

## A new subspecies *Trigonella coerulescens* (Fabaceae), from Turkey

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*Trigonella coerulescens* (Bieb.) Hal. subsp. *kemerensis* R.S. Göktürk *subsp. nova* (Fabaceae) is described from SW Anatolia, Turkey and illustrated. It grows on sandy seashores in Olimpos-Çıralı (Kemer) and Adrasan (Kumluca) beaches. It is closely related to subsp. *coerulescens*, an endemic taxon confined to Olimpos-Beydağları National Park. Diagnostic morphological characters of subsp. *kemerensis* and subsp. *coerulescens* are discussed.

Key words: Fabaceae, new subspecies, taxonomy, *Trigonella*

In April 2007, during an expedition to Olimpos-Beydağları National Park, as a part of the Project “Guide book of Olimpos-Beydağları National Park” I collected some interesting *Trigonella* specimens from sandy seashores. In total, I collected 22 specimens from two localities. The specimens were checked against Ivimey-Cook (1968), Huber-Morath (1970), Feinbrun-Dothan (1978), Anzalone *et al.* (1982), Meikle (1985), Davis *et al.* (1988), Tan and Panista (2000) and Özhatay and Kültür (2006) and compared with specimens in ANK, GAZI and HUB.

Since the genus *Trigonella* was revised by Huber-Morath (1970) for the *Flora of Turkey*, only one new species (*T. pseudocapitata*) has been described from the country (Davis *et al.* 1988), and later *T. rechingeri* was added as a new national record (Tan & Panista 2000). With the subspecies described below, the total number of *Trigonella* taxa occurring in Turkey now stands at 54.

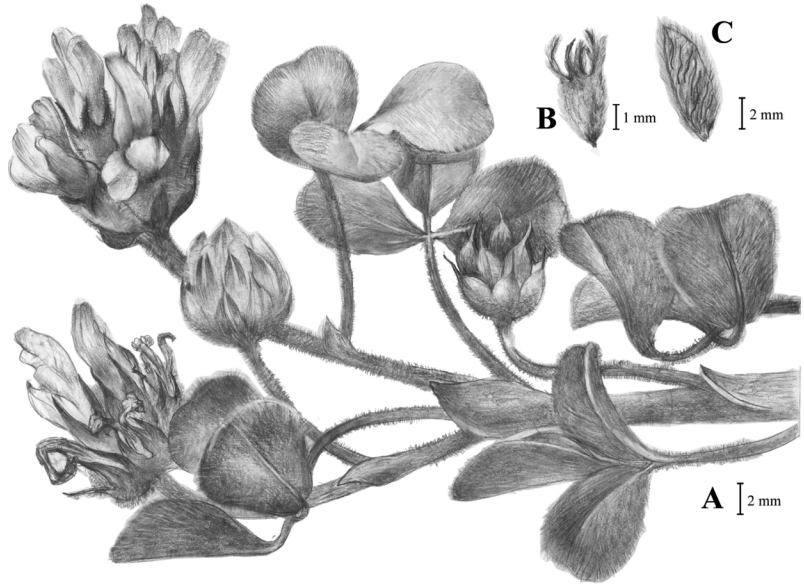
***Trigonella coerulescens* (Bieb.) Hal.**  
subsp. ***kemerensis*** R.S. Göktürk, *subsp.*  
*nova* (Fig. 1) (Sect. *Biebersteinianae*)

*Affinis T. coerulescensi*, sed ab *T. coerulescens*  
*tomentosa* (non *villosa*), *stipulis integris, acutis*  
*ad subacuminatis* (non *denticulatis, subulatis*),  
*calycis dentibus linearis, brevioribus quam tubis*  
(non *subulatis, aequalibus cum tubis*) differt.

HOLOTYPE: Turkey. C3 Antalya: Kemer, Çıralı, sandy seashores, 3 m, 2.IV.2007, 36°23'895"N, 30°28'537"E, R. S. Göktürk 6013 (AKDU; isotypes ANK, GAZI, HUB). — PARATYPES: Turkey. C3 Antalya: Kemer, Çıralı, sandy seashores, 3 m, 21.IV.2007, 36°23'895"N, 30°28'537"E, R. S. Göktürk 6034 (AKDU!); Kumluca, Adrasan, sandy seashores, 5 m, 21.IV.2007, 36°18'212"N, 30°27'967"E, R. S. Göktürk 6032 (AKDU!).

ETYMOLOGY. Kemer is one of the most important tourism cities in the Antalya province of Turkey.

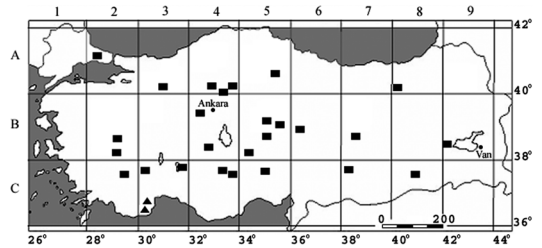
Velvety annual herb. Stem prostrate to ascending, branched from base, tomentose hairy,



**Fig. 1.** *Trigonella coerulescens* subsp. *kemerensis* (from the holotype). — **A:** Habit. — **B:** Calyx. — **C:** Fruit.

up to 20 cm. Stipules broadly lanceolate or ovate, 2–5 mm long, entire, acute to subacuminate at apex. Leaflets obovate, dentate in the upper part, densely tomentose hairy, thick, 5–10 × 3–8 mm. Peduncle up to 2.5 cm long. Inflorescens capitate, 12–15-flowered, dense; ovate, 8–15 × 4–6 mm in flower; oblong, 12–20 × 10–12 mm in fruit. Bracts lanceolate, densely tomentose hairy, 2–2.5 mm long, longer than pedicel. Calyx tubular, densely tomentose hairy, 5 mm; teeth linear, shorter than tube. Corolla blue, 7–10 mm long. Legume oblong, 7–9 × 2–2.5 mm (excluding beak), densely tomentose hairy, erect or patent, with anastomosing veins, brown; beak 3–5 mm long. Seeds ovate, brown, finely tuberculate, 2 × 1–1.2 mm.

**DISTRIBUTION, ECOLOGY AND PHENOLOGY.** Endemic. Çıralı and Adrasan (Olimpos-Beydağları National Park; Fig. 2) in Antalya. East Mediterranean element. *Trigonella coerulescens* subsp. *coerulescens* is common in Irano-Turanian region in Turkey. *Trigonella coerulescens* subsp. *kemerensis* was collected from two localities in Kemer and Kumluca district in Antalya province (in Turkey) by the author. It grows on sandy seashores together with *Anthemis ammophila* (endemic), *Cakile maritima*, *Eryngium maritimum*, *Lotus halophilus*, *Medicago marina*, *Euphorbia peplis*, *Anchusa aggregata* and *Silene kotschyi* var. *maritima*. It



**Fig. 2.** Geographical distribution of *Trigonella coerulescens* subsp. *kemerensis* (▲) and *T. coerulescens* subsp. *coerulescens* (■) in Turkey.

flowers in March–April and fruits in April–May.

*Trigonella coerulescens* subsp. *kemerensis* is clearly different from subsp. *coerulescens* by the tomentose (vs. villous hairiness), entire, acute to subacuminate stipules (vs. denticulate and subulate stipules), and the linear calyx teeth shorter than the tube (vs. subulate and as long as the tube). In addition it differs by the broadly lanceolate or ovate stipules, up to 2.5 cm long peduncle and lanceolate bracts. Also, subspecies *coerulescens* grows in limestone slopes, *Pinus* forests, steppe and fallow fields at 300–1300 m.

**REPRESENTATIVE SPECIMENS EXAMINED** of *Trigonella coerulescens* subsp. *coerulescens*: — **Turkey.** A4 Ankara: Ayaş-Beypazarı, Beypazarı'na 10 km kala, tarla kenarlarındaki marnlı topraklar ve alüvyonal düzlükler, 650 m, *M. Vural* 4109 (GAZI); Ankara-Çankırı yolu 81. km, andezit kayacha step, 800–840 m, *H. Duman* (5782) & *Z. Aytaç* (GAZI).

A4 Kırıkkale: Koçubaba kasabası, meşe çalılığı içi, 1300 m, A. A. *Dönmez 2005* (HUB). B2 Denizli: Geyra-Babadağ ca. 12–14 km, 1200–1300 m, çayırliklar, *H. Akan 3432 Z. Aytaç & M. Ekici* (GAZI). B5 Nevşehir: Uçhisar Batısı, yol kenarı, 1300 m, *M. Vural (4490) & Ü. Kol* (GAZI); Göreme, Göreme'nin 5 km batısı, tarla kenarı ve volkanik tüf, 1110 m, *M. Vural (4643) ve ark* (GAZI). B5 Aksaray: Kızılkaya köyü, kutlukaya mevkii, 1150 m, *F. Ertuğ 384* (ANK). C2 Afyon: Dazkırı, top tepesi, step, 1000 m, *Z. Aytaç 7338* (GAZI); Dazkırı, Hasan dede köyü, çay kenarı, 1000 m, *Z. Aytaç 1148* (GAZI). C2 Burdur: Salda gölü, Yeşilova, 900 m, yol kenarı, *H. Akan 5748 & Ekici* (GAZI). C4 Konya: Karapınar, erozyon önleme sahası, 1000–1100 m, *Z. Aytaç (3105) & H. Duman* (GAZI).

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