

## A NEW SPECIES OF ONOBRYCHIS (FABACEAE) FROM IRAN

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*Onobrychis marandensis* Amirabadi. & Ghanavati, a new species endemic to Iran, is described and illustrated. The new species belongs to *Onobrychis* Miller subgen. *Sisyrosema* (Bunge) Grossheim sect. *Heliobrychis* Bunge ex Boissier. *Onobrychis marandensis* is distributed in Azerbaijan province in northwestern Iran. It is undoubtedly rather closely related to *O. gaubae* Bornm., but differs in the shape of the terminal leaflets which are narrowly ovate (not elliptic-ovate), 43-70×19-31 mm (not 35-45×25-30 mm), the wing petals are ciliate (not glabrous), the indumentum of the stem and leaves is subsericeous (not short pubescence-tomentose), the stipules are 6-11 mm long (not 3-6 mm), the corolla is 18 mm (not 13-14 mm) long.

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گونه‌ای جدید از جنس اسپرس (تیره بقولات) در ایران

حسن امیرآبادی زاده، کارشناس ارشد پژوهشی مرکز تحقیقات کشاورزی و منابع طبیعی خراسان رضوی.  
فرنگیس قنواتی، استادیار پژوهش موسسه تحقیقات اصلاح بذر و نهال کرج.

گونه *Onobrychis marandensis* یک گونه جدید انحصاری برای ایران است که در اینجا معرفی و شرح داده می‌شود. گونه جدید به جنس *Onobrychis*، زیر جنس *Sisyrosema* و بخش *Heliobrychis* تعلق داشته و در شمال غرب ایران در استان آذربایجان رویش دارد. این گونه بدون شک با گونه *O. gaubae* Bornm. خویشاوندی دارد اما در برخی صفات با یکدیگر تفاوت دارند که عبارتند از: برگچه انتهایی تخم مرغی کشیده (نه بیضوی - تخم مرغی)، به طول ۴۳ تا ۷۰ (نه ۳۵ تا ۴۵) میلی متر و عرض ۱۹ تا ۳۱ (نه ۲۵ تا ۳۰) میلی متر، بال‌ها مژکدار (نه بدون مژک)، گیاه با پوشش کرکی ابریشمی (نه با کرکهای کوتاه نمدی - کرک‌آلود)، گوشوارکها به طول ۶ تا ۱۱ (نه ۳ تا ۶) میلی‌متر و جام گل به طول ۱۸ (نه ۱۳ تا ۱۴) میلی‌متر.

### Introduction

The tribe *Hedysareae* comprises perennial or annual herbs or shrubs with segmented and flattened pods: *Taverniera* DC., *Stracheya* Benth., *Eversmannia* Bunge, *Hedysarum* L., *Ebenus* L., *Corethrodendron* Fisch. & Basiner, *Alhagi* Adans. and *Onobrychis* Mill. (Thulin 1985, Polhill 1981). The latter includes about 170 species and is mainly distributed in southwestern Asia, the Mediterranean region, and in temperate Europe and Asia (Cronquist 1981). A few taxa are cultivated as fodder or as ornamentals (Lock & Simpson 1991, Yakovlev & al. 1996, Mabberley 1997). In Flora Iranica, Rechinger (1984) treated 77 species in nine sections: section *Dendrobrychis* DC. (7 species), sect. *Lophobrychis* Handel-Mazzetti (5 species), sect.

*Onobrychis* (14 species), sect. *Laxiflorae* (Širjaev) Rechinger (3), sect. *Anthyllium* Nábělek (7 species), sect. *Afghanicae* Širjaev (3 species), sect. *Heliobrychis* Bunge ex Boissier (21 species), sect. *Hymenobrychis* DC. (12 species), sect. *Insignes* (Širjaev) Rechinger (3 species), and two species remaining unassigned. Recently new taxa have been described in *Onobrychis* from Iran (Amirabadi et al. 2007, 2009; Amirabadi 2011; Ranjbar et al. 2004, 2007, 2009; Ranjbar 2009). The present paper is focused on a new Iranian taxon from *Onobrychis* sect. *Heliobrychis* from the province E Azerbaijan. This section is the largest section of *Onobrychis* subgenus *Sisyrosema*.

Table 1. Diagnostic morphological characters of *Onobrychis marandensis*, *O. gaubae* and *O. depauperata*.

Characters	<i>O. marandensis</i>	<i>O. gaubae</i>	<i>O. depauperata</i>
Height (cm)	ca. 40	20 (30)	55
Indumentum	With $\pm$ appressed subsericeous hairs	shortly pubescent-tomentose	sparsely pilose
Stipule length (mm)	6-11	3-6	10
Leaflet pairs	1 to 2	1 to 3	4 to 5
Leaflet shape	narrowly ovate	elliptic or ovate	lanceolate
Bract length (mm)	4-5	2-3	3-4
Standard length (mm)	18	13-14	15-17
Wing indumentum	ciliate	glabrous	ciliate
Wing length (mm)	10-10.5	$\pm$ 7	8

These specimens have been checked in the herbaria of TARI, IRAN, FUMH, Mashhad Research Center and Research center of Agriculture and Natural Resources of E Azerbaijan. Flora Iranica (Rechinger 1984), Flora URSS (Schischkin and Bobrov 1972), Flora of turkey (Hedge 1970; Davis et al. 1988), Flora of Armenia (Takhtajan 1980), Flora of Azerbaijan (Kariatin 1952) and some general references (Boissier 1872; Freyn 1892; Sirjaev 1926) treatments of the genus were used as the main literature.

***Onobrychis marandensis*** Amirabadi. & Ghanavati, **sp. nov.** (Fig. 1).

*Typus.* Iran, Azerbaijan: 15 km S of Marand, Mishu-Dagh mt., 1800-2250 m, 26.06.1978, Assadi & Mozaffarian 29886 (holotypus TARI).

*Other specimens examined.* IRAN. Azerbaijan: Tabriz to Marand, 3 km. after Sofian, on the hills of Marl, 1500-1600 m., Zarifi 10040 and 10041; Tabriz to Marand, Payam village, Misho-dagh mt. 1900 m., Zarifi 10052; Taso, between Angoshtjan & Amestjan, hills above Taso Research station, 1430 m., Zarifi 10030.

Differt ab *Onobrychis gaubae* Bornm., indumento subsericeo (nec omnino breve, pubescenti-tomentello), stipula 6-11 mm (nec 3-6 mm) longa, foliolio terminali anguste ovato, 43-70×19-31 mm (nec elliptico-ovato, 35-45×25-30 mm), vexillo ad 18 mm (nec 13-14 mm) longo, alis ciliatis (nec glabris).

Erect perennial herbs, yellowish-green, the whole plant more or less appressed-subsericeous hairy; stems up to 15 cm long, ribbed, branched at the base. Stipules free, scarious, 6-11 mm long, subulate, pilose. Basal leaves long petiolate, with a single terminal leaflet 43-70 × 19-31 mm, narrowly ovate, acuminate at apex, on both sides pilose but more densely at lower side; cauline leaves usually with 1-2 pairs of lanceolate leaflets, 13-34 mm × 3-11 mm; terminal leaflet 43-63 mm × 13-21 mm. Inflorescence many-flowered, dense, elongating in fruit. Peduncle up to 38 cm long. Pedicel c. 2 mm long, densely silvery hairy. Bracts 4-5 mm, subulate, pilose.

Calyx 6 to 7 mm long, silvery hairy; teeth longer than tube, subulate. Corolla yellow, with prominent purple venation. Standard 18 × 12 mm, obovate, emarginated at apex, with silvery hairs. Wings 10.5 mm long, lanceolate, acute, ciliate at the apex; keel shorter than the standard, 15 mm long, oblong, clawed. Ovary 1 ovulate. Juvenile pod densely covered with long spreading silvery hairs; mature pod with a stipe up to 2 mm long, semiorbicular, without setae 8×8 mm, foveolate on the disc, covered by purple setae 5-6 mm long.

*Relationships.* *Onobrychis marandensis* is closely related to *O. gaubae*, which is also found in West to Central Iran. The species are morphologically similar in having few leaves with large leaflets and same pod shape. Important differences between the new species and its related taxa are presented in Table 1.

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Fig. 1. *Onobrychis marandensis*. -a. Habit with details of flower and pod. -b. Standard. -c. Wings. -d. Keels. -e. Calyx. -f. Androecium. -g. Pod. Photo from the holotype, Assadi & Mozaffarian 29886 (TARI).

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