

## A REVISION OF ACER MONSPESSULANUM L. IN IRAN; A NEW SUBSPECIES REPORT

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The genus *Acer* L., consisting of 8 species and also some subspecies and varieties, is one of the most important forest trees distributed in all floristic regions of Iran. Among them, *Acer monspessulanum* L. by having five subspecies has the greatest range of distribution and diversity in the genus. During a study on herbarium specimens of the Research Center of Agricultural and Natural Resources of W. Azerbaijan Province for the preparation of the flora of Iran in Persian, subspecies *oksalianum* which was previously reported from Turkey, was identified and is reported for the first time for the flora of Iran. A new identification key for subspecies is presented here. An illustration of the new subspecies is provided.

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**Key words:** *Acer monspessulanum* L. ; new subspecies; Aceraceae; new record; Iran

مروری بر گونه *Acer monspessulanum* L. در ایران؛ گزارش یک زیر گونه جدید

طیبه امینی: مربی پژوهش مرکز تحقیقات و آموزش کشاورزی و منابع طبیعی مازندران

حبیب زارع: استاد یار پژوهش مرکز تحقیقات و آموزش کشاورزی و منابع طبیعی مازندران

بهمن علی‌زاده: کارشناس ارشد مرکز تحقیقات کشاورزی و منابع طبیعی آذربایجان غربی

جنس افرا با تعداد ۸ گونه و تعداد زیادی واریته و زیرگونه، از مهمترین گونه‌های درختی هستند که در همه مناطق رویشی ایران انتشار دارند. از بین گونه‌های مختلف افرا در ایران، گونه *Acer monspessulanum* L. با ۵ زیر گونه، ضمن برخورداری از تنوع تاکسونی بالا، بیشترین سطوح انتشار را به خود اختصاص داده است. از اینرو در همین رابطه و در حین مطالعه بر روی نمونه‌های هرباریومی مرکز تحقیقات کشاورزی و منابع طبیعی آذربایجان غربی، زیرگونه *oksalianum* که قبلا از ترکیه گزارش شده بود، شناسایی و برای اولین بار گزارش می‌گردد. از اینرو ضمن بررسی زیرگونه‌های آن، کلید شناسایی جدیدی برای تاکسون‌های این گونه ارائه می‌شود.

### INTRODUCTION

The genus *Acer* was created by Tournefort in 1700. Linnaeus (1737) accepted *Acer* as a distinct genus in the first edition of his *Genera Plantarum*. The name of *Aceraceae* was first used by Lindley (1836) for an order. The *Aceraceae* have been considered part of the order *Sapindaceae* by some old botanists: Reichenbach 1828, 1834, Horaninov 1847; Gray 1858, Braun 1860; Bentham & Hooker 1862; and Drude 1887 (Van Gelderen & al. 1995). *Acer* is classified into 16 sections: 8 of which are further subdivided into 19

series. These sections and series accommodate 230 taxa: 124 species, 95 subspecies (including the typical subspecies), 8 varieties, and one forma (Compiled by van Gelderen 1995). Fossil maples have been found only in the Northern Hemisphere. The first maplelike trees were found in the upper cretaceous about 100 M. Y. B. P. Most of which are native to Asia with a number also appearing in Europe, Northern Africa and North America. Only one species is native to the Southern Hemisphere. In Iran territory, the genus *Acer* consists of 7 species (Murray 1969, Maroofi & al.



sepals, stamens two times longer than corolla, ovary densely hairy. Samaras 2. 5-3. 5 cm long, wings vertical, rarely diverging at an acute angle, dilated above, nut woody, glabrous outside, hairy inside

**4-subsp. cinerascens** (Boiss.) Yalt.

Often as a shrub, rather densely branched, young shoots tomentose, later glabrous. Leaves variable in size and shape, 3 lobed, 2-6 cm long, grayish green, blunt, pilose beneath, basal lobes often strongly reduced, margins entire or coarsely toothed. Flowers appearing with the leaves in April-May, similar to the typical subspecies. Samaras almost parallel, nutlets small and hard. Bark olive-green with blackish spotting.

**5-subsp. turcomanicum**. (Pojark.) E. Murr.

rather tall tree, densely branched shrub to 2-3 m tall, leaves 3 lobed, 3-4 cm long and 3-5 cm wide, leathery, almost evergreen in mild winters, rusty and pilose below, lobes diverging almost horizontally, veins prominent. Samaras connivent, nutlets small, hard, often parthenocarpic in unfavorable conditions.

**6-subsp. assyriacum**. (Pojark.) Rech. f.

A shrub or dense shrub like tree, leaves 3 lobed, occasionally 5 lobed, dentate on sterile shoots.

**7-subsp. persicum** (Pojark.) Rech. f.

Small trees or shrub, up to 5 m. height and 50 cm diameter, with smooth light brown to gray in young twigs, leaves in fertile branches 15-20 mm broad, coriaceous or subcoriaceous, glabrescent on the both surface, with 3 entire lobes, weakly dentate especially on the sterile branches, samaras 15-20 mm long and 5 mm broad, inside and outside of loculus.

**New record**

*Acer monspessulanum* L. subsp. *oksalianum* Yalt. is reported for the first time for the flora of Iran and except subsp. *microphyllum*, other 7 subspecies are native to Iran and among them subsp. *persicum* is endemic.

**subsp. oksalianum** Yalt. (fig. 1)

Shrub or small tree up to 5 (-7) m. young branches tomentose at first, later glabrescent except for the junction of the petiole, reddish-brown with many lenticels, grayish-brown at the old branches, rather branched and crown seen dense, buds dark brown and densely tomentose. Petioles 10-40 mm long, usually tomentose or with sparingly long hair and very dense nearly blade and branches, leaf blade similar to *Acer hyrcanum* but very smaller than, often 3 lobes sometimes with a second pair of weakly developed lobes at base especially in the upper and juvenile leaves, clearly and coarsely dentate at 2/3, usually acuminate obtuse at apex, rounded or subcordate at base. subcoriaceous, olive green in upper surface thoroughly covered with dispersed long hair, lower surface light green and more or less densely tomentose, main vein prominent, yellowish. 23-55 mm long and 23-65 mm broad. Peduncle up to 10 mm. pedicle 12-17 mm. even in young samaras with 1 or 3 long hair and tomentose at base, loculus (outside) and its stalk more or less tomentose. Angle between the outside edges of the wings less than 45 degrees. It grows on the rocky slopes especially on the edges of high river bank and shrubby thickets on mountain slopes, usually mixed with *Quercus infectoria* ssp *boissieri* , *Salix* spp., *Colutea* spp.

*Distribution*: Turkey and Iran

*Type*: Holotype H. Kayacik, Sarimsak, Andirin, Maras, Southeastern Turkey.

*Specimens seen*: Iran, Western Azerbaijan, Urmia, Serro road, Eshkesoo village, 1500-1700m, Alizadeh & al. 4751.

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Fig. 1. *Acer monspessulanum* subsp. *oksalianum*.

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