

A New Record for the Flora of Turkey: *Iberis saxatilis* L. (*Brassicaceae*)

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Abstract: *Iberis saxatilis* L. is reported for the first time (B1 Balıkesir) from Turkey. A description, including an illustration of the plant parts, and a distribution map are presented.

Key Words: *Brassicaceae*, *Iberis saxatilis*, new record, Kazdağ, Balıkesir

Türkiye Florası İçin Yeni Bir Kayıt: *Iberis saxatilis* L. (*Brassicaceae*)

Özet: *Iberis saxatilis* L. türü Türkiye'den (B1 Balıkesir) ilk defa kaydedilmiştir. Bu makalede türün betimi, morfolojik çizimleri ve yayılış haritası verilmiştir.

Anahtar Sözcükler: *Brassicaceae*, *Iberis saxatilis*, yeni kayıt, Kazdağ, Balıkesir

Introduction

Some *Iberis* L. specimens were collected during an expedition to Balıkesir province as part of the Flowering Plants of Kazdağ National Park Project (TÜBİTAK-YDABAG-103Y104). We were not able to identify them using the Flora of Turkey (Hedge, 1965; Yıldırım, 2000). They were similar to *Iberis saxatilis* L. (Table 1) according to Flora D'Italia (Anzalone et al., 1982), Flora Europaea (Da Silva & Franco, 1993), the Mountain Flora of Greece (Franzen, 1986) and Flora Hellenica (Tan, 2002). After thorough examinations of all the specimens and the relevant literature, it was decided that this species was a new record for Turkey. The number of *Iberis* species known from Turkey is now 9.

Iberis saxatilis L., Cent. Pl. 2:23 (1756) (Figures 1, 2).

Perennial, procumbent, diffuse shrub with straight, flowering stems 2.5-10 cm, glabrous to puberulent below, densely retrorsely puberulent above. Leaves 3-9 x 1-1.5 mm, semi-cylindrical on not flowering shoots and below on flowering stems; flat on upper flowering stems, entire, linear, acute, mucronulate, glabrous on both surfaces, ciliate on margins when young, soon glabrous. Inflorescence 7-12 x 9-12 mm, corymbose in flower,

shortly elongating in fruit. Sepals, 1.5-2.5 mm, green to purplish, glabrous, white membranous-margined. Petals 3.5-6.5 mm (inner 3.5-4.5 mm, outer 5-6.5 mm), white to purplish-white, gradually narrowed into a short claw. Fruiting pedicel to 6 mm. Silicula 5-8 x 4-6 mm, ovate, broadly winged from the base, lobes rounded.

Type: Origin of type material not known (LINN 825/3 photo!)

Material Examined: [Turkey] B1 Balıkesir: İter trojanum, Mt. Ida in marmor, mont. Szus-Dagh, 17.7.1883, P. Sintenis (photo!). Kazdağ (İda), Nanekırı, limestone, 1500 m, 19.05.2004, T. Dirmenci (2516a!) & F. Satıl (GAZI, HUB, Yıldırım) ibid 05.06.2004, T. Dirmenci (2523!) & F. Satıl (EGE), ibid Zığındere valley, limestone, 1600 m, 19.05.2004, T. Dirmenci (2516b!) & F. Satıl (ANK), Susuz dağ-Kuş tepe, 1500 m, 02.07.2004, T. Dirmenci (2872b!) & F. Satıl (Hb. T. Dirmenci). Fels mit Rutschalpe, Dép. Hérault: Pégairolles-de-Buéges-St.-Guillem-le-Désert 14 km sw Pégairolles-de-Boéges, 450 m, 4.4.1982, Max Nydegger 30006 (GAZI!); Kalkfels, Vaucluse: Carpentras-Sault-de-Vaucluse, Gorges de la Nesque, Belv. 734 m. 3.4.1980, Max Nydegger (GAZI!).

Table 1. Comparison of the diagnostic characteristics of *I. saxatilis* in Kazdağ with *I. saxatilis* in other Flora.

Characters	Kazdağ	Flora Hellenica	Flora Europaea	Flora D'Italia
Plant height	2.5-10 cm	2-10 cm	Up to 15 cm	5-15 cm
Leaflets	3-9 x 1-1.5 mm semi-cylindrical linear at first ciliate but soon glabrous acute, mucronulate	(2-)5-15 x 0.3-1.5 mm semi-terete linear ciliate, otherwise glabrous subacute	up to 20 x 1.5 mm semi-cylindrical linear at first ciliate but soon glabrous acut, mucronulate	10-15 x 1 mm - linear - acute
Inflorescence	7-12 x 9-12 mm corymbose in flower shortly elongating in fruit	10-22 mm racemose	- corymbose in flower elongating in fruit	racemose
Pedicele	2-4 mm	2-4 mm	-	-
Sepals	1.5-2.5 mm green to purplish with scarious margin	2-5-3 mm purplish with scarious margin	- -	2.5 mm
Petals	inner 3.5-4.5 mm, outer 5-6.5 mm white to purplish-white	inner 3-6 mm, outer 7-10 mm white	- -	6-7 mm white
Style	0.7-1.2 mm	0.5-1.2 mm	-	
Fruiting pedicel	6 mm	-	-	
Silicula	5-8 x 4-6 mm ovate broadly winged from the base	4.5-7 x 4-6 mm broadly ovate wing 0.1-0.3 mm broad below	5-8(-9) x 4.5-6(-7) mm obovate broadly winged from the base	7 x 6 mm -

The recommended IUCN Threat Category (IUCN, 2001) is Endangered (EN). It was collected from 3 localities in Kazdağ. The Nanekırı population is in good condition, but the other 2 populations are poor, and the distribution area is less than 10 km² in Turkey. Therefore, the recommended threat category for this species is Endangered.

Ecology: It grows on limestone at 1500-1600 m together with e.g. *Achillea fraasii* Sch.Bip. subsp. *troiana* Asch. & Heimerl, *Asperula sintenisii* Asch. ex Bornm., *Paeonia mascula* (L.) Mill. subsp. *arietina* (Anders) Cullen & Heywood, *Aristolochia pallida* Willd., *Saxifraga sancta* Gris., *Iris suaveolens* Boiss. & Reut., *Viola tricolor* L., *Cerasus prostrata* (Lab.) Ser. var. *prostrata*, *Astragalus heldreichii* Boiss., *Astragalus idae* Grossh., *Minuartia garckeana* (Asch. & Sint. & ex Boiss.) Mattf., *Linum boissieri* Asch. & Sint. & ex Boiss., *Tulipa sylvestris* L., and *Muscari bourgaei* Baker.

Discussion

Iberis is represented by 20 species in Europe (Da Silva & Franco, 1993), by 6 species in Flora Hellenica (Tan, 2002), and by 8 species in the Flora of Turkey (Hedge, 1965; Yıldırım, 2000, 2001). According to Franzen (1986) and Tan (2002), *I. saxatilis* was collected from Kazdağ (İda) by Sintenis in 1883. This specimen was not seen by Hedge (1965).

I. saxatilis is allied to *I. sempervirens* L. and *I. runemarkii* Greuter & Bardet (Syn: *Iberis arbuscula* Runemark), which are also woody at the base. It can be easily distinguished from *I. sempervirens* by its short flowering stems, 2.5-10 cm (not 15-30 cm), semi-cylindrical leaves (not oblong to oblong-spathulate), length and width of leaves, 3-9 x 1-1.5 mm (not 8-30 x 2-6 mm), outer petals to 6.5 mm (not 7-11 mm), and small fruit, 5-8 mm (not 8-10 mm). It differs from *I. runemarkii* in its semi-cylindrical leaves (not spathulate),

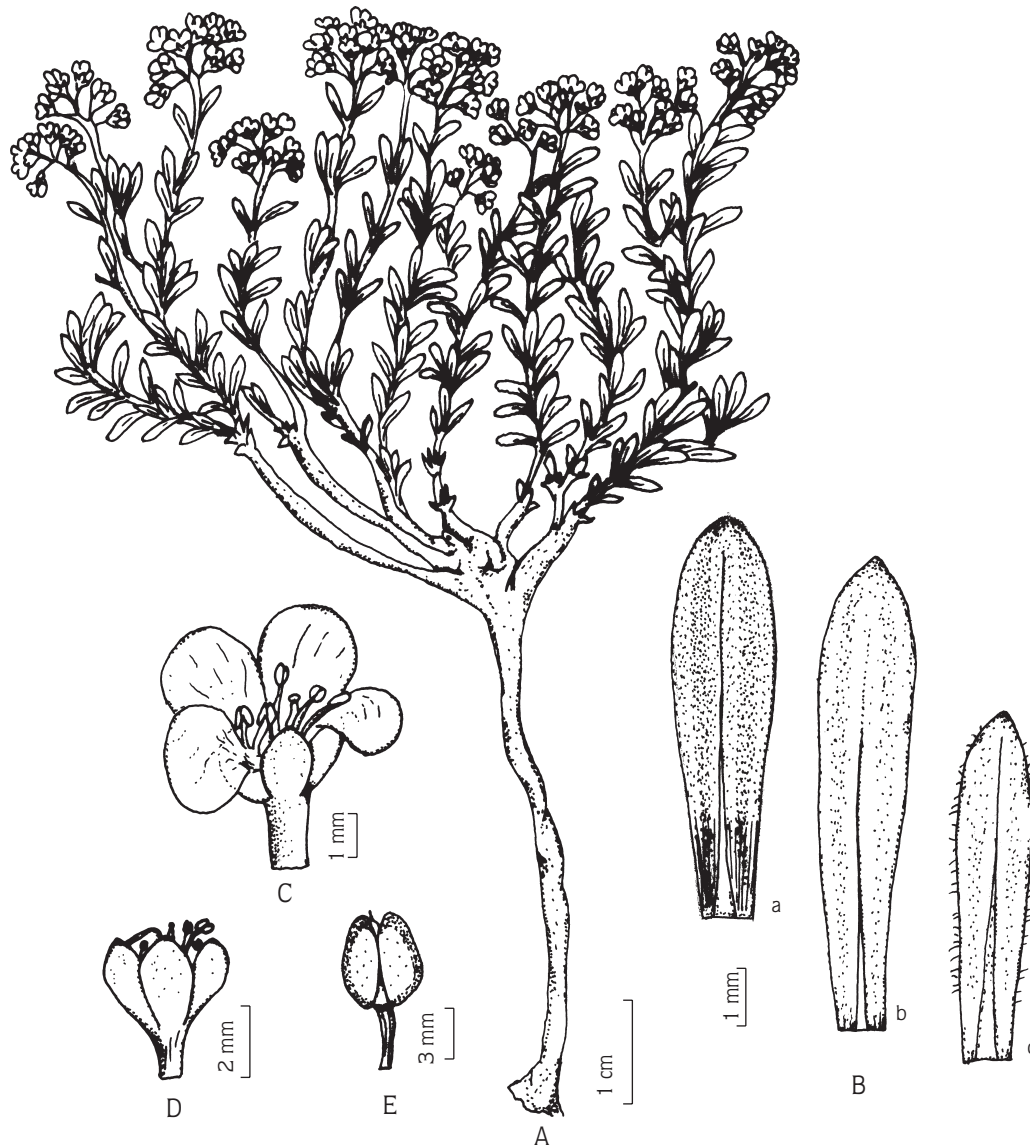


Figure 1. The plant parts of *Iberis saxatilis* L.: A-Habit, B-Leaves (a-in fruit period, b-in flowering period, c-in early flowering period), C-Flower, D-Calyx, E-Fruit.

length and width of leaves, 3-9 x 1-1.5 mm (not 10-30 x 2-5 mm), leaf margins entire (not 1-2 small teeth on each side), fruiting pedicel up to 6 mm (not 5-9 mm), sepals 1.5-2.5 mm (not c. 6 mm), outer petals to 6.5 mm (not up to 15 mm), and small fruit, 5-8 mm (not 8-10 mm).

Key to Related *Iberis* L. Species

1. Flowering stems 15-30 cm, leaves 8-30 x 2-6 mm, outer petals 7-15 mm
2. Leaves entire, sepals 2-3 mm, outer petals up to 11 mm
I. sempervirens

2. Leaves toothed at apex, sepals c. 6 mm, outer petals up to 15 mm
I. runemarkii
1. Flowering stems 2.5-10 cm, leaves 3-9 x 1-1.5 mm, sepals 1.5-2.5 mm, outer petals up to 6.5 mm.
I. saxatilis

I. saxatilis is widely distributed in Europe (Greece, Italy, Spain, Romania, France, Switzerland, Yugoslavia, Crimea and N. Africa). It was divided into 2 subspecies in Flora Europaea: *I. saxatilis* subsp. *saxatilis* and subsp. *cinerea* (Poiret) P.W.Ball & Heywood. *I. saxatilis* subsp.

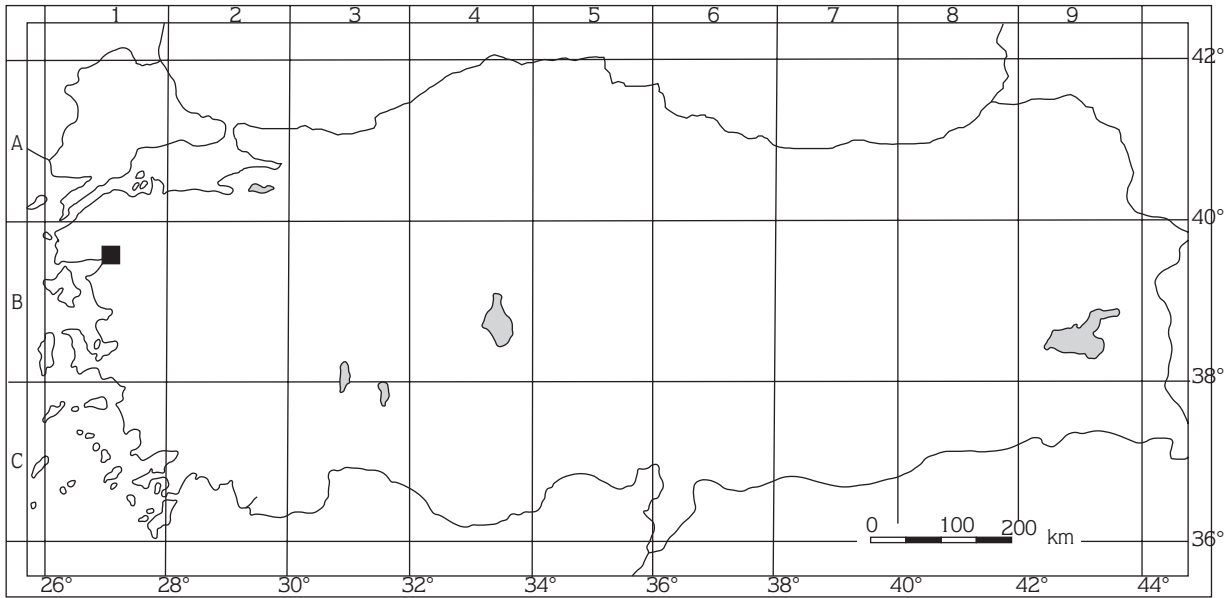


Figure 2. Distribution map of (■) *Iberis saxatilis* L. in Turkey.

saxatilis is apparently the Turkish plant. According to Flora Europaea, it differs from subsp. *cinerea* in its stem up to 15 cm (not 40 cm), glabrous to puberulent (not velutinous), leaves up to 1.5 mm wide (not 2 mm), and silicula with a shallow notch (not acute).

Key to related subspecies of *Iberis saxatilis* L.

Flowering stems up to 10 cm (Turkish plants), leaves up to 1.5 mm wide, silicula with a shallow notch
subsp. *saxatilis*

Flowering stems up to 40 cm, leaves up to 2 mm wide, notch of silicula acute
subsp. *cinerea*

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