

# A NEW SPECIES OF HEDYSARUM (FABACEAE) AND A NEW RECORD OF ANEMONE (RANUNCULACEAE) FROM NW IRAN

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A new species, i.e. *Hedysarum marandense* (*Fabaceae*) is described, and a new record, i.e. *Anemone narcissiflora* L. subsp. *willdenowii* (Boiss.) Davis. (*Ranunculaceae*) is recorded for the first time in Iran from an area near the Marand city, prov. Azerbaijan Sharqi. Morphological peculiarities of *Hedysarum marandense* are mentioned and an illustration for this new species is given.

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یک گونه جدید از هدیزاروم (باقلائیان) و یک گزارش تازه از آنمون (آلاله‌ایان) از استان آذربایجان شرقی، مرند، ایران  
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پوشش گیاهی مناطق زنوزق و کوه کمر از توابع شهرستان مرند واقع در استان آذربایجان شرقی (شمال غرب ایران) در طی سالهای ۱۳۸۷ تا ۱۳۸۹ جمع‌آوری و به دقت مطالعه شد. از میان نمونه‌های گیاهی جمع‌آوری شده *Hedysarum marandense* Mozaffarian, Akrami & Maassoumi (*Fabaceae*) به عنوان گونه جدید و *Anemone narcissiflora* L. subsp. *willdenowii* (Boiss.) Davis (*Ranunculaceae*) به عنوان گزارش جدید شناسایی شدند که برای اولین بار از ایران معرفی می‌گردند.

## INTRODUCTION

During studies on the flora of Zunuzagh and Kuhkamar (Marand area) two interesting plants were found that they are determined as a new species and a new record. In this paper, *Hedysarum marandense* Mozaffarian, Akrami & Maassoumi belongs to sect. *Criniferum* Boiss. (Hedge 1970, Fedtschenko 1972 and Rechinger 1984) is described as a new taxon for the flora of Iran. Also, *Anemone narcissiflora* L. subsp. *willdenowii* (Boiss.) Davis (Davis & al. 1965) was formerly unknown in the Flora Iranica region, here is reported as a new record for Iran.

## RESULTS

### NEW SPECIES

***Hedysarum marandense*** Mozaffarian, Akrami & Maassoumi, sp. nov. Fig. 1.

**Holotypus:** Iran, Azerbaijan, Marand, between Zunuzagh and Kuhkamar, 2083-2328 m, 25. 6. 2009, V. Mozaffarian & S. Akrami 93725 (TARI).

Similis ab *H. macranthum* (Fryen & Sint.) B. Fedtsch. sed differt staturo brevior 30–40 cm (nec ad 60 cm) longo; foliolis 5–7 (nec 5) jugis, corolla 22 (nec ad 18–20) mm longo, vexillo atropurpureo (nec pallide violaceo) ala 2 (nec 2.5–3) polo brevior, leguminibus 1-5 (nec 2–3) articulatis setis longe flavescens (nec purpurescentibus).

Perennial, up to 40 cm tall, many stemmed, appressed-sericeous-hairy. Stems well developed, erect. Caudex rather thin. Stipules separate, sericeous, 8-9 mm long, ± thick. Leaves with 5-7 pairs of leaflets, 9-12 cm long; leaflets ± remote, greenish-gray above, sericeous beneath, ovate-oblong to elliptic-oblong, acute at the apex, mucronulate, 12-28 mm long, 7-10 mm wide. Peduncles longer than the leaves. Racemes 7-10 cm long, 3-4 cm wide. Flowers dense. Bracts linear, 4 mm long, hairy. Calyx campanulate, 8-9 mm long; teeth linear to filiform, white hairy, 6-8 mm long; two



Fig. 1. *Hedysarum marandense* ( $\times 0.57$ ); calyx, standard and keel ( $\times 1$ ).

Table1: Morphological comparison of *Hedysarum marandense* and its relatives.

Species Characters	<i>H. marandense</i>	<i>H. macranthum</i>	<i>H. candidissimum</i>
Corolla	Pale purple, keel longer than wings and as long as standard	Violet, keel longer than wings and shorter than standard	Purplish-pink, keel as long as wings and shorter than standard
Leaflets	5-7 pairs	5 pairs	2-4 pairs
Pod	1-5 loculed	2-3 loculed	-----
Stature	30-40 mm	40-60 mm	10-20 (-30) mm

filiform bracteoles at the base of calyx nearly shorter than the tube. Corolla deeply red, when dry change to violet, glabrous; standard 22 mm long, 15 mm wide, spatulate, emarginate, with a short claw at the base up to 6 mm long; wings 13 mm long; limb oblong, 6 mm long, 4 mm wide; keel 20 mm long, 9 mm wide, clawed at the base. Ovary hairy. Pods moniliform, 1-5 jointed; joints flattened, oval-orbicular, 8-10 mm long, ribbed, densely hairy, with reddish to yellowish bristles, 1.5-4.5 mm long.

The new species belongs to *Hedysarum* sect. *Crinifera* Boiss. which consists of perennial herbs, with multi-jointed pods covered with many, rather long, thin, and usually reddish to yellowish bristles. A standard up to 22 mm long and yellowish fruit bristles, separate *H. marandense* from the other species of the section. *Hedysarum macranthum* (Freyn & Sint.) B. Fedtsch. and *H. candidissimum* Freyn are close to *H. marandense*, differing in the characters given in Table 1.

### NEW RECORD

***Anemone narcissiflora*** L. subsp. ***willdenowii*** (Boiss.) Davis, Notes R.B.G. Edinb. 26: 175- (1969). Fig. 2. Syn.: *A. umbellata* Willd., Sp. Pl 2: 1284 (1800); *A. narcissiflora* var. *willdenowii* Boiss., Fl. Or. 1: 14 (1867); *A. impexa* Juz., Fl. URSS 7: 737 (1937). Rootstock stout and strongly fibrous. Basal leaves palmately 3-5 partite into incised cuneate segments; petioles long. Involucral leaves sessile, deeply tripartite

into subentire segments. Flowers umbellate, 3-5. Tepals 5, obovate-elliptic, 2- 3 cm in diameter, white. Achenes glabrous, flattened.

*Specimen seen.* Iran, prov. Azerbaijan Sharqi, Marand, Kuhkmar mountains, 2095 m, 25. 06. 2008, Akrami & Mozaffarian 93815 (TARI).

*Anemone* L. with four species is a relatively small genus of *Ranunculaceae* in Iran (Rechinger & Riedl 1992). According to Flora Iranica, three species of this genus belong to sect. *Anemone* and the other species belongs to sect. *Homalocarpus* DC. The new record is also a member of sect. *Homalocarpus* DC. The new record has flowers aggregated in umbels with 3-5 rays, whereas the other species growing in Iran have 1-2 (-3) flowers.

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Fig. 2. *Anemone narcissiflora* L. subsp. *willdenowii*. ( $\times 0.58$ ); fruit ( $\times 1.8$ ).