NEW RECORD OF DIANTHUS PENDULUS (CARYOPHYLLACEAE) FROM IRAN

K. Safikhani & M. Mahmoodi

INTRODUCTION

Caryophyllaceae with approximately 86 genera and almost 2200 species is one of the largest angiosperm families, which are distributed on all continents but concentrated in the Mediterranean and Irano-Turanian regions. The species of the family are heliophytes that occur in dry and open habitats. Some members are restricted to mountainous regions (Johnson & Wilson, 1993; Fior & al., 2006). Traditionally, Caryophyllaceae are divided into 3 subfamilies: Alsinioideae, Caryophyllidoideae and Paronychioideae (Pax & Hoffmann, 1934; Bittrich, 1993; Rableer & Bittrich, 1993; Fior & al., 2006).

The genus Dianthus L. belongs to the subfamily Caryophyllidoideae, which is the second largest genus in Caryophyllaceae, after Silene L., includes approximately 300 species. This genus is mainly distributed in the Mediterranean region of Europe and Asia (Reeve 1967; Bittrich 1993).

Assadi (1985) studied the genus Dianthus in Iran and identified 33 species for this genus, of which 9 are endemics to the country. According to Rechinger (1988), 43 species of Dianthus grow in Flora Iranica area, from which, 32 species occur in Iran.

Twenty-five species are common between the results of the Assadi (1985) and Rechinger (1988) studies. While Assadi (1985) has not considered any infra-specific divisions for Iranian Dianthus species, Rechinger (1988) has recognized 12 subspecies and 5 varieties for them (D. crinitus SM. three subspecies, D. orientalis Adams nine subspecies; D. strictus Banks & Soland three varieties, D. tabrissianus Bienert ex Boiss. two varieties), D. erythrococcus Boiss., D. siphonocalyx Blakelock, and D. subaphyllum (Leperg) Rech. f. have been reported from Iran in Flora Iranica, while, Assadi (1985) has not reported them from Iran. D. binaludensis Rech. f., D. liboschitzianus Ser in DC., D. mazanderanicus Rech. f. and D. stapfi Lemperg.

Key words: New record; Dianthus pendulus; Caryophyllaceae; Hamedan Province; Iran

Dianthus pendulus Boiss. & C.I. Blanche that was previously reported from Iraq, Lebanon, Syria and Palaeartine, is described as a new record for the first time, from Hamedan Province in the west of Iran. Morphological description, distribution and photographs of this new record are given.

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گزارش جدید گونه .Dianthus pendulus

گیون صنفی خاصی: عضو هیئت علمی مرکز تحقیقات کشاورزی و منابع طبیعی همدان، سازمان تحقیقات، آموزش و ترویج کشاورزی

محمد محمودی: عضو هیئت علمی مؤسسه تحقیقات جنگل‌ها و منابع طبیعی استان همدان، سازمان تحقیقات، آموزش و ترویج کشاورزی

که در این مقاله گونه Dianthus pendulus Boiss. & C.I. Blanche در این مقاطعه گونه در ایران گزارش می‌شود. دوی اولین بار از استان همدان در غرب ایران گزارش شده است.

INTRODUCTION

Caryophyllaceae with approximately 86 genera and almost 2200 species is one of the largest angiosperm families, which are distributed on all continents but concentrated in the Mediterranean and Irano-Turanian regions. The species of the family are heliophytes that occur in dry and open habitats. Some members are restricted to mountainous regions (Johnson & Wilson, 1993; Fior & al., 2006). Traditionally, Caryophyllaceae are divided into 3 subfamilies: Alsinioideae, Caryophyllidoideae and Paronychioideae (Pax & Hoffmann, 1934; Bittrich, 1993; Rableer & Bittrich, 1993; Fior & al., 2006).

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which have been listed as independent species in Flora Iranica, have been considered as synonyms of *D. polyplepis* Bienert ex Boiss., *D. cretaceous* Adams, *D. tabrizianus* Bienert ex Boiss. and *D. macranthus* Boiss. respectively by Assadi (1985). *Dianthus pachypetalus* Stapf and *D. pulverulentus* Stapf, which were reported from Iran as independent species (Assadi 1985), have been considered as synonymous with *D. tabrizianus* Bienert ex Boiss. var. *tabrizianus* and *D. orientalis* Adams subsp. *stenocalyx* (Boiss.) Rech. f. respectively by Rechinger (1988). Furthermore, Assadi (1985) identified *D. denaicus* Assadi, *D. diversifolius* Assadi, *D. hafezi* Assadi, *D. rudbaricus* Assadi, *D. sahandicus* Assadi as new species and *D. inamoenus* Schischk as new record from Iran, which Rechinger (1988), has mentioned them in Supplementary *Dianthus* Species.

After 1988, *Dianthus pseudocrinitus* Behroozian & Joharchi (2014) reported as a new species from Iran. In this paper we report an additional *Dianthus* species for the flora of Iran based on new collections and observations of living plants from Alvand Mount located around the village of Haydareh, west of Hamadan, W Iran.

**MATERIALS AND METHODS**

The herbarium specimens were collected from Mt. Alvand around Haydareh village in Hamedan Province, W Iran during 2018 in flowering and fruiting periods. Vegetative and reproductive characters of the specimens were studied by means of a stereomicroscope (Olympus SZ60).

Descriptions of the new record and its close relatives were compared using revision of the genus *Dianthus* in Iran (Assadi, 1985) and the relevant Flora, especially the Flora Iranica (Rechinger, 1988). Specimens were identified as *D. pendulus* and were compared with the images of type specimen and they match very well. The plant specimens are deposited in the herbariums of Research Institute of Forests and Rangelands (TARI) and Agriculture and Natural Resources Research and Education Center of Hamedan Province.

**RESULTS AND DISCUSSION**

**New record**


**Specimen examined:** Hamedan Province: Hamedan, Haydareh posht-e-shahr village, Mt. Alvand, (N: 34°46' 42.6", E: 48° 26' 43.4''), 2254 m, 18.06.2018, K. Safikhani. 107092 (TARI); 8264 (Agriculture and Natural Resources Research and Education Center of Hamedan Province Herbarium).

Plant suffruticose, including many emitted floriferous stems and foliferous shoots. Leaf bearing stems 20-30 cm tall, thin, almost in middle parts with thinner branches, ascendant or pendulous or sub-erect. Often in middle or upper parts foliate, nodes barely thickened. Leaves grassy green; young sterile branches leaves arcuate, 6-8 cm x ca. 2 mm; shorter than stem leaves, erect-spreading, 3 nerved, flaccid, sheath 2-3 mm long; the upper and middle leaves far from each other as well as from the flowers, lanceolate-scale like, adpressed to branches. Bracts (16-20)30 (-36), densely imbricate, lanceolate, acute or ± acuminate, exteriors very small and the interiors gradually enlarged, unequally with prominent veins, 1/3-1/2 as long as calyx. Calyx 25-35x3 mm, narrowly fusiform, light green, sometimes suffused purplish; teeth 4-5 mm long, lanceolate, acute. Petals ca. 30 mm; claw ca. 2 mm wide, 8-10 mm of its length toward limb barely widened and broader. Limb oblong, fimbriate for 1/3-1/2 its length, pink in a living state (figs. 1-4).

**Distribution:** Iraq, Lebanon-Syria, Palestine, Iran.

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Fig. 1-4: *Dianthus pendulus* Boiss. & C.I. Blanche (photos by Safikhani, 20 October 2019).

REFERENCES


