

# LEPTALEUM HAMATUM (CRUCIFERAE), A NEW RECORD FOR THE FLORA OF IRAN AND DISTINCT FROM L. FILIFOLIUM

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*Leptaleum hamatum* Hemsley & Lace was collected from Isfahan province is reported as a new record for the flora of Iran. It is well characterized by the length and shape of the siliqua from *Leptaleum filifolium* (Willd.) DC.

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Key words. Cruciferae, Hesperideae, *Leptaleum hamatum*, Iran, new record.

گزارش *Leptaleum hamatum* به عنوان گونه ای مستقل از *L. filifolium* و جدید برای ایران

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گونه *Leptaleum hamatum* در فلور ایرانیکا از پاکستان گزارش گردیده ولی در فلور پاکستان مترادف گونه *L. filifolium* قرار گرفته است. گونه *L. hamatum* دارای خورجین باریک و بلند، نوک خورجین قلاب مانند و طول گلبرگها کمتر از دو برابر طول کاسبرگها می باشد. گونه *L. filifolium* دارای خورجین کوتاه و پهن، نوک خورجین راست و یا تا حدودی خمیده، همچنین طول گلبرگها بیش از دو برابر طول کاسبرگ می باشد. مطالعات نشان داد که این گونه ها مترادف هم نبوده و بایستی از هم مستقل باشند، ضمناً گونه *L. hamatum* برای اولین بار از ایران گزارش می شود. نمونه های این گونه در مسیر اصفهان به شهرضا، کیلومتر ۳۰ جمع آوری گردید. ویژگیها، محل دقیق جمع آوری و پراکندگی جغرافیایی گونه بیان شده است.

## Introduction

In the course of my studies on *Cruciferae* family, tribe *Hesperideae* in Iran, *Leptaleum hamatum* Hemsley & Lace as a new record for the flora of Iran was distinguished. It was previously known only from Pakistan in *Flora Iranica* (Rechinger 1968). The species was designated as a synonym of *L. filifolium* (Willd.) DC. in *Flora of West Pakistan* (Jafri 1973). The specimens was collected from Isfahan Province, 30 km from Isfahan to Shahreza, 32° 26' 08" N. and 51° 46' 31" E., at an altitude 1734 m and deposited in LH (Lorestan herbarium) and TARI. The features of new record is explained here and compared with its nearest relative, *Leptaleum filifolium* (Willd.) DC.

***Leptaleum hamatum*** Hemsl. & Lace

Isfahan: 30 km on the road to Shahreza, 32° 26' 08" N, 51° 46' 31" E, 1734 m, Mehrnia 5475.

Table 1. Comparison of *Leptaleum hamatum* and *L. filifolium*.

Plant annual, with slender stem, 5- 20 cm high, simple or minutely branched, glabrous or somewhat with glandular hairs, mainly on the siliqua. Leaves sessile, linear, 20-60 mm long, simple or divided usually into 3 or 5 filiform slender segments; segments up to 2 cm. long, 1-2 mm broad. Racemes 5-10 flowered, lax. Flowers axillary, solitary or in pairs. Pedicels 3-6 cm long in fruit, slightly thickened. Sepals linear, erect, not saccate, 3-5 mm. long. Petals linear, small, 3-7 mm. long, about 0.75-1 mm broad, withish or light pink. Siliqua linear-cylindrical, 3-7 cm long, hamate at the apex, indented, with one prominent midrib and small netted lateral veins, with oval glands. Seeds apparently uniseriate in each cell. Septum membranous and thin. Cotyledons incumbent.

*Leptaleum hamatum* was described from Pakistan (see Rechinger 1968). In *Flora Iranica* (Rechinger 1968) it was known from Pakistan only, in *Flora of W. Pakistan* (Jafri 1973) it was known as a synonym of *L. filifolium*.

Characters	<i>Leptaleum hamatum</i>	<i>Leptaleum filifolium</i>
Siliqua tip	Hamate	Incurved
Siliqua shape	Cylindrical linear	Broadly linear
Siliqua width	1-1.5 mm.	2.5-3.5 mm.
Siliqua length	3-7 cm.	1.5-4 cm.
Pedicle length in fruiting	3-6 mm.	1-4 mm.
Siliqua / pedicel	More than twice width	Not more than twice width
Siliqua dehiscence	Indehiscent	Tardily dehiscent
Indumentum	Oval glands	Glabrous or with simple & furcate hairs
Petals	Not twice as long as sepals	Twice as long as sepals
Siliqua texture	Delicate	Rigid & coriaceous
Seeds	Lax and apparently uniseriate	Dense and clearly biserriate
Seeds number	30-50 in each fruit	60-80 in each fruit



Fig. 1. *Leptaleum hamatum* (left), *L. filifolium* (right). x 1.

The specimens collected in Iran are very well match with the description of the species. They were compared with the specimens of *L. filifolium* (Willd.) DC. There are some characters useful to separate the two species which are shown in table 1. Therefore in this paper *L. hamatum* is known as a distinct species from *L. filifolium*. As there is no record of *L. hamatum* from Iran, the record from Iran should be a new report.

*Leptaleum hamatum* is an Irano-Touranian element that apparently distributed from Iran to Pakistan. This species grows in arid regions with light sandy soils. Flowers and fruits appear between April and May. Following species associated in the distribution area of the species: *Leptaleum filifolium* (Willd.) DC, *Malcolmia africana* (L.) R. Br, *Malcolmia taraxacifolia* Balbis, *Gypsophila acantholimoides* Bornm., *Heliotropium noeanum* Boiss., *Acanthophyllum glandulosum* Bunge & Boiss., *Peganum harmala* L., *Achillea wilhelmsii* C. Koch,

*Artemisia sieberi* Besser, *Anchusa italica* Retz., *Capparis spinosa* L., *Alhagi persarum* Boiss. & Buhse, *Astragalus gossypinus* Fisch., *Ziziphora tenuior* L., *Avena fatua* L., *Atraphaxis spinosa* L.

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