

## A new variety of *Trigonella persica* (Fabaceae) from Iran

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### Abstract

*Trigonella persica* var. *gandomanica* is described as a new variety from southern part of Iran. This taxon belongs to section *Bucerates*, which is the largest section of annual *Trigonella* species. This taxon is the first variety of *T. persica* introduced from Iran. *T. persica* var. *persica* is closely related taxon to the variety. However, the new variety differs from *T. persica* var. *persica* by its glabrous pods (vs. hairy pods).

**Key words:** New variety, Fabaceae, Section *Bucerates*, *Trigonella persica*, Iran

### Introduction

*Trigonella* L. (Fabaceae) includes about 135 species in worldwide, and the most of the species are distributed in the dry regions around Mediterranean, West Asia, Europe, North and South Africa, North America, and with only two species being present in South Australia (Mabberly, 1997). The members of *Trigonella* are hairless annual or perennial herbs or sometimes covered with simple hairs originate in the Mediterranean and Irano-Turanian regions (Yilmaz *et al.*, 2009; Ranjbar *et al.*, 2010, 2011). After revising the genus for the flora of Iran by Rechinger (1984), six new species and one new variety have been described from the country (Ranjbar *et al.*, 2011, 2012) and seven taxa were added as new records (Hamzeh'ee, 2000; Janighorban, 2004; Badrzadeh *et al.*, 2009; Ranjbar and Hajmoradi 2012).

*Trigonella* sect. *Bucerates* (Boiss.) Sirj. is represented with one endemic species and four subspecies in Iran (Rechinger, 1984). *Trigonella persica* Boiss. is only endemic species of the section in Iran. In this paper, *T. persica* var. *gandomanica* Ranjbar and Hajmoradi is described as a new variety from Iran. It was collected in a locality along with *T. persica* var. *persica*. Now with this variety, the total number of *Trigonella* taxa occurring in Iran increased to 47.

### Taxonomy

*Trigonella persica* Boiss. var. *gandomanica* Ranjbar and Hajmoradi, **var. nov.** (Figure 1)

*Trigonellae persicae* var. *persicae affinis*, a qua leguminis glabrescentibus (nec pilis appresso-albis) differt.

**Holotype:** Iran. Gandoman to Yasuj, Gereh-Bass bridge, 31°75'N, 51°25'E, 1734 m a.s.l., 5 April 2010, Ranjbar and Hajmoradi 23536 (BASU!; isotypes W, TARI).

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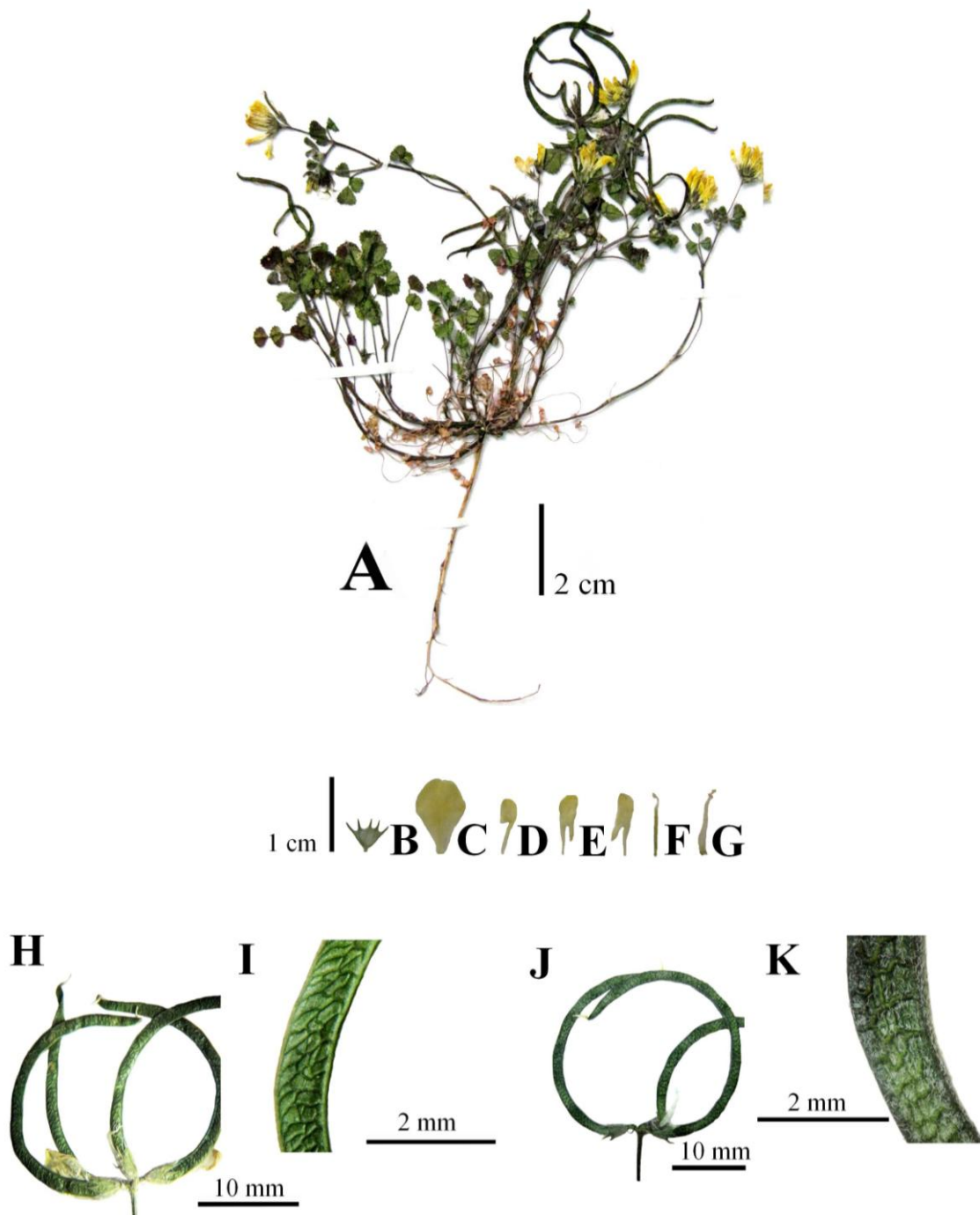


Figure 1. *Trigonella persica* Boiss. var. *gandomanica* Ranjbar and Hajmoradi (*Ranjbar and Hajmoradi* 23536, BASU). A. Habit (with flowers and pods); B. Calyx; C. Standard; D. Keel; E. Wings; F. Ovary; G. Androecium; H and I. Glabrous pods. J and K. Pubescent pods in *T. persica* var. *persica*

Annual herbs, stem usually branched from base, often ascending, 8-16 cm tall, sparingly pilose. Stipules semisagittate, 2-4 × 1-1.3 mm. Leaves 3-26 mm long, sparsely to loosely covered with hairs, 0.3-0.5 mm long, petiole 2-23 mm long. Leaflets obdeltoid, sharp dentate, 2-6 × 2-5 mm, sparsely covered with appressed white hairs on both sides, 0.3-0.5 mm long. Peduncle slender, 12-26 mm long. Flowers 2-6, umbellate, subsessile. Calyx shorter than corolla, 3.5-4 mm long, sparsely or loosely hairy; teeth lanceolate, ca. 1 mm long. Corolla yellow, standard 9-10 × ca. 5 mm, wings ca. 9 × ca. 2 mm, oblong, round at

tip; claw ca. 4 mm long, keel ca.  $8 \times$  ca. 2 mm; stamen ca. 8 mm long. Legume linear,  $20\text{--}40 \times 1\text{--}1.5$  mm, rarely compressed, semicircular-incurved, transversely reticulate, beak very short.

### Etymology

The specific epithet refers to Gandoman city, where the new variety is found

### Taxonomic and distributional remarks

*Trigonella persica* var. *gandomanica* is a narrowly endemic variety known only from the stony-steppe zone of the Kallar mountain, south Gandoman in Chaharmahal va Bakhtiari province (Figure 2). New variety shows remarkable similarities to *T. persica* var. *persica* in the shape and size of petals and pods and also in the sculpturing of pods. Both varieties are distributed in southwest Iran. However, *T. persica* var. *gandomanica* can be recognized well by its glabrous pods (Figure 1 H-K).

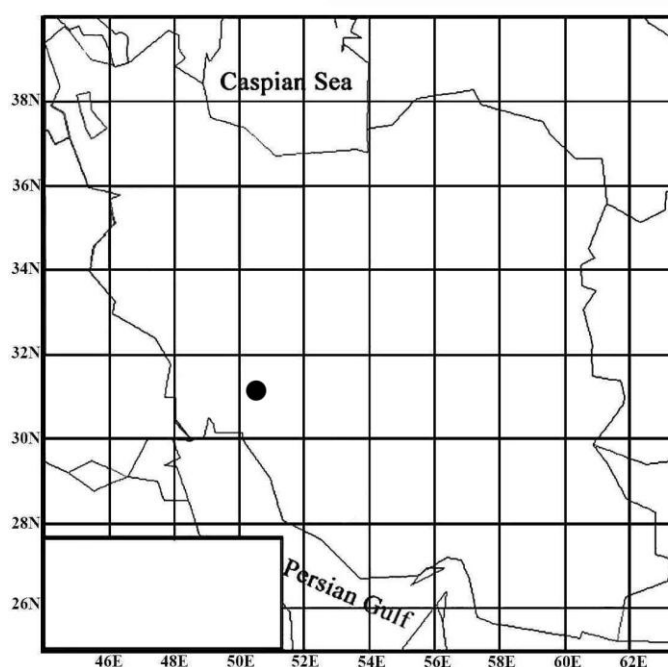


Figure 2. Distribution map of *Trigonella persica* Boiss. var. *gandomanica* Ranjbar and Hajmoradi

### Specimens examined

#### *Trigonella persica* var. *persica*

Iran. Lorestan province: Dow Rud toward lake, 1450 m a.s.l., 22 April 2009, *Ranjbar and Hajmoradi* 23664 (BASU!); Lorestan university, 1250 m a.s.l., 22 April 2009, *Ranjbar and Hajmoradi* 23661 (BASU!). Kordestan province: 5 km after Sanandaj toward Divandarreh, 1500 m a.s.l., 16 May 2011, *Ranjbar and Hajmoradi* 24923 (BASU!); Sanandaj toward Divandarreh, after Khamush Abad village, 1560 m a.s.l., 16 May 2011, *Ranjbar and Hajmoradi* 26493 (BASU!). Hamedan province: Hamedan toward Qorveh, before Veynesar village, 1830 m a.s.l., 16 May 2011, *Ranjbar and Hajmoradi* 24770 (BASU!); 30 km before Qorveh, 1800 m a.s.l., 21 May 2005, *Ranjbar* 7081 (BASU!); Hamedan toward Malayer, after Ekbatan dam, before Ghahavand bifurcate, 1950 m a.s.l., 7 Jan 2004, *Ranjbar* 5889 (BASU!). Kohgiluyeh va Boyer Ahmad province: Dena mountain,

2247 m a.s.l., 27 April 2011, *Ranjbar and Hajmoradi 23878* (BASU!). Fars province: Sepidan to Nor Abad, 5 km after first neck of Nor Abad, 20 km before Dowlat Abad Hasani emergency, 1882 m a.s.l., 7 April 2010, *Ranjbar and Hajmoradi 23530* (BASU!). Markazi province: Tafresh, 1963 m a.s.l., 22 April 2010, *Ranjbar and Hajmoradi 23697* (BASU!).

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## واریشه‌ای جدید از گونه *Trigonella persica* از تیره Fabaceae از ایران

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### چکیده

در مطالعه حاضر، *Trigonella persica* var. *gandomanica* به عنوان واریشه‌ای جدید از جنوب ایران شرح داده شده است. این تاکسون متعلق به بخش *Bucerates* است که بزرگترین بخش از گونه‌های یک‌ساله از جنس *Trigonella* است. این تاکسون نخستین واریشه معرفی شده برای گونه *T. persica* از ایران است. *T. persica* var. *persica* نزدیک‌ترین تاکسون به این واریشه است. با این وجود، واریشه جدید با داشتن میوه‌های بدون کرک در مقابل میوه‌های کرکی از *T. persica* var. *persica* متفاوت می‌شود.

واژه‌های کلیدی: واریشه جدید، *Fabaceae*، *Bucerates*، *Trigonella persica*، ایران