

NOTES ON THE OLEACEAE FAMILY IN IRAN

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Fraxinus excelsior subsp. *excelsior* is recorded for the flora of Iran. Two new varieties including *Fraxinus angustifolia* subsp. *syriaca* var. *pilosa* and *F. angustifolia* subsp. *persica* var. *pubescens* are described from West of Iran (Zagros mountain). *Fraxinus angustifolia* subsp. *persica* is the new combination. Also field studies approved that *Olea ferruginea* and *O. aucheri* are synonymous and they should be included in *O. europaea* subsp. *cuspidata*.

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Key words. *Oleaceae*, *Olea*, *Fraxinus*, New record, Iran.

مطالعاتی روی خانواده زیتون (*Oleaceae*) در ایران

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زیر گونه *Fraxinus excelsior* subsp. *excelsior* برای اولین بار از ایران گزارش می‌شود. دو وارسته *Fraxinus angustifolia* subsp. *syriaca* var. *pilosa* و *F. angustifolia* subsp. *persica* var. *pubescens* بر اساس نمونه‌های متعدد هرباریومی موجود و جمع‌آوری شده از غرب (زاگرس) به عنوان واحدهای جدید نامگذاری و شرح داده می‌شوند. ترکیب جدید *Fraxinus angustifolia* subsp. *persica* نیز معرفی می‌گردد. مطالعات صحرائی نشان داد که گونه‌های *Olea ferruginea* و *O. aucheri* مترادف یکدیگرند و بایستی در تاکسون *O. europaea* subsp. *cuspidata* قرار داده شوند.

INTRODUCTION

The *Oleaceae* family in Iran has been revised for the project "Flora of Iran in Farsi". The work was started in 2001 and has been based on the study of numerous herbarium specimens in Iranian herbaria (i.e. TARI, IRAN, TUH and KARAJ) and also field studies. In this paper some new taxa, record and combination are introduced.

NEW COMBINATION

Fraxinus angustifolia Vahl subsp. **persica** (Boiss.) Azadi, **comb. nov.**

Syn.: *F. persica* Boiss., Diagn. Pl. Or. Nov. Ser. 1, 11: 78 (1849); *F. oxyphylla* M.B. var. *subintegra* Boiss., Fl. Or. 4: 41 (1879); *F. syriaca* Boiss. var. *persica* (Boiss.) Lingelsheim in Engler, Pflanzen. 72 (4, 243): 53 (1920); *F. rotundifolia* Miller subsp. *persica* (Boiss.) E. Murray in Rech. fil., Fl. Iranica- no. 52 *Oleaceae*: 8 (1968).

In most of Floras the name of *Fraxinus angustifolia* Vahl (1804) is used instead of *F. rotundifolia* Miller (1768). It is necessary to mention that according to the ICBN laws [nomenclatural decisions (Article 69) taken at Berlin Congress (1987) or later versions i. e. St. Louis (2000, articles 56, 57)] the former name is a conserved name (nomina conservanda) and the latter one is a rejected name (nomina rejicienda), and all of combinations which is based on this name must be rejected. *F. rotundifolia* has been widely and persistently used in a sense not including its type, in fact no actual type specimen exist for Miller's name (Green 1988). Therefore the name *F. rotundifolia* Miller and its subspecies in Flora Iranica which belongs to *F. angustifolia* complex rejected and a new combination is made.

F. angustifolia Vahl, Enum. Pl. 1: 52 (1804).

Syn.: *F. rotundifolia* Miller, Gard. Dict. ed. 8, F no. 2(1768), nom. rejic.

Key to the subspecies and varieties

- 1-Leaflets margin serrate to coarse serrate, often green (subsp. **syriaca**) 2
- Leaflets margin subentire or irregular serrate, glaucous (subsp. **persica**) 3
- 2- Leaflets glabrous or sometimes pilose along the midrib beneath, rachis, petiole and twig glabrous var. **syriaca**
- Leaflets, rachis, petiole and twig pilose var. **pilosa**
- 3- Leaflets, rachis, petiole and twig glabrous var. **persica**
- Leaflets, rachis, petiole and twig pubescent var. **pubescens**

NEW TAXA

Fraxinus angustifolia Vahl subsp. **syriaca** (Boiss.) Yalt. var. **pilosa** Azadi, **var. nov.**

Differt ab varietate *syriaca* ramulis, rachidibus et foliolis pilosis.

Typus. Bakhtiari: Bazoft valley, after Chebd to Lebdi, 1750 m., Mozaffarian 58027 (holotypus TARI).

Distribution. Iran (endemic).

Other specimens seen. Azarbayejan: Oroumieh to Oshnavieh, Ghasemlou valley, 1500-1600 m., Azadi and Nikchehreh 83277; 30 km. from Piranshahr to Sardasht, 1500-1700 m., Azadi and Nikchehreh 83280. -Kordestan: 45 km. S. of Sanandaj, Avalan mountain, 2600 m., Kafash 3173; Bagh-e Khan, Sabeti 331 (31020/3-IRAN and 4298/1-6 in herbarium of Karaj Agriculture Faculty).- Lorestan: Doroud to Emarat, after Tee vilage, 1600-1700 m., Azadi 81322; Doroud to Emarat, Bar Aftab vilage, 1500-1600 m., Azadi 81318.- Bakhtiari: Heyran, Hakimi 31020-IRAN; Bueen, between Makedin and Chalcheraneh, 2000-2500 m., Norouzi and Khajedin 1388; Lordegan, Monj, Badamestan, N. of Bon-gerd, 1500-2350 m., Mozaffarian 54729.

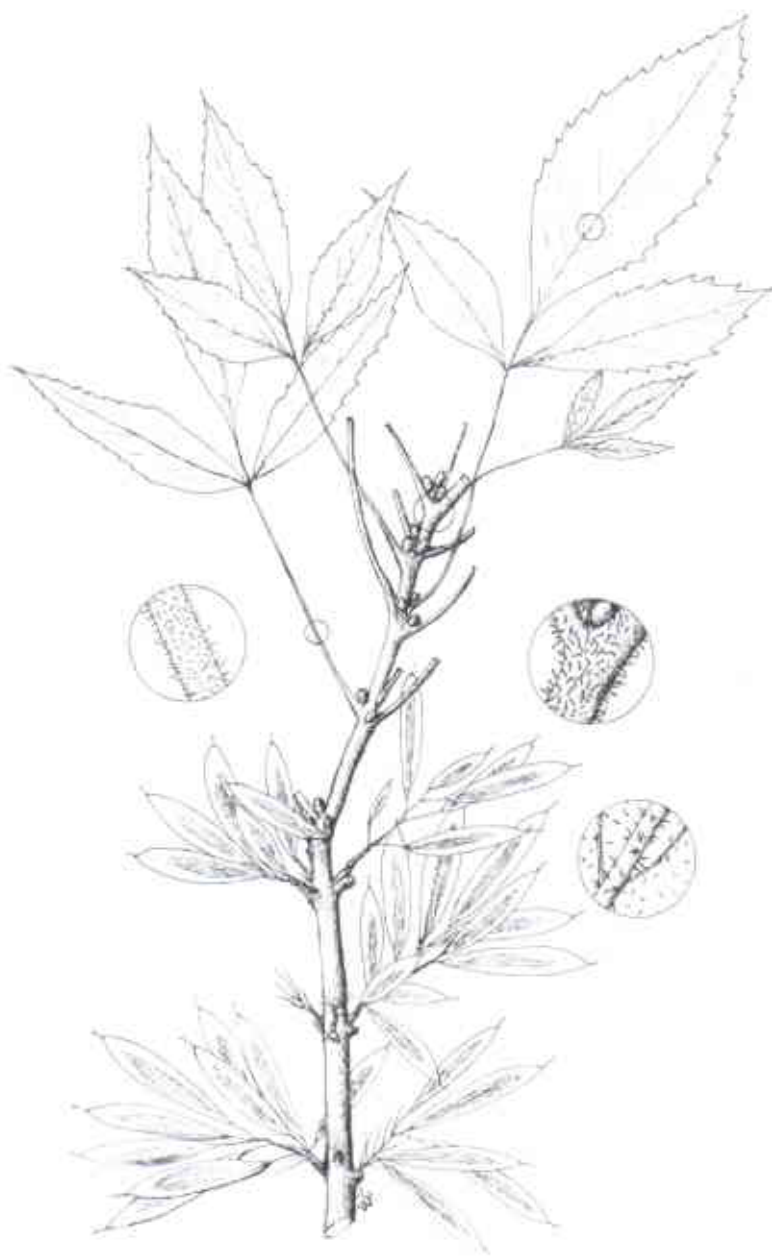


Fig. 1. *Fraxinus angustifolia* subsp. *syriaca* var. *pilosa* ($\times 0.55$).

- Kohgilouyeh: Dinar mountain, 2250 m., Dehghan 3371.

The new variety differs from var. *syriaca* in soft long hairs (pilose) on leaflets, rachis, petiole and twig.

Fraxinus angustifolia Vahl subsp. **persica** (Boiss.) Azadi var. **pubescens** Azadi, var. nov.

Differt ab varietate *persica* ramulis, rhachidibus et foliolis pubescentibus.

Typus. Kohgilouyeh: 26 km. from Yasouj to Ardakan, 2200 m., Assadi & Abouhamzeh 46291 (holotypus TARI).

Distribution: Iran (endemic).

Other specimens seen: Lorestan: Shoul Abad to Aligoudarz, Keygouran, 1800-2000 m., Azadi 81316.- Bakhtiari: Bazoft, N. of Khouyeh vilage, 2300 m., Sardari 3099; Akhoureh, Makedin, Zard mountain, 2200 m., Mousavi and Satei 31015-IRAN.- Kohgilouyeh: 70 km. NW. of Yasouj, near Deligan, 2300 m., Assadi & Abouhamzeh 46433; Yasouj to Deligan, after Sepidar, 2100-2300 m., Azadi 81328; 26 km. from Yasouj to Ardakan, 2200 m., Assadi & Abouhamzeh 46291; Tal-e Khosro, Komehr, Behboudi 951 E; Margoun waterfall, 2100 m., Ghahreman and Attar, 19064; Dena, Sisakht, 2100 m., Mortazavi 3385.- Esfahan: N. of Dena mountain, Ab Malakh, 2000-2600 m., Assadi and Mozaffarian 31377.- Fars: Mian Jangal-e Fasa, 1650 m., Javidtash 30.

The new variety differs from var. *persica* in fine short hairs (pubescent) on leaflets, rachis, petiole and twig.

NEW RECORD

Fraxinus excelsior L. subsp. **excelsior**

Selected specimens. Gorgan: 10 km. S. of Azad Shahr, 400 m., Assadi and Mozaffarian 40979; Gorgan, Gale Maran, 2200 m., Gauba 1214; Gorgan, 100 m., Pabot 28468; 86 km. E. of Gonbad Kavous, 740 m., Pabot 28469;

Jangal-e Golestan, Almeh, 1460 m., Sabeti 4086; Zarringol, 850 m., Riazi 7622; Jangal-e Golestan, S. E. of waterfall, 800 m., Wendelbo 14288; Touskistan, on the road to Chahar Bagh, 900 m., Abarsaji 3497; Nodeh, 900 m., Gauba and Sabeti 1213. -Mazandaran: Siah Bishe, 2500 m., Assadi 76680; previous locality, 2100-2300 m., Azadi 81909; Pol-e Zangouleh, 2400 m., Gauba 4309; Kelardasht, Riazi 31013-IRAN; forest above Sangdeh, 2400-2800 m., Azadi and Assadi 76007; Chamestan, Vaz forest, 1300-1400 m., Azadi 81921, 81922; S. of Ramsar, 13 km. toward Janat Rudbar, 700 m., Runemark and Maassoumi 21578; Dashte Nazir, Emamzadeh, 900-1000 m., Azadi 84364; Noshahr, Kheyroudkenar forest, 600 m., Assadi 33489; previous locality, Gorazbon, 500 m., Azadi 81914. -Gilan: Hashtpar, Karganroud valley, 300 m., Roshan 7631; previous locality, Lisar valley, 630 m., Roshan 7626; Asalem to Khalkhal, Asalem forest, 900-1000 m., Azadi 81924, 81925; Talesh, Asalem forest, Esfandiari 6449E. -Azarbayejan: Arasbaran protected area, E. of Vaighan, 1200-1500 m., Assadi and Maassoumi 20302; previous locality, Makidi to Kalibar, 1400 m., Runemark and Assadi 22116; previous locality, Kalaleh Olia, 1300-1600 m., Azadi and Nikchehreh 83272, 83275; previous locality, Kalibar to Asheghlou, 2100 m., Azadi and Nikchehreh 83269; 10 km. from Kalibar to Khoda Afarin, 1350-1850 m., Mozaffarian 37631; Hassan Beiglou, 1200 m., Mirdamadi 1217(4291/2, 3, 4-IRAN).

It was previously known from Europe, Turkey and Caucasia (Euro-Sib. element). The closest localities to the Iranian gathering are in N.E. of Turkey (Yaltrik 1978) and Caucasia (Vasil'ev 1952). It is distributed through the Hyrcanian province and recognized easily within the Iranian representatives of the genus by having glabrous petiole and rachis, long leaf, more leaflets (7-13) with neatly crenate-serrate to

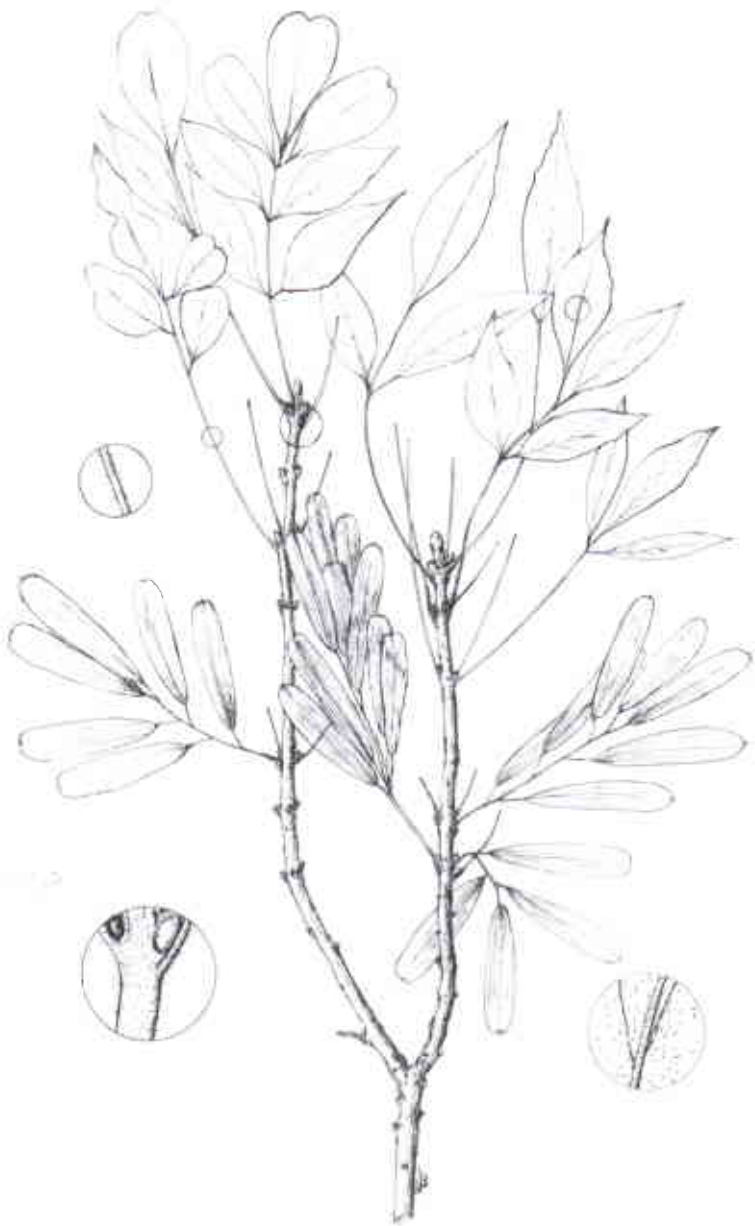


Fig. 2. *Fraxinus angustifolia* subsp. *persica* var. *pubescens* (×0.7).

serrate margin, black winter buds and paniculate inflorescence. It is very similar to *Fraxinus excelsior* subsp. *coriariifolia* (with pubescent petiole and rachis) in most of characters but differs in distribution. Geographical distribution of subsp. *coriariifolia* is N.E. of Turkey, Caucasia and N. of Iran (Hyrcano-Euxine element), and Iranian gathering specimens are only from west part of the Hyrcanian.

NOTES ON THE OLEA

Different species of this genus are recorded from Iran. Boissier (1879) in *Flora Orientalis* recorded two species (*O. europaea* L. and *O. cuspidata* Wall.), also Parsa (1949) in *Flore de l' Iran* recorded the same species. Murray (1968) in *Flora Iranica* recognized three species [*O. europaea* L., *O. ferruginea* Royle (Syn.: *O. cuspidata* Wall. ex DC.) and *O. aucheri* (Chev.) Ehrendf.]. Among the recorded species, *O. europaea* in fact is the cultivated olive and two other species in *Flora Iranica* are separated based on the kind of inflorescences which is panicle in *O. ferruginea* and raceme in *O. aucheri*. This character has no value in distinguishing these taxa and provides no firm basis for differentiation. Also the field studies shown that the matured inflorescences of all specimens in natural habitat are panicle, moreover I have seen no specimens with raceme inflorescence in all herbaria, thus I included *O. aucheri* in *O. ferruginea*. Recently a full treatment on *Olea europaea* complex was given by Green & Wickens (1989). According to this revision two above mentioned species are placed as synonymous of *O. europaea* L. subsp. *cuspidata* (Wall. ex DC.) Ciferri. This paper provided a good evidence for me and I used it in my studies, so I believe that different geographical distribution which exist in the members of this complex is the best criteria for expressing taxonomic

differentiation, therefore I accept this treatment and replaced two synonymes (*O. ferruginea* and *O. aucheri*) at the rank of new subspecies (*O. europaea* subsp. *cuspidata*) which has a distinct geographical distribution.

DOUBTFUL RECORD

Syringa persica L. Sp. Pl. 9 (1753); Boissier, E., *Flora Orientalis* 4: 38 (1879).

Carl Linnaeus (1753) doubtfully recorded this species from Iran (habitat in Persia?) without further details, similarly Boissier (1879) recorded it from uncertain habitat in Iran (Persia absque loco). The same view is often repeated in the most references. I have seen no Iranian specimens of this species in all herbaria and in natural habitats, the only two specimens which I observed are from cultivated plants (Iran: Gilan: Bandar-e Anzali, 1207 in herbarium of Pharmacy Faculty of Tehran University.- Afghanistan: Kabul, Rechinger 33578 in TARI herbarium). Moreover most of specimens which are recorded in the references are from cultivated plants, thus the presence of *S. persica* in Iran is obscure. Also according to some investigations on garden specimens of *S. persica* (K. Sax, *Journ. Arn. Arb.* 9:7.1930) which is recorded in *Flora of Pakistan* (Grohmann 1974) revealed that this species has to be treated as a hybrid, due to its sterility. Also it has been suggested that one of its parents is *S. laciniata* Hort. and the other one may be the rare and little known *S. afghanica* Schneid., only known from a few collections in wild (Bean 1981).

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