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SADIK ERIK & NASIP DEMIRKUŞ

New species from NE Turkey: *Chaerophyllum posofianum (Apiaceae)* and *Vicia erzurumica (Fabaceae)*

Abstract

Erik, S. & Demirkuş, N.: New species from NE Turkey: *Chaerophyllum posofianum (Apiaceae)* and *Vicia erzurumica (Fabaceae).* – Willdenowia 28: 151-156. 1998. – ISSN 0511-9618.

Chaerophyllum posofianum and *Vicia erzurumica* from the NE Turkish districts of Posof and Tortum, respectively, are described as species new to science and illustrated.

Introduction

The total number of higher plant species in the Turkish flora reached 8792 with the publication of the supplement volume of the 'Flora of Turkey' (Davis 1988). Since then, studies have been continued and even increased and new species and records have been added. According to the check-list by Özhatay & al. (1994), additional 133 species were reported until then, rising the total number of species known from Turkey up to 8925. The localities in which new species have been collected were often botanically badly explored areas, such as restricted military areas and regions close to the border of the country.

In this article further two species from Turkey are described as new to science. The first is *Chaerophyllum posofianum* S. Erik & N. Demirkuş. It was collected during the research on the flora of the Çiçek Mountains in the district of Posof, a project supported by the Turkish Scientific and Technical Research Council (TÜBITAK). This species is the second new *Chaerophyllum* species from this province after the discovery of *Ch. karsianum* Kit Tan & Ocakverdi (Tan & Ocakverdi 1980). The Çiçek Mountains are very near to the Armenian border and harbour an interesting flora. Many taxa collected there turned out to be new to the country or to science.

The second species is *Vicia erzurumica* N. Demirkuş & S. Erik, discovered in the Tortum district in the province of Erzurum during our studies on the flora of E Anatolia. A first specimen was collected in 1984 but when we recognized that it might be a new species, more specimens were collected from the same locality in 1995.

Preparing this contribution to the flora of Turkey, the following floras besides Davis (1965-88) have been consulted: Boissier (1888), Komarov (1972), Šiškin & Bobrov (1974), Czerepanov (1995), Chrtková-Žertová & al. (1979) and Tutin & al. (1968).

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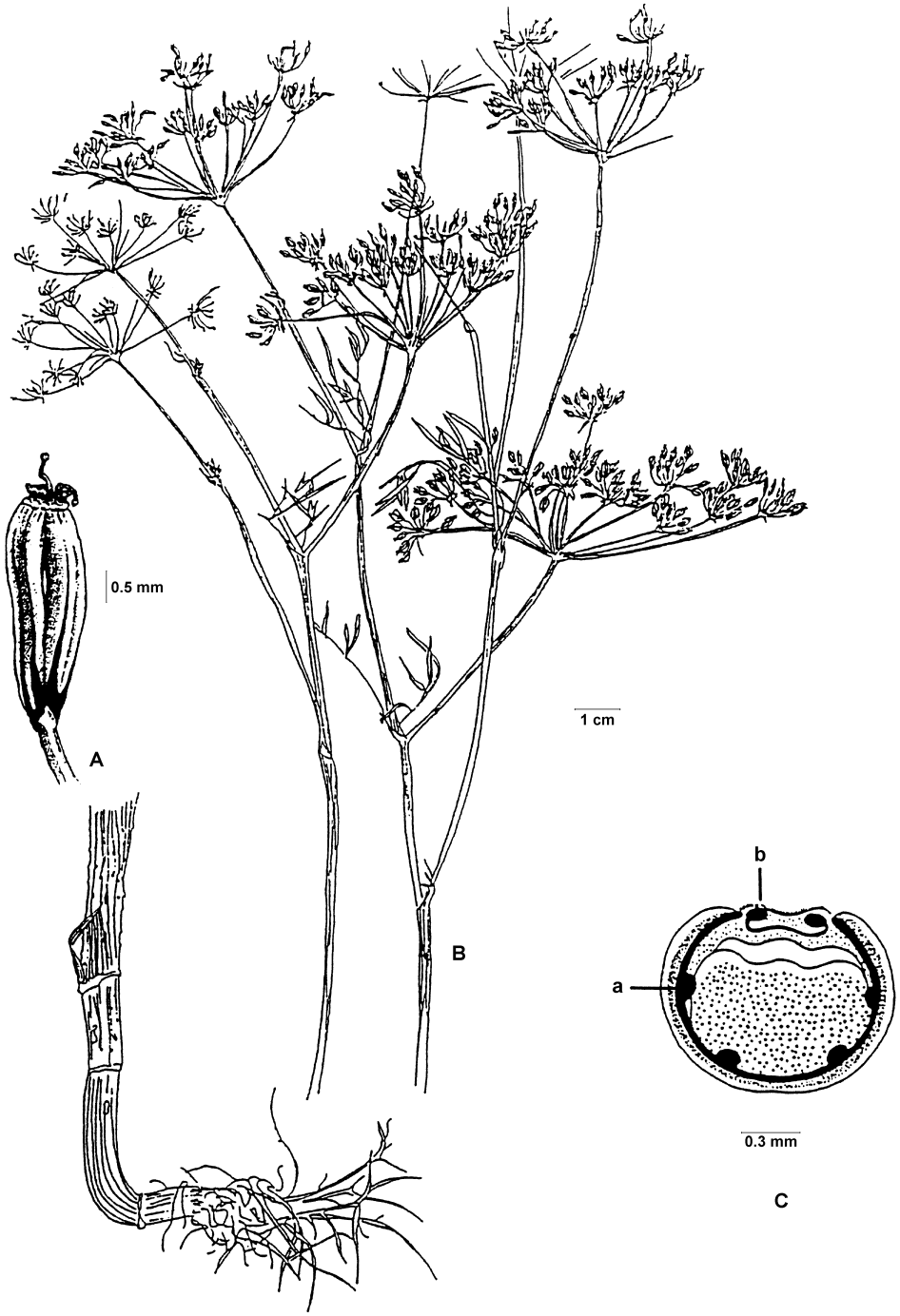


Fig. 1. *Chaerophyllum posofianum* – A: fruit; B: habit; C: mericarp cross section (a: dorsal vittae; b: commissural vittae). – Drawn after the type.

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Chaerophyllum posofianum S. Erik & N. Demirkuş, **sp. nova** – Fig. 1.
Holotypus: Turkey, A9 Ardahan (Kars), Posof, fields between Al village and Posof river, 1500-1700 m, 27.7.1985, *Demirkuş 2960* (HUB).

Affinis *Chaerophyllo bulboso* L. et *Ch. karsiano* Kit Tan & Ocakverdi sed pedunculis ebracteis, radiis multis, antheris purpureis et foliis integerrima differt.

Plant biennial, erect, up to 100 cm high, with short tuberous roots, stem terete, striate, scabrid below, glabrous above; fibrous collar absent. Lower leaves 3-pinnate, upper ones simply pinnate, glabrous or glabrescent, green. Leaflets linear-elliptical, up to 18 × 1.5 mm, margin slightly denticulate, midrib obvious on the lower face, acute at the apex. Rays 16-19, 1-4.5 cm long, pilose in flower, glabrous in fruit, striate, unequal. Raylets 16-19, 1-6 mm long, glabrous, unequal. Bracts absent; bracteoles 4-5, triangular-lanceolate to lanceolate, 2.5-4 mm long, ciliate at upper part, caudate at apex. Fertile flowers 3-7 per umbellule. Sepal obsolete. Petals ovate, c. 0.75 × 1 mm, apex apiculate, curved downwards appearing emarginate, white, glabrous. Anthers purple, filaments 1.5-2 mm long. Fruit glabrous, linear-oblong, 1.5-2 × 3.5-4 mm, narrowed at base, truncate at apex; styles divergent, c. 1 mm; stylopodium subconical in fruit;

Tab. 1. Diagnostic characters of *Chaerophyllum bulbosum, Ch. karsicum* and *Ch. posofianum.*

Characters	*Ch. bulbosum*	*Ch. karsianum*	*Ch. posofianum*
Leaf segments	toothed or deeply divided	entire	entire
Rays	6-13	12-16	16-19
Bracts	0-1	1-2	0
Bracteoles			
number	3-6,	6-8,	4-5,
indument	glabrous	ciliate	ciliate
length [mm]	1.5-3	4-6	2.5-4
Petals			
colour	white	fading pink	white
size [mm]	1 × 1.5	1.75-2.5	0.75-1
Anther colour	yellow	yellow	purple
Fruit size [mm]	2-2.5 × 4-5	1.5-2 × 5-6	1.5-2 × 3.5-4

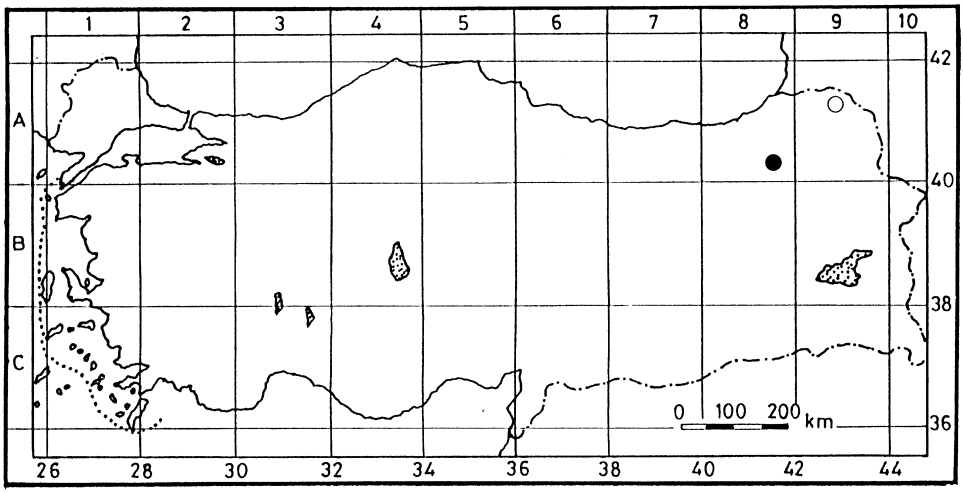


Fig. 2. Known distribution of *Chaerophyllum posofianum* (○) and (●) *Vicia erzurumica.*

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primary ridges obvious, rounded, secondary ridges absent, commissural vittae 2, dorsal vittae 4. Flowering in July.

Chaerophyllum posofianum is closely related to *Ch. bulbosum* L., a widespread species known from N Turkey, Europe and Caucasia, and *Ch. karsianum* Kit Tan & Ocakverdi, recently described from the same province as our new species. *Ch. posofianum* is distinguished from *Ch. bulbosum* by its ebracteate peduncles, 16-19 (versus 6-13) rays, ciliate (versus glabrous) bracteoles and purple (versus yellow) anthers, and from *Ch. karsianum* by its more numerous rays (versus 12-16), ebracteate (versus 1-2 bracteate) peduncles, white (not fading pink) petals and purple (versus yellow) anthers (Tab. 1).

The district of Posof, in which the new species has been collected, is the northeasternmost district of Turkey, adjacent to Georgia and Armenia. The species may thus also occur in the adjacent regions of Armenia and Georgia. Presently it is considered endemic to Turkey and since it was collected in the Euro-Siberian belt, it belongs to the Euro-Siberian element. Until recently, the number of Turkish *Chaerophyllum* species recognized was 13 (Hedge & Lamond 1972), but it has increased to 15 with the discovery of *Ch. karsianum* and *Ch. posofianum.*

Vicia (sect. *Cracca* S. F. Gray) ***erzurumica*** N. Demirkuş & S. Erik, **sp. nova** – Fig. 3.
Holotypus: Turkey, A8 Erzurum, Tortum, Azort Yaylası, orman yolu, taşlık alanlar, 1900 m, 20.7.1995, *Demirkuş 4481* (HUB; isotypi: GAZI, B). – Paratypus: A8 Erzurum, Tortum, Azort Köyünden Yaylaya, Sarıçam ormanı, taşlı yamaçlar, 1950 m, 18.7.1984, *Demirkuş 2176* (HUB).

Affinis *Vicia glareosa* Davis sed foliolis 5-juglis (non 4), oblongo-obovatis, truncato mucronulatis pedunculis brevibus, 1-3 mm (non 4-13 mm), ovariis cum ovulis 5-6 (non 2) differt.

Glabrous perennial. Stem short, up to 10 cm, thin, wiry, many-branched, bearing subterranean stolons. Leaves paripinnate, rachis ending in a 1 mm long, blunt mucro. Leaflets usually 5-paired, 4-8 × 2-4 mm, oblong-obovate, truncate and mucronulate at apex, obtuse and asymmetrical at base, glabrescent, lamina white-punctate, margins revolute. Stipules 2-4 mm, broadly lanceolate, obviously semisagittate, cuspidate to caudate at apex, entire. Flowers solitary in leaf axils, 13-20 mm, pale yellow, purple when dry. Calyx 6 mm, obliquely campanulate; teeth triangular, acuminate, the upper acuminate and 25 mm long, the others triangular and 2 mm long, slightly villose, tinged purple. Standard platonychioid, glabrous, apex obcordate, purplish veined up to apex, limb 12 mm, claw 8 mm; wings 16-18 mm with claw 8 mm; carina 13-14 mm, claw 8 mm. Ovary up to 13 × 1 mm, glabrous, 5-6-ovuled. Style 4-5 mm, curved, pubescent all around immediately below the stigma, laterally compressed, tufted above. Stamens 10, diadelphous, nine filaments 3.5-4 mm, the last 7 mm long. Legume oblanceolate, up to 27 × 7 mm, 5-6-seeded, beak curved, 4-5 mm long, glabrous. Seeds 3.5 × 3 mm, oblong-orbicular, slightly compressed, hilum on the side, testa thin, smooth, usually 2-4 seeds reaching maturity. Flowering in July.

Tab. 2. Diagnostic characters of *Vicia erzurumica* and *V. glareosa.*

Characters	*V. erzurumica*	*V. glareosa*
Leaves (in flower)	(4-)5(-6) paired	4-paired
Leaflets	oblong-obovate, truncate, mucronulate	elliptical-oblanceolate, acute, mucronate
Peduncle length [mm]	1-3(4)	4-13
Stipule	broadly lanceolate, obviously semi-sagittate, cuspidate to caudate	narrowly lanceolate, acute to acuminate, not obviously semisagittate
Ovules	5-6	2
Legume	up to 25 mm, oblanceolate, glabrous, 5-6-seeded, beak 4-5 mm	unknown

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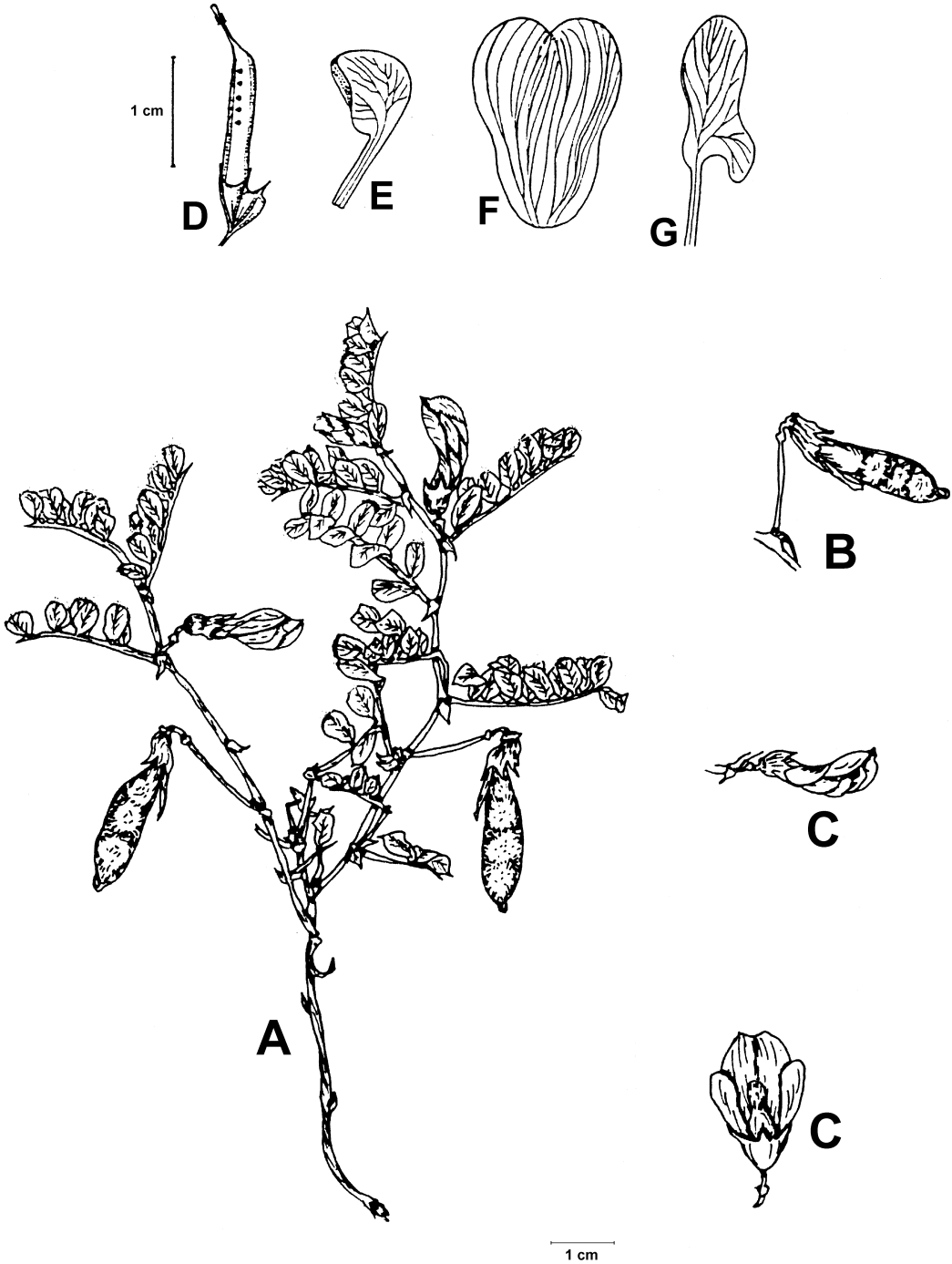


Fig. 3. *Vicia erzurumica* – A: habit; B: fruit; C: flower; D: ovary; E: carina; F: standart; G: wing. – Drawn after the type.

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The species is endemic to Turkey, known only from the type locality, and can be considered an Irano-Turanian element. With its long, wiry stems and subterranean stolons it is well adapted to stony slopes.

Vicia erzurumica is a very distinct species with no close relatives. However, in both habitus and habitat it resembles *V. glareosa* of *V.* sect. *Cracca* from the neighbouring province of Tunceli (Davis & Plitmann 1970). From this species it is distinguished by 5-paired leaves, truncate-mucronulate leaflets, shorter peduncles and the 5-6-ovuled ovary (Tab. 2). Like *V. glareosa*, also *V. erzurumica* has a platonychioid standard and the laterally compressed and apically tufted style, which are the main diagnostic characters of *V.* sect. *Cracca* (Kupicha 1976). The new species can thus be safely placed in *V.* sect. *Cracca* near *V. glareosa*.

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