

## Two New Varieties and a New Record in *Onobrychis* from Turkey

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**Abstract:** Two new *Onobrychis* Miller (*Fabaceae*) varieties are described and illustrated from east Anatolia: *O. fallax* Freyn & Sint. var. *longifolia* Aktoklu and *O. atropatana* Boiss. var. *grandiflora* Aktoklu. *Onobrychis meschetica* Grossh. is a new record from Turkey; a full description is given.

**Key Words:** Flora, *Fabaceae*, *Leguminosae*, *Onobrychis*, Turkey.

### Türkiye'den Korunga İçin İki Yeni Varyete ve Bir Yeni Kayıt

**Özet:** Bu makalede korunga için Doğu Anadolu'dan iki yeni varyete, resmi çizilerek betimlenmiştir: *O. fallax* Freyn & Sint. var. *longifolia* Aktoklu ve *O. atropatana* Boiss. var. *grandiflora* Aktoklu. *Onobrychis meschetica* Grossh. Türkiye için yeni bir kayıttır; türün geniş bir tanımı verilmiştir.

**Anahtar Sözcükler:** Flora, *Fabaceae*, *Leguminosae*, *Onobrychis*, Türkiye.

### Introduction

*Onobrychis* Miller comprises about 170 species, mainly in SW Asia, the Mediterranean region and in temperate Europe and Asia (Cronquist, 1981; Zohary, 1987). It has c. 53 species in Turkey (Hedge, 1970; Davis et al., 1988; Duman and Vural, 1990), excluding the one reported here.

These two new varieties and the new record are based on a revision of the genus in Turkey. Plant specimens were collected from Kars (NE Anatolia) and Malatya (E Anatolia). These specimens have been checked in the herbaria of AEF, ANK, CUFH, EGE, GAZI, HUB, ISTE, ISTO and OMU together with the Flora of Turkey account (Hedge, 1970; Davis et al., 1988), Flora URSS (Schischkin and Bobrov, 1972), Flora Iranica (Rechinger, 1984), Flora of Iraq (Townsend and Guest, 1984), Flora Palaestina (Zohary, 1987) and some general references (Boissier, 1872; Freyn, 1892; Şirjaev, 1925, 1926, 1931).

*Onobrychis fallax* Freyn & Sint. var. *longifolia* Aktoklu var. *nova* (Sect. *Onobrychis*). Figure 1.

A varietate typica foliis basalibus longe petiolatis majoribus, foliis caulibus supra glabris, subtus pilis adpressis differt.

Type: [Turkey B7 Malatya] Arguvan, Çobandere köyü, Şotik çayı vadisi, Sağırtaş mevki, 1200 m, 12 vii 1992, B.Yıldız-9684b (holo. hb. Mustafa Kemal University).

E. Anatolia. Endemic. Irano-Turanian element. Closely related to *Onobrychis fallax* but differing in the features indicated below.

*Onobrychis fallax* Freyn & Sint. var. *fallax*

1. Basal leaves ovate or ovate-oblong, petioles up to 10 cm, leaflets 7-15 x 3-9 mm.
2. Upper leaflets 10-22 x 2-3 mm, pilose on both surfaces, glabrous above.

*Onobrychis fallax* Freyn & Sint. var. *longifolia* Aktoklu

1. Basal leaves ovate-oblong or ovate-elliptic, petioles at least 10 cm, leaflets 15-34 x 7-11 mm.
2. Upper leaflets 17-29 x 2-5 mm, pilose below, glabrous above.



Figure 1. *Onobrychis fallax* var. *longifolia*: a. habitus, b. calyx, c. standard, d. wing, e. keel, f. stamens, g. ovary, h. fruit.

These varieties can be keyed out as follows:

1. Petiole of basal leaves up to 10 cm; leaflets 7-15 x 3-9 mm; upper leaflets 10-22 x 2-3 mm, pilose on both surface or rarely glabrous above var. *fallax*
1. Petiole of basal leaves at least 10 cm; leaflets 15-34 x 7-11 mm; upper stem leaflets 17-29 x 2-5 mm, pilose below, glabrous above var. *longifolia*

*Onobrychis atropatana* Boiss. var. *grandiflora* Aktoklu var. *nova* (Sect. *Heliobrychis* Bunge). Figure 2.

A varietate typica calycis 10-12 mm longis (non 8-10 mm longis), dentibus tubo triplo longioribus, vexillo 18-20(-23) mm longo (non 13-17 mm longo) et carina 3-4 mm brevior (non subaequilongae) differt.

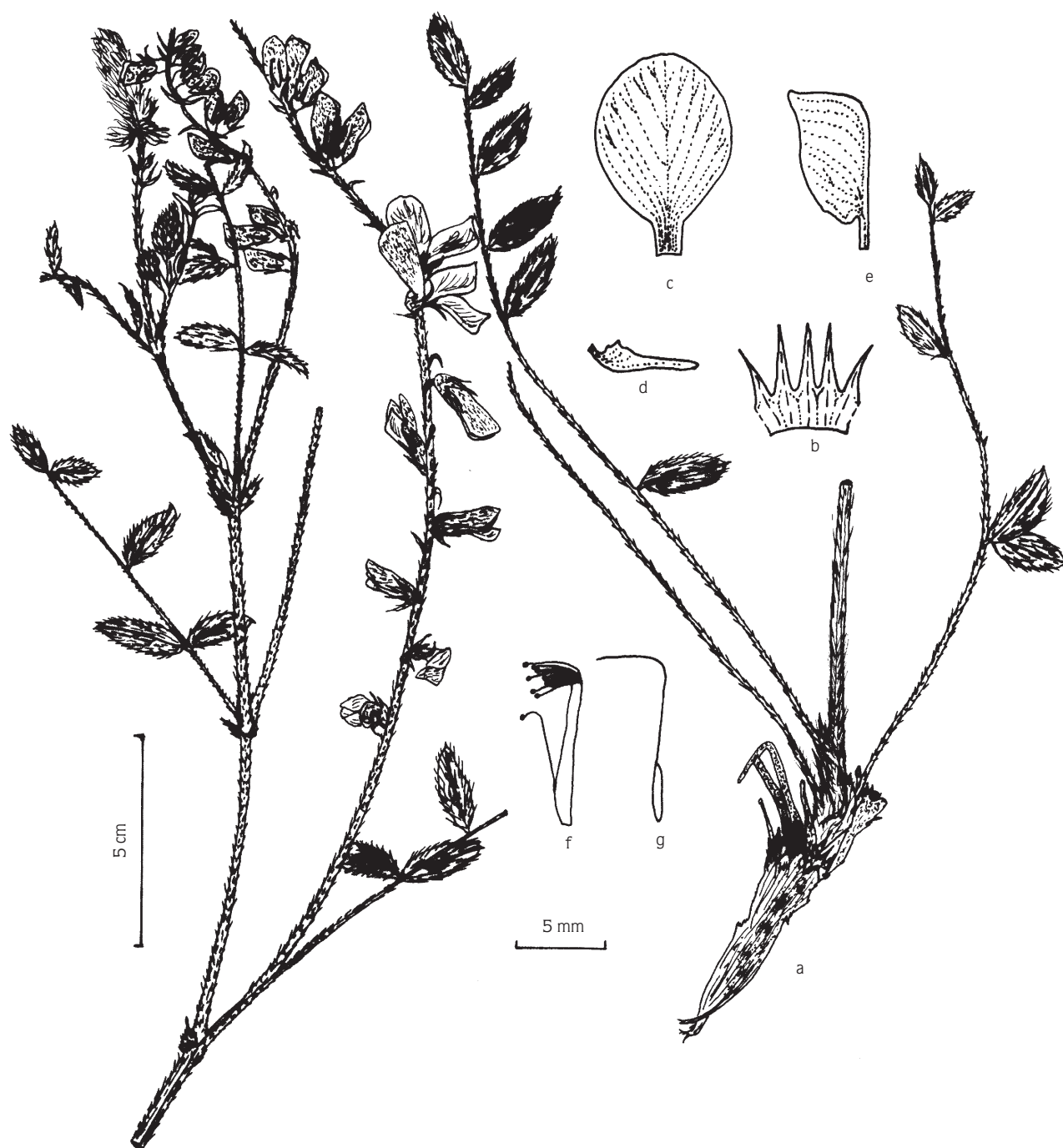


Figure 2. *Onobrychis atropatana* var. *grandiflora*; a. habitus, b. calyx, c. standard, d. wing, e. keel, f. stamens, g. ovary.

Type: [Turkey A9 Kars] Sarıkamış, Karakurt, Mantaş deresi mevkii, 1450 m, 17 vi 1980, O.Güneş-1677 (holo. HUB).

NE. Anatolia. Endemic. Irano-Turanian element.

Closely related to *O. atropatana* but differing in the features indicated below.

*Onobrychis atropatana* Boiss. var. *atropatana*

1. Leaves indumentum adpressed pilose below and subglabrous above,
2. Calyx 8-10 mm, including teeth c. 2 x length of tube,
3. Standard as long as keel.

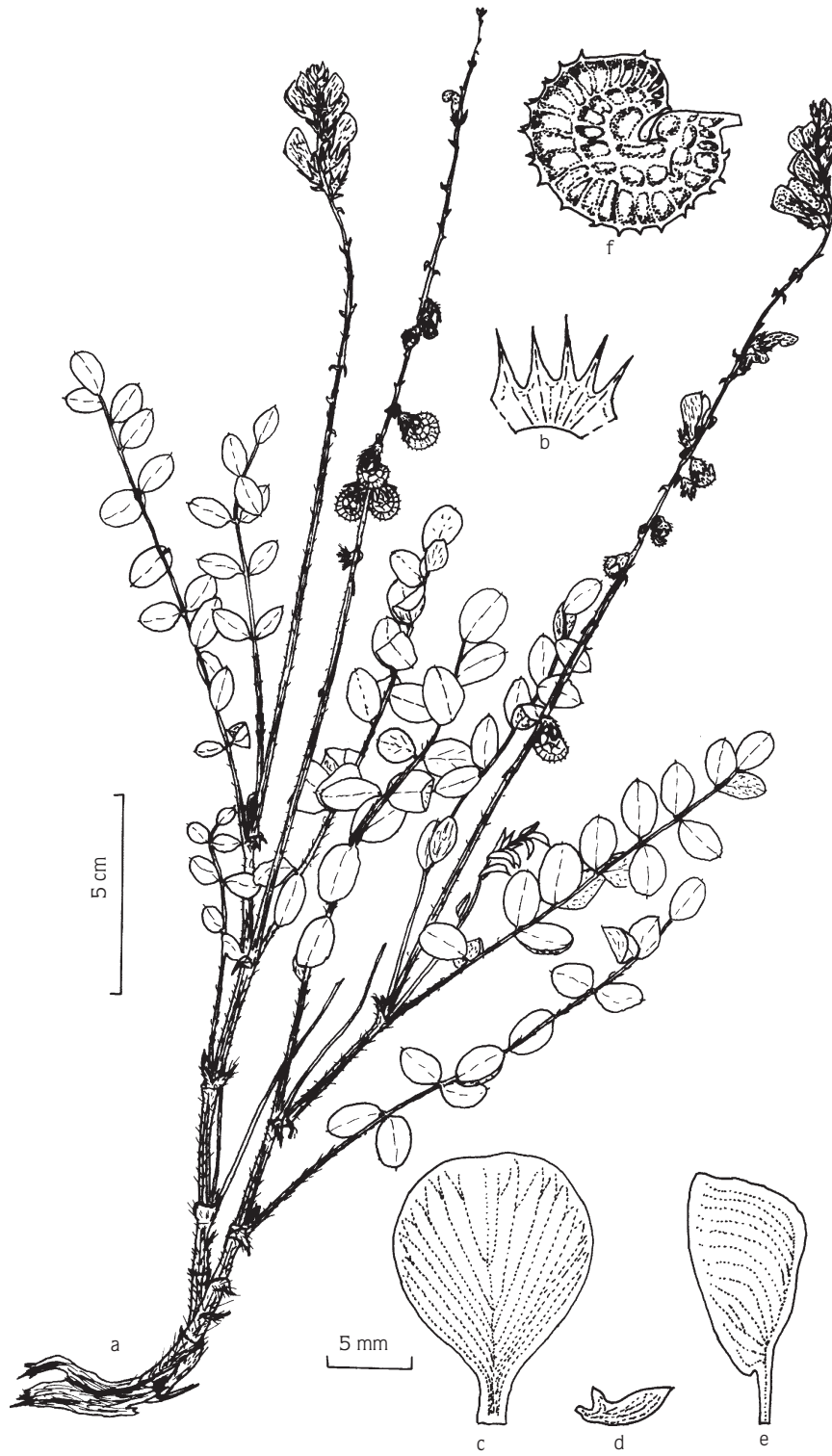


Figure 3. *Onobrychis meschetica*: a. habitus, b. calyx, c. standard, d. wing, e. keel, f. fruit.

*Onobrychis atropatana* Boiss. var. *grandiflora* Aktoklu

1. Leaves indumentum adpressed and spreading pilose on both surfaces,
2. Calyx 10-12 mm, including teeth c. 3 x length of tube,
3. Standard 3-4 mm longer than keel.

The varieties can be keyed out as follows:

1. Calyx 8-10 mm, teeth 2 x length of tube; standard as long as keel var. **atropatana**
1. Calyx 10-12 mm, teeth 3 x length of tube; standard 3-4 mm longer than keel var. **grandiflora**

**O. meschetica** Grossh. in Flora U.R.S.S., Diagnoses of new species mentioned in vol. XIII, p.554 (1948). [Subgen. *SisYROSEMA* (Bunge) Grossh. sect. *Hymenobrychis* DC.] Figure 3.

Syn.: *O. circinata* Ledeb. var. *lamprocarpa* Trautv. in Acta Hort. Petrop. 4:133 (1876); *O. circinata* Ledeb. var. *caucasica* Trautv. l.c. 133 (1876); l.c.: Širjaev, Onobr. Gen. Rev. 2: tab. 8, f. 49 et 50 (1926).

Perennial, 35-60(-80) cm high, stems loosely branching, light green striate, more or less spreading hairy, hairs up to 2 mm long at base of stem. Stipules 6-7 mm, free, lanceolate, acuminate, densely adpressed and spreading pilose. Basal leaves with 2-4 pairs, median and upper leaves with 7-8(-9) pairs of leaflets, leaflets 8-18 x (4-)6-12 mm, ovate or elliptic, rounded to obtuse at apex, minute mucronate, glabrous above, sparingly pubescent beneath. Peduncles twice as long as leaves; pedicels 1-1.5 mm, pilose. Inflorescence many-flowered, ± lax, elongating in fruit. Bracts 3-5 mm long, lanceolate-acuminate, adpressed pilose; bracteoles 1 mm long, filiform, pilose. Calyx 5-6 mm, pubescent all over; tube 2

mm; teeth 3-4 mm, 2(-3) x length of tube. Corolla light yellow with darker veins; standard 14-17(-18) x 10-13 mm, obovate, retuse, ± 3 mm clawed, dense adpressed pilose dorsally; wings 6-7 x 1.5-2 mm, subfalcate, ± 1.5 mm clawed, 1.5 mm horizontal auriculate, glabrous; keel 14-17 x 5.5-6.5 mm, slightly truncate, 3-3.5 mm clawed, glabrous. Anthers 1 mm; filaments 15-17 mm. Ovary 2-2.5 x 1-1.5 mm, reniform, 1-ovulate, glabrous; style 16-18 mm. Fruit 12-14(-16) x 9-11(-13) mm, glabrous even when young, ripe fruits shiny with dark tinge, margin with 0.5-1 mm long and villous at apex teeth, disc with 3-4 short rather firm acute prickles; marginal cells nearly square or one and a half times as long as wide. Fl 5-7, Dry slopes, stony places and gravels in the low and the moderately high belt.

Type: [S. Transcaucasus] prope Borzhomi, 2 vi 1865, Radde 35 (LE).

**A9** Kars: Posof, Binbaşı Eminbey-Yurtbeyler köyü arası, yolboyu korunmuş alanlar, 1500-1900 m, 5 viii 1982, N. Demirkuş-1805 (HUB, Hb. Mustafa Kemal University).

This species is centred in S. Transcaucasia (Georgia) and NE Anatolia (Kars). Related to *O. radiata* (Desf.) M.Bieb. [3:587], but differing in the shorter calyx (5-6 mm, not 8-10 mm), darker yellow-veined flowers (not red-veined or rarely absent), subfalcate wings (not ovate-oblong), glabrous and shiny fruit (not pubescent or villous and dull). It resembles *O. albiflora* Hub.-Mor. [10:131], but it is easily distinguished by being more or less spreading hairy, with yellow corolla and subfalcate wings.

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