

## A New Genus (*Leptaleum* DC.) Record for Turkey

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**Abstract:** The monotypic *Leptaleum* DC. (*Cruciferae/Brassicaceae*) is recorded for the first time from Turkey. The diagnostic characters of *Leptaleum filifolium* (Willd.) DC. are given and its ecology and conservation status are discussed.

**Key Words:** Flora of Turkey, Kars, *Cruciferae/Brassicaceae*, *Leptaleum*, new record

### Türkiye İçin Yeni Bir Cins (*Leptaleum* DC.) Kaydı

**Özet:** Monotipik bir cins olan *Leptaleum* DC. (*Cruciferae/Brassicaceae*) Türkiye'den ilk defa kaydedilmektedir. *Leptaleum filifolium* (Willd.) DC.' un tanıtıcı özellikleri, yetiştirme ortamı ve koruma durumu belirtilmektedir.

**Anahtar Sözcükler:** Türkiye Florası, Kars, *Cruciferae/Brassicaceae*, *Leptaleum*, yeni kayıt

### Introduction

During floristic investigations, the authors collected many interesting specimens of *Cruciferae* from around the River Aras (Halıkışlak, Kars, north-east Anatolia, Turkey). Initial attempts to name one specimen using the *Flora of Turkey* (Davis, 1965; Davis et al., 1988; Güner et al., 2000) were not successful. Eventually, using the family account in the *Flora of Iraq* (Townsend, 1980), *Flora Iranica* (Rechinger, 1968), *Flora URSS* (Kamarov, 1970) and *Flora Palaestina* (Zohary, 1966) the specimens were identified as *Leptaleum filifolium* (Willd.) DC. It was a new record for Turkey. The record is not surprising since the species also grows in nearby Iraq, Iran, and Syria.

*Leptaleum* DC. is monotypic and exists mainly in the Irano-Turanian region. The name derives from the Greek leptaleos (slender), referring to the filiform leaves (Townsend, 1980).

The species has a wide range of distribution in SW Asia. So far *L. filifolium* is known from Iran, Iraq, Syria, Lebanon, Arabia, and Egypt (Figure 1); it is also found in

the Caucasus, W Pakistan, Afghanistan, C Asia, and Mongolia (Zohary et al., 1980; Greuter et al., 1986).

#### *Leptaleum* DC.

Dwarf annual herb with simple or pinnate leaves. Flowers white to pink; petals very narrow, distinctly clawed. Sepals erect, the inner not saccate at the base. Filaments linear, those or the longer (inner) stamens fused to the apex in pairs, often reduced to 2 by abortion. Ovules very numerous; stigma lobes small, fused into a cone, style almost absent. Siliqua linear, dorsally compressed, the valves opening only at the apex; seeds biseriate. Radicle incumbent (description as given by Townsend, 1980).

The following species description was based on the specimens collected from Halıkışlak village.

*Leptaleum filifolium* (Willd.) DC., System. Veg. 2: 510 (1821).(Figure 2).

**Syn.:** *Sisymbrium filifolium* Willd., Sp. Pl. ed. 4, 3: 495 (1800).

**Type:** Habitat in Sibiria ad Kumam fluvium, B.

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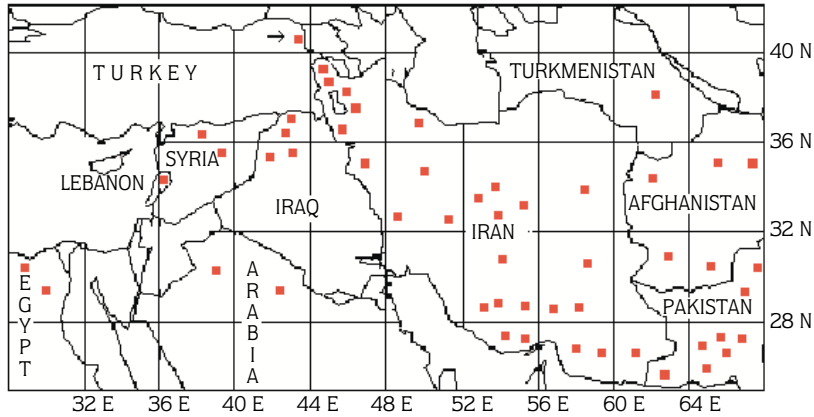


Figure 1. SW Asiatic distribution of *Leptaleum filifolium*.



Figure 2. *Leptaleum filiforme* (Willd.) DC. a. habit; b. outer sepals; c. inner sepals; d. petals; e. stamens and ovary.

Annual, divaricately branching from base, 2-10 cm; branches, fruit and pedicels sparingly to densely furnished with simple or furcate whitish hairs, plant otherwise glabrous or almost so. Lower leaves up to c. 2 cm, often simple and filiform, the upper usually simply pinnate with long, filiform segments. Flowers white, later pink, solitary in the axils of all the leaves (even those at the extreme base), or in very short axillary racemes of up to 3 flowers; pedicels 2-3 mm. Sepals erect, c. 5 mm. pale-margined. Petals linear-oblongate, c. 9-10 mm, apex rounded. Siliqua linear, compressed, 17-30 x 2 mm; suture prominent and smooth; valves reticulate-smooth,

0.75 mm. Flowering: April-May, fruiting: June. Irrigated alluvium along ditches and channels, sandy banks. 974-1000 m.

Turkey, north-east Anatolia. A9 Kars, Halıkışlak village, around River Aras, sandy banks, 06 v 2006, 974 m, 40°07'388"N-043°37'752"E. M. Ünal & F.Özgökçe 9295 (VANF).

## Results and Discussion

Members of *Cruciferae* are found in most parts of the world, but are mainly concentrated in the north temperate region and more especially in the countries surrounding the Mediterranean basin and in SW and C Asia (Heywood, 1985). The Irano-Turanian region has c. 150 genera, and generic endemism is very high, i.e. 40% (Hedge, 1976). There are 91 genera in Turkey (Davis, 1965; Davis et al., 1988; Güner et al., 2000; Yıldırım, 2001; Behçet & Ünal, 2002; Bani & Adıgüzel, 2006). With the new record, the total reaches 92.

*Leptaleum* is similar to *Malcolmia* R.Br. and *Sisymbrium* L. It differs from the *Malcolmia* in its filiform leaves, the upper usually pinnate with filiform segments. It differs from *Sisymbrium* in its branched hairs. In the most recent paper on the systematics of the family, *Leptaleum* is placed in the tribe *Euclidieae* (Al-Shehbaz et al., 2006).

In Turkey, *L. filifolium* grows in a very limited area, where it is under high grazing pressure. The recommended IUCN Red Category is Vulnerable (VU

(B1a) (IUCN, 2001). In its locality, the following taxa exist abundantly: *Suaeda confusa* Iljin, *Salsola nitraria* Pall., *Salix pentandroides* A.Skv., *Tamarix parviflora* DC., *Euclidium syriacum* R.Br., *Alyssum linifolium* Steph. ex Willd. var. *linifolium*, *A. desertorum* Stapf var. *prostratum* T.R.Dudley, *Veronica polita* Fries, *Astragalus*

*ornithopodioides* Lam., *Tripleurospermum parviflorum* (Willd.) Pobed., *Sisymbrium altissimum* L., *Malcolmia africana* (L.) R.Br., *Ceratocephalus falcatus* (L.) Pers., *Capsella bursa-pastoris* (L.) Medik., *Nonea caspica* (Willd.) G.Don, *Anchusa arvensis* (L.) M.Bieb. subsp. *orientalis* (L.) Nordh., and *Euphorbia heteradena* Jaub & Spach.

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