

Genista vuralii (Fabaceae), a new species from Turkey

Ahmet Duran¹ & Hüseyin Dural²

¹⁾ Kırıkkale University, Faculty of Science and Literature, Department of Biology, 71450 Kırıkkale-Turkey

²⁾ Selçuk University, Faculty of Science and Literature, Department of Biology, 420131 Konya-Turkey

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Genista vuralii A. Duran & H. Dural *sp. nova* is described from the transition territory of Central and North Anatolia in Turkey. It is related to *G. lydia* and *G. sandrasica*, from which it mainly differs in its leaves, calyx and legumes.

Key words: Fabaceae, *Genista*, taxonomy

Introduction

The genus *Genista* includes chiefly deciduous shrubs or small trees in the Mediterranean area and western Asia. In total, there are about 140 species in the genus. It is represented in *Med-Checklist* by 106 (Greuter *et al.* 1989), in *Flora Europaea* by 56 (Gibbs 1968), in *Flora of the U.S.S.R.* by 19 (Shishkin 1945) and in *Flora of Iraq* (Townsend & Gust 1974) by one species.

Genista was previously revised by Gibbs (1970) for Turkey. Only one species has since been described from Turkey, *G. sandrasica* (Davis *et al.* 1988). Adding the species described here raises the number of Turkish species of *Genista* to 14.

The authors collected specimens of *Genista* in 1997 on the Dumanlı Mountain, Çankırı and in 2001 on the Ilgaz Mountain. The specimens were compared with specific descriptions in Gibbs (1968, 1970) and Davis *et al.* (1988), but no match was found. *Genista lydia* and *G. sandrasica* are closest, and we studied 14 specimens of the former and two of the latter deposited in

ANK, HUB, GAZI and ADO. Flowering specimens belonging to the new species were identified as *Genista tinctoria* and *G. lydia* in ANK.

Genista vuralii* A. Duran & H. Dural, *sp. nova (Figs. 1 and 2)

Affinis G. lydiae, sed fruticulus parvus procumbens vel adscendes, 5–18 cm longus (nec frutex procumbens vel erectus 10–200 cm) etc. dif-fert.

TYPE: Turkey. A4 Çankırı: Atkaracalar, Dumanlı Dağı, Taşlık vicinity, 1350–1500 m, stony places, 12.VI.1997 A. Duran 4364 & H. Dural (holotype ADO; isotypes KNYA, GAZI, ANK, HUB).

Procumbent or ascending small shrublet with several spreading stems 5–18 cm long. Stems and branches 0.5–1.5 mm diameter, with 4–6 ridges separated by grooves, white pilose, sometimes sparsely pilose below; twigs green. Stipules 0.5–1 mm long, erect, subulate. Leaves alternate, persistent, oblanceolate to elliptic, (4–)6–15

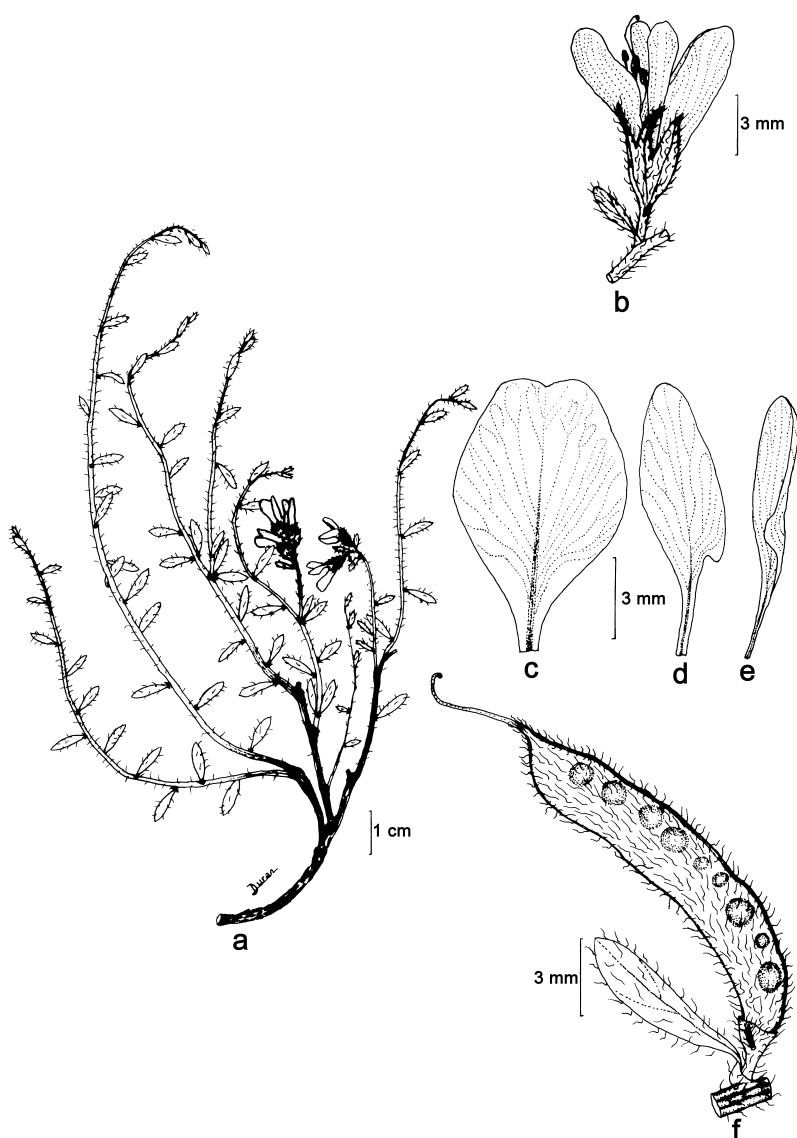


Fig. 1. *Genista vuralii* (from holotype, drawn by A. Duran). — **a**: Habit. — **b**: Flower. — **c**: Standard. — **d**: Wing. — **e**: Keel. — **f**: Fruit.

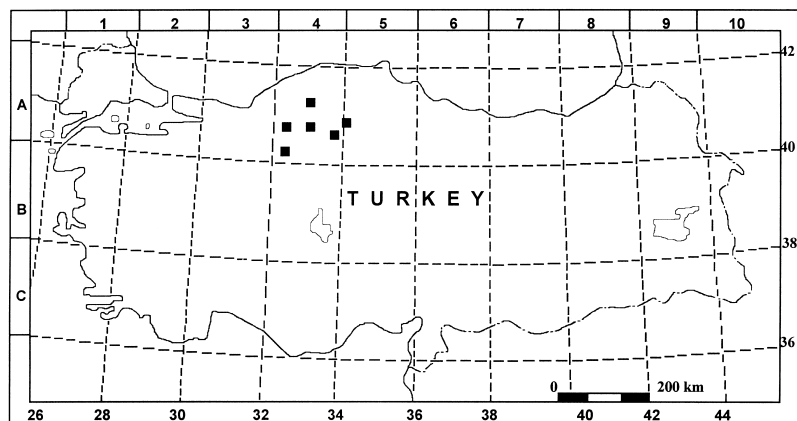
$\times 1.3$ – 2.5 (– 3) mm, entire, $\pm$ obtuse to acute, entirely sparsely pilose or rarely glabrous below. Flowers in short 2–8-flowered racemes, borne on short branches. Lower bracts foliaceous, 3.5 – 7×1 – 1.4 mm, uppermost reduced in size. Pedicels 1 – 2 mm long; bracteoles linear, ca. 1.5 mm long. Calyx 4.5 – 6 (– 7) mm long, densely subadpressed villous, divided to slightly more than halfway; upper teeth triangular-lanceolate, 2.5 – 3.5 mm long, lower narrowly lanceolate, 2 – 3 mm long. Corolla yellow, 8 – 11 mm long, glabrous or sometimes with a few eglandular simple white hairs; standard broadly ovate, cuneate at base, $\pm$ equaling keel; wings slightly shorter than stand-

ard and keel, obtuse. Ovary with 3 – 10 ovules, densely white villous. Legume linear-oblong, to 22×4 mm, densely white villous, with thickened dorsal and ventral sutures; 3 – 8 seeds. Flowering June–July, fruiting July–August.

ETYMOLOGY: This species is named in the honour of the eminent Turkish botanist Professor Mecit Vural (Biology Department, Gazi University), who is an expert on the flora of Turkey.

DISTRIBUTION AND SUGGESTED CONSERVATIONAL STATUS: Endemic, grows in the transition territory of the Central and North Anatolia (Çankırı, Kastamonu, Bolu, Ankara provinces), Euro-Siberian

Fig. 2. Distribution map of *Genista vuralii* (■).



element. Recommended IUCN (2001) category vulnerable (VU), because it is known from only nine localities.

HABITATS: *Genista vuralii* grows in rocky areas, steppes and forest clearings with *Alysum thymops*, *Dorycnium pentaphyllum* subsp. *anatolicum*, *Sedum acre*, *Bunium microcarpum* subsp. *bourgaei*, *Achillea teretifolia*, *Thymus sipyleus* subsp. *rosulans*, *Galium verum* subsp. *glabrescens*, *Ventenata dubia*, *Quercus* spp., *Pinus sylvestris*, *P. nigra*, *Juniperus communis* and *Abies nordmanniana*.

Genista vuralii is closely allied to *G. lydia*

subsp. *lydia* and *G. sandrasica*. A comparison of the three species is provided in Table 1. Chromosome counts of *Genista vuralii* have not been carried out, but the chromosome number of the related species is $n = 24$ in *G. tinctoria* (Cubas *et al.* 1998).

ADDITIONAL SPECIMENS EXAMINED (paratypes): Turkey.

A4 Çankırı: Atkaracalar, Dumanlı Dağı, Taşlık vicinity, 1350–1500 m, stony places, 16.VII.1997 A. Duran 4419 (ADO); A4 Çankırı: Ilgaz Dağı, Telekom transmitter vicinity, 1900 m, forest clearings, steppe, 21.VII.2001 A. Duran 5819 & Y. Menemen (ADO); A4 Kastamonu: Saka Dağı yaylası, ca. 1050 m, 27.VI.1980 M. Demirörs (ANK); A4 Kastamonu:

Table 1. Comparison of *Genista vuralii*, *G. lydia* subsp. *lydia* and *G. sandrasica*.

Character	<i>G. vuralii</i>	<i>G. lydia</i> subsp. <i>lydia</i>	<i>G. sandrasica</i>
Plant	procumbent or ascending small shrublet, 5–18 cm long	procumbent or erect shrub, 10–200 cm long	prostrate shrublet, 7–20 cm long
Stem and branches	pilose, hairs spreading, long, white	very sparsely adpressed hairs or glabrous	glabrescent
Leaves	persistent, alternate, oblanceolate to elliptic	caducous after flowering, subopposite or alternate, linear-oblong or very narrowly elliptic	caducous after flowering, subopposite, oblanceolate to broadly lanceolate
Stipules	0.5–1 mm long,	0.5–1 mm long,	1–1.5 mm long,
Calyx	4.5–6 mm long, densely subadpressed villous, upper teeth 2.5–3.5 mm long	3.5–5 mm long, glabrous or with teeth sparsely ciliate, upper teeth 2–2.2 mm long	3.2–4.2 mm long, pilose, upper teeth ca. 2 mm long
Corolla	standard $\pm$ equaling keel, wings slightly shorter than standard and keel	standard as long as keel and wings	standard equaling keel, wings shorter than standard and keel
Ovary	3–10 ovules, densely villous	3–9 ovules, glabrous or sometimes sparsely hairy	3(–6) ovules, pilose
Legume	densely villous, hairs spreading, long, white	glabrous	pilose, hairs sparsely adpressed, short

Küçük Ilgaz Dağı, Yurt Tepesi, 2050 m, 30.VI.1958 Z. & F. Mankzay (ANK); A4 Çankırı: Yapraklı Dağı, ca. 1600 m, 12.VI.1989 Y. Akman (ANK); A4 Ankara: Beypazarı, Mahiye Tepesi, stony places, ca. 2000 m, 30.VI.1971 Y. Akman (ANK); A4 Kastamonu: Ilgaz Dağı, Kızılçöller yaylası, open places, ca. 1950 m, 27.VII.1982 Y. Akman, E. Yurdakulol & M. Demirörs (ANK); A4 Bolu: Köroğlu, 1800–1900 m, 26.VI.1975 Y. Akman (ANK); A4 Bolu: Gerede-Aktaş forest, ca. 1600 m, 3.VII.1975 O. Ketenöğlu (ANK); A4 Kastamonu: Daday, Ballıdağ below, wooded place, ca. 1000 m, 11.VI.1979 O. Ketenöğlu (ANK); A5 Kastamonu: Tosya, Karaköy, Ortayayla vicinity, ca. 1200 m, 13.V.1975 M. Kılınç (ANK).

REPRESENTATIVE SPECIMENS EXAMINED: — *Genista lydia* subsp. *lydia*. **Turkey.** A3 Bolu: Yedigöller Milli Parkı, ca. 900 m, 1977 R. İlarslan (ANK); A4 Kastamonu: Küre-İnebolu, ca. 730 m, P.H. Davis 21597 (ANK); B1 Çanakkale: Kalkın-Edremit yolu, 18. km, 500 m, *Pinus nigra* clearings, 2001 A. Duran 5828 & Sağıroğlu (ADO); B2 Bursa: Uludağ, ca. 1700 m, P.H. Davis 14842 (ANK); C3 Isparta: Eğridir, Aksu-Sütçüler yolu, Aksu çıkışı, 1300 m, forest clearings, 1999 A. Duran 4607 & Sağıroğlu (ADO); C3 Antalya: Kemer, Tahtalı Dağı, Yaylakuz Dere-Peynirlik, 800–1600 m, *Pinus brutia* forest, 1979 H. Peşmen 4631 & A. Güner (HUB); C3 Antalya: Akseki, Güzelsu, Yazıcı vicinity, 1000 m, macchia, 1996 A. Duran 3876 (GAZI); C6 Osmaniye: Zorkun, Keldazi Tepesi, 1600 m, forest clearings, 2001 A. Duran 5757 & Sağıroğlu (ADO). — *Genista sandrasica*. **Turkey.** C2 Muğla: Köyceğiz; Ağla above, Aşıt vicinity, 1700 m, *Pinus nigra* forest, serpentine, 1992 A. Güner et al., A. Güner 10869 (GAZI, HUB).

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