Vicia garinensis (Fabaceae), a new species from Iran

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Vicia garinensis Dehshiri (Fabaceae : Vicieae), sp. nova of subgen. Vicilla is described and illustrated from the Hamadan province, west of Iran. It is similar, and probably most closely related to V. multijuga.

Vicia (Fabaceae : Papilionoideae : Vicieae), an important component of the Iranian flora, is a genus comprising about 150 (Kupicha 1976) to 210 (Hanelt & Mettin 1989) species distributed mainly in Europe, Asia and North America, extending to the temperate regions of South America and tropical Africa (Zohary 1972, Maxted 1993). The Mediterranean area is its main centre of diversity (Naranjo et al. 1998). The genus is characterized by having a style pubescent all around, or bearded on the adaxial side, never twisted, and a non-winged stem. The latest complete revision (Pakravan 2000) of Vicia in Iran considers 40 species (45 taxa), of which two are endemic, V. kotschyana and V. sojaki. The species of Vicia were classified into two subgenera, Vicia (with six sections) and Vicilla (with eight sections).

During an investigation of the flora of the Garin Mountain, Hamadan province, west of Iran, one unknown population of Vicia was collected on slightly disturbed rocky mountain slopes (July–August 2009). After examining the morphological features and checking the relevant literature during identification (Fedchenko 1948, Tamamshyan 1954, Ball 1968, Davis & Plitmann 1970, Zohary 1972, Townsend 1974, Chrtková-Žertová 1977a, 1977b, 1979, Pakravan 2000), we concluded that the specimens collected could not be identified using any of the keys, and they represent an hitherto undescribed species belonging to subgen. Vicilla. The specimens were also compared with relevant specimens in TARI. After this this addition the number of species and taxa of Vicia distributed in Iran is increased to 41 and 46, respectively.

Vicia garinensis Dehshiri, sp. nova (Fig. 1)

Inter speciebus e serie Ciceroidea et Variegata caulis tenuis (nec crassus), stipulae 2–3 dentatae (nec 0–2 dentatae), foliola 5-juga (nec. 6–15-juga vel 0–4-juga), legumen 13–17 mm longum (nec 20–40 mm longum), semina elliptica (nec. globularia, sphaeroidea vel sphaeroidea-elliptica) insignis. Inter speciebus e serie Variegata stipulae 2–5 mm longae (nec 6–30 mm longae), foliola 2–8 mm longa (nec 9–48 mm longa), pedunculi 8–30 mm longi (nec 40–120 mm longi), flores 6–12 mm longi (nec 18–26 mm longi), calyx 3–3.5 mm longus (nec 5.5–11 mm longus) insignis.
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Type: Iran. Hamadan province: Nahavand city, Gamasiab fountain, Garin Mountain, Yal Kabud peak, 34°00’N, 48°23’E, alt. 3300–3400 m, growing on rocky places, 23.VII.2009 M.M. Dehshiri & M. Zarrini 53922 (holotype IRAN; isotype TARI).

Etymology. The specific epithet refers to the Garin Mountain.

Sprawling perennial plant with intricately branched, ascending or prostrate stems, low-growing, up to 15 cm tall, indumentum moderately or densely tomentose or pilose, becoming subglabrous, with a branched rootstock. Stems slender, numerous, ascending from creeping base, 5–30 cm long, shortly tomentose or pilose, 4-angled, solid, with raised ridges, slightly intertwining, strongly branching at base. Stipules 2–5(–7) mm long, 2–4 mm broad, broadly ovate to semi-hastate or semi-sagittate, pilose to subglabrous, often completely-toothed or larger lobe entire, smaller frequently with (1–)2–3(–4) small teeth at base. Leaves paripinnate, 5–10(–20) mm long; petioles 1–5 mm, thin, leaf rachis broad, terminating in a firm, small and straight or slightly recurved mucro to simple or branched short tendril; leaflets (1–)5(–7)-paired, remote, often alternate, oblong to elliptical, short, (1–)2–8(–9) mm long, 0.7–3 mm wide, thin, obtuse or acute, mucronate, shortly tomentose or pilose to

subglabrous, with inconspicuous nerves; secondary nerves 2–4-paired. Peduncles 0.8–3 cm long, equal to or longer than leaves, pilose. Inflorescence composed of (2–)5–10-flowered axillary racemes; bracts very minute or absent. Flowers 6–12 mm long, milk-coloured with violet-tips. Calyx often violecent, 3–3.5 mm long, campanulate, appressed-pilose, hairs short; teeth unequal, upper shorter than lower, shorter than tube, upper pair of teeth broad and short, abruptly apiculate, lower teeth lanceolate or linear-lanceolate. Corolla glabrous, 10–11.5 mm long, ca. 3 times as long as calyx, standard a little longer than wings, keel shorter than wings, and standard much paler than keel; style laterally compressed, hairy all round at apex. Pods pale brown or yellowish brown, 13–17 mm long, 4–6.5 mm wide, stipitate, oblong to rhombic, cuneate at base, shortly acuminate at apex, sparsely apressed hairy, hairs white; stipe 2–2.5 mm long. Seeds 1(–2), dull, brownish green, often spotted with dark dots, seldom dark brown to black, elliptical, smooth, slightly compressed, 2.6–3.3 mm thick, 3.8–5.4 mm long, 3–3.6 mm wide.

**D**istri**b**ution. *Vicia garinensis* is known only from alpine area on the Garin Mountain in Hamadan province (W Iran), where the species is very rare and occurs in few patches.

**H**abitat e**c**ology and **p**henology. *Vicia garinensis* grows on gravelly mountain slopes with limestone as substrate, on steep alpine taluses, among rocks between 3300 and 3400 m altitude. It is known from only one population. Flowering occurs in July and Fruiting in August.

*Vicia garinensis*, with a slender stem, 2–3-dentate stipules, 5-paired leaflets, short pods, and elliptical or oblong seeds is distinguishable from all known species within the *V. ciceroidea* group, as well as from those within the *V. variegata* group (Table 1).

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**Table 1. Comparison of Vicia garinensis with the V. ciceroidea group** and *V. variegata group*.

<table>
<thead>
<tr>
<th>Characters</th>
<th>V. garinensis</th>
<th>V. sojakii</th>
<th>V. ciceroidea</th>
<th>V. multijuga</th>
<th>V. aucheri</th>
<th>V. gregaria</th>
<th>V. afghanica</th>
<th>V. persica</th>
<th>V. akhmaganica</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stems slender</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Number of leaflet pairs</td>
<td>1(–2)</td>
<td>1(–2)</td>
<td>1–4</td>
<td>0–2</td>
<td>1–2</td>
<td>1–2</td>
<td>1–2</td>
<td>1–2</td>
<td>1–2</td>
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<tr>
<td>Length (mm)</td>
<td>3.8–5.4</td>
<td>3.8–5.4</td>
<td>4.5–5.5</td>
<td>3.8–5.4</td>
<td>4.5–5.5</td>
<td>3.8–5.4</td>
<td>4.5–5.5</td>
<td>3.8–5.4</td>
<td>4.5–5.5</td>
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<tr>
<td>Stipule</td>
<td>2(–3)</td>
<td>2(–3)</td>
<td>2–3</td>
<td>2–3</td>
<td>2–3</td>
<td>2–3</td>
<td>2–3</td>
<td>2–3</td>
<td>2–3</td>
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<tr>
<td>Calyx length</td>
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<td>3–3.5</td>
<td>3–3.5</td>
<td>3–3.5</td>
<td>3–3.5</td>
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<td>Seed shape</td>
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<td>oblong</td>
<td>oblong</td>
<td>oblong</td>
<td>oblong</td>
</tr>
</tbody>
</table>

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Specimens examined. — *Vicia multijuga*. Iran. Semnan province, ca. 20 km NW of Shahrud, Shahvar mountain, 3000–3700 m, *Assadi & Mozaffarian 40844* (TARI). Semnan province, ca. 30 km NW Shahrud, Shahvar mountain, 3200 m, *Assadi & Maassoumi 211119* (TARI).

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References


