

## NEW RECORD OF DIANTHUS PENDULUS (CARYOPHYLLACEAE) FROM IRAN

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*Dianthus pendulus* Boiss. & C.I. Blanche that was previously reported from Iraq, Lebanon, Syria and Palaestine, 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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**Key words:** New record; *Dianthus pendulus*; Caryophyllaceae; Hamedan Province; Iran

گزارش جدید گونه *Dianthus pendulus*. تیره Caryophyllaceae از ایران

کیوان صفی‌خانی: عضو هیأت علمی مرکز تحقیقات کشاورزی و منابع طبیعی همدان، سازمان تحقیقات، آموزش و ترویج کشاورزی  
محمد محمودی: عضو هیأت علمی مؤسسه تحقیقات جنگل‌ها و مراتع کشور، سازمان تحقیقات، آموزش و ترویج کشاورزی  
در این مقاله گونه *Dianthus pendulus* Boiss. & C. I. Blanche که پراکنش آن در عراق، لبنان، سوریه و فلسطین می‌باشد، برای اولین بار از استان همدان در غرب ایران گزارش می‌شود. شرح گونه، پراکنش و تصاویر آن ارائه 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: Alsinoideae, Caryophylloideae and Paronychioideae (Pax & Hoffman 1934; Bittrich 1993; Rabeler & Bittrich 1993; Fior & al. 2006).

The genus *Dianthus* L. belongs to the subfamily Caryophylloideae, 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. tabrisianus* Bienert ex Boiss. two varieties), *D. erythrocoleus* Boiss., *D. siphonocalyx* Blakelock, and *D. subaphyllus* (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. liboschtizianus* Ser in DC., *D. mazanderanicus* Rech. f. and *D. stapfi*

Lemperg, which have been listed as independent species in Flora Iranica, have been considered as synonymous of *D. polylepis* Bienert ex Boiss., *D. cretaceous* Adams, *D. tabrizianus* Bienert ex Boiss. and *D. macranthus* Boiss. respectively by Assadi (1985). *D. 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, *D. 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

*Dianthus pendulus* Boiss. & C.I.Blanche, Diagn. Pl. Orient. ser. 2, 6: 28 (1859).

**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, unclearly with prominent veins, 1/3-1/2 as long as calyx. Calyx 25-35×3 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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Figs. 1-4: *Dianthus pendulus* Boiss. & C. I. Blanche (photos by Safikhani, 20 October 2019).

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