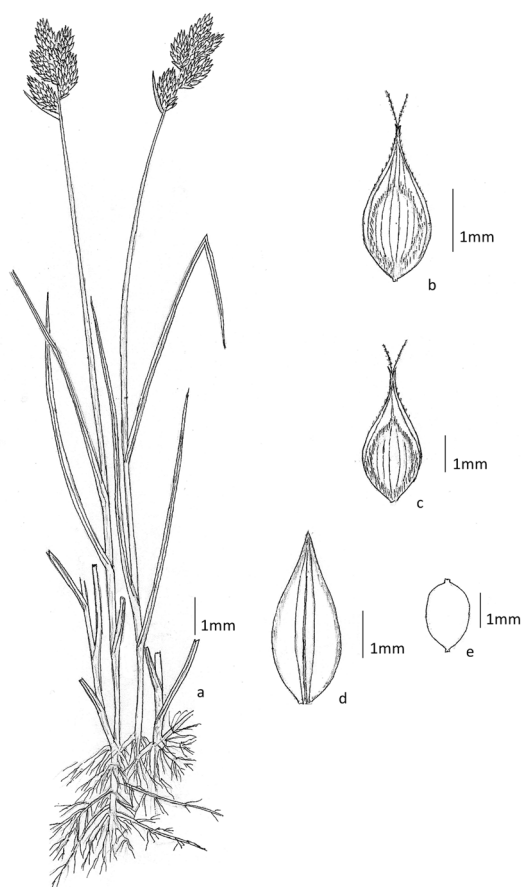
which occur only in North America, the others in Europe, New Zealand, former USSR, China, North and South America and North Africa (Egorova, 1999).

During botanical explorations in the Kashmir Himalaya, the authors have collected specimens of a *Carex* taxon which, after critical examination, turned out to be *Carex leporina*. Thorough perusal of all the relevant literature revealed that this species has not been reported from Indian subcontinent so far. The present finding is, therefore, the first record of this species for Indian subcontinent from the Kashmir Himalaya. A brief description, accompanied with an illustration and two photographs, is provided here to authenticate the new record and facilitate its easy identification.

***Carex leporina* L.**, Sp. Pl. 973.1753; Kuk. in Engl., Pflanzenr. 38: 210. 1909.

*C. nuda* Lam. Fl. Franc., 2: 172. 1779; nom. illeg.; *C. mollis* Gilibert. Exerc. Phyt., 2: 546. 1792; opus utique oppr.; *C. ovalis* Goodenough. Trans. Linn. Soc. London, 2: 148. 1794; *C. brizoides* Genersich. Elench. 857. 1798, nom. illeg., non L. 1755; *C. sicula* Tineo. Pl. Rar. Sicil. 30, 1817; *C. argyroglochin* Hornemann, Fors. Oecon. Plantel., ed. 3, 1: 927 1821; *C. leporina* L. var. *argyroglochin* (Hornemann) W.D.J. Koch., Syn. Fl. Germ. Helv. 753. 1837; *C. tenuis* Schleicher ex Steudel, Nomencl. Bot., ed. 2, 1: 296. 1840, nom. inval.; *C. malvernensis* S. Gibson, Phytologist 1: 715, 1843; *C. leporina* L. var. *argyrolepis* Petermann, Anal. Pfl.-Schlüss. 493. 1846; *C. leporina* L. var. *capitata*

Sonder., Fl. Hamburg. 489, 1850; *C. leporina* L. var. *nemoralis* Trevir., Fl. Ross. 4: 279. 1852; *C. leporina* L. var. *pallens* Godron., Fl. France 3: 397, 1855; *C. leporina* L. var. *subfestiva* Lange, Pug. Pl. Hispan. 62. 1860; *C. leporina* L. f. *minor* Kuntze, Taschen-Fl. Leipzig 16. 1867; *C. leporina* L. subsp. *sicula* (Tineo) Nyman, Consp. Fl. Eur. 779. 1882; *C. leporina* L. var. *atrofusca* Christ., Bull. Soc. Roy. Bot. Belgique 27(2): 166. 1888; *C. leporina* L. f. *robusta* Fiek. Jahresber. Schles. Ges. Vaterl. Cult. 203. 1889; *C. leporina* L. var. *alpine* Ascherson & Graebner. Syn. Mitteleur, Fl. 2(2): 52. 1902; *C. cousturieri* Gandoger. Bull. Soc. Bot. France 60: 556. 1913 (publ. 1914); *C. leporina* L. var. *laucheana* Bornmüller. Allg. Bot. Z. Syst. 22: 100. 1916; *C. tracyi* Mackenzie, Erythea 8: 41. 1922; *C. leporina* L. subsp. *argyroglchin* (Hornemann) P. Fournier. Fl. Compl. Plaine Franc. 554. 1928; *C. leporina* L. subsp. *ovalis* (Goodenough) Maire. Fl. Afr. Nord., 4: 116. 1957; *C. ovalis* Goodenough var. *argyroglchin* (Hornemann) DeLanghe & Lambinon, Nouv. Fl. Belg. 759. 1973; *C. ovalis* Goodenough var. *subfestiva* (Lange) O. Bolòs & Vigo, Fl. Man. Països Catalans 4: 255. 2001. (Fig. 1,2).



**Fig.1.** *Carex leporina* L.: **a.** Habit; **b,c.** Perigynium abaxial and adaxial views; **d.** Glume; **e.** Nutlet

**Lectotype:** Morison, Pl. Hist. Univ. Oxon. 3, sect. 8, tab. 12, fig. 29. 1715.

Perennial, 20–65 cm high, rhizomatous herb. Rhizome short, woody, densely covered with dark-brown scales. Culms densely tufted, stiff, acutely trigonous, glabrous, smooth below, scabrous above. Leaves 1/2–1/3 of the stem length; blades linear, 1–3 mm wide, margins scabrous; sheath light brown, 2–4 cm long; ligule 0.3–0.4 mm wide, arched, membranous. Bracts glumaceous to setaceous, sheathless, brown. Inflorescence 1.5–3 cm long, spiciform; spikes 4–10, sessile, ovoid, less frequently obovate to ellipsoid, 5–12 × 5–8 mm, light-brown, tightly to loosely overlapping, lower 1–2 spikes rarely remote, gynaeandrous. Pistillate and staminate glumes similar, ovate to lanceolate, 3.8–4.2 × 1–1.5 mm, acute, yellowish-brown with white-scarious margins, midrib pale-green. Perigynia sessile, ovoid to ellipsoid, plano-convex, 3–4 × 1.7–2 mm including 1.5–2 mm long beak, broadly winged (wing up to 0.3 mm), glabrous, both sides conspicuously nerved, yellowish-green, margin scabrous from shoulder to top, gradually tapering into a winged beak; beak red-brown or golden at tip, bifid, the notch more visible adaxially. Stigma 2-branched. Nutlets oblong to ellipsoid, plano-convex, 1.5–2 × 1–1.3 mm, glabrous, yellowish-brown, tapering at both ends.

**Diagnostic features:** Culms densely tufted; spikes 4–10, ovate, less frequently obovate to ellipsoid, light-brown, 5–12 mm long; perigynia 3–4 × 1.7–2 mm including 1.5–2 mm long beak, ovate to ellipsoid, glabrous, both sides conspicuously nerved, yellowish-green, gradually tapering into a winged beak, margin scabrous from shoulder to top; beak broadly winged, red-brown or golden at tip, bifid, the notch more visible adaxially.

The species is commonly known as 'egg bract sedge' (Koopman, 2011), or 'oval sedge' (Jermy *et al.*, 2007).

**Flowering & Fruiting:** May–July

**Habitat:** Mesic to moist grasslands and forest slopes; 1800–2700 m.

**Distribution:** North America, Europe, North-west Africa, Russia, China, New Zealand (introduced), and now in Indian subcontinent from Kashmir Himalaya.





**Fig. 2.** *Carex leporina* L.: **a.** Habit; **b.** Inflorescence

*Specimens examined:* INDIA, **Kashmir:** Gulmarg, 2.7.2006, Ehtisham ul Haq, G.H. Dar & B.A. Wafai 964 (KASH); Gulmarg, Ehtisham ul Haq, G.H. Dar & B.A. Wafai 1012 (KASH); Dachigam National park, Ehtisham ul Haq, G.H. Dar & B.A. Wafai 3425 (KASH).

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*in Europe, 1 Accepted names, hybrids, synonyms, distribution, chromosome numbers.* Margarf Publishers.

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