

A NEW *ROSA* SPECIES FOR EUROPEAN FLORA**

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S U M M A R Y

Rosa iberica Stev. is collected from the European Turkey (Kırklareli, Tekirdağ, İstanbul) which the most west occurrence is A4 Bolu recorded in Flora of Turkey (Davis, 1972). *R. iberica* is a new taxon for A1(E) and A2(E) squares, furthermore both for Flora of Thrace and Europe with the specimens collected from Thrace. In this study a short description of the species, drawings of the characteristics and a map of distribution in the investigation area is given.

Ö Z E T

Türkiye Florası'nda yayılışı en batıda A4 Bolu olan *Rosa iberica* Stev., Türkiye'nin Trakya Bölgesi'nden (Kırklareli, Tekirdağ, İstanbul) toplanmıştır. Dolayısıyla Trakya'dan toplanan bu örnekler ile *R. iberica* hem Trakya hem de Avrupa Florası için yeni bir türdür. Bu çalışmada türün kısa bir tanıtımı, karakteristik özelliklerini belirten kısımların çizimleri ve araştırma bölgesindeki yayılışını gösteren bir harita verilmiştir.

Kew words: *Rosa iberica*, morphology, Turkey

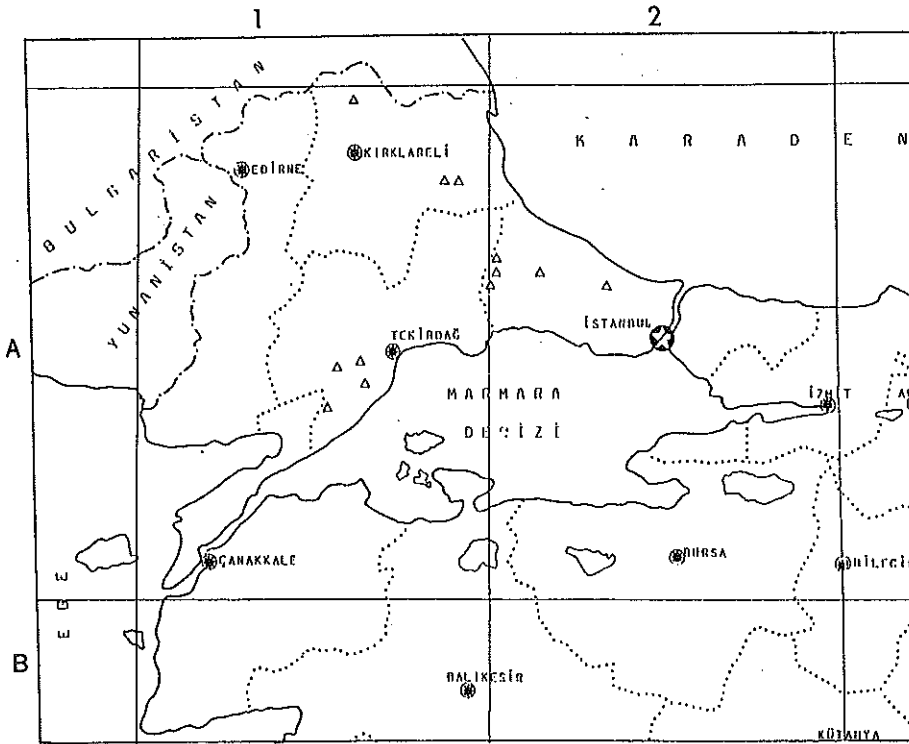
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I N T R O D U C T I O N

The genus *Rosa* L. (*Rosaceae*) comprises about 200 species in the Northern Hemisphere (Zielinski, 1989). It is mainly centered in the Middle and SW Asia (Keller, 1923). In Turkey there are about 25 species including *R. puberulenta* Bieb. which was recently collected from the Erzincan province and added to the flora (Nydegger-Hügli, 2002). *R. iberica* Stev. named from "Iberia-Caucasia" (Baytop, 1995) is a complex species which occurs in SW Asia, Caucasia, N Iraq, N Iran and the mountains of Carpathia (Komarov, 1971, Phillips & Rix, 1988, Browicz & Zielinski, 1984). According to Flora of Turkey the occurrence of this species is mainly in N and E Anatolia, the most west of that in Bolu and the most east in Kars and Van provinces (Davis, 1972). However it has not a well-known local name in Anatolia, it is cultivated in Gaziantep and neighbour villages as ornamental plants in the gardens and graveyards. Petals are used as making jam (Baytop, 2001).

Rosa species were noticed the people during the ages, due to their medicinal usages and beautiful flowers. In the recent years using the different parts for different purposes by the people the popularity of the plant was increased. For example mostly using as a herbal tea prepared from fruits and commonly selling in the markets, etc. The genus *Rosa* which has taxonomic problems and needs detailed taxonomical investigation. The wild and native *Rosa* taxa grow in NW Turkey were investigated morphologically, anatomically, phytochemically (preliminary analyzes) and palinologically. During the study many specimens were collected and thus occurrence of *R. iberica* in Thrace was reported that not indicated in both Flora of Thrace and Europe and also *Rosaceae* volume of 'Atlas Florae Europaeae' (Kurtto, A., 2004).



Map1. Distribution of *R. iberica* on the investigation area.

MATERIAL AND METHOD

During this survey many specimens were collected from Thrace and investigated. They were identified by using many related Flora's (Davis, 1972, Komarov, 1971, Rechinger, 1982, Townsend, 1966) and kept in the herbarium of Istanbul University, Faculty of Pharmacy (ISTE).

The drawings of the important parts of the plant for identifying (general shape, stem, leaf, sepals (outer and inner), flower, stigma, disc, shape of fruit and seed) and also a map of distribution area were given.

R E S U L T A N D D I S C U S S I O N

Rosa iberica Stev., in Bieb., Fl. Taur.-Cauc. 3:345 (1819).

Syn. *Rosa aucheri* Crépin in Bull. Soc. Bot. Belg. 8: 344 (1869).

Rosa anatolica Crépin in Bull. Herb. Boiss. 1: 159 (1893)

Rosa arabica Crép., l.c. et in Bull. Soc. Bot. Belg. XVIII: 412 (1879).

Rosa rubiginosa var. *iberica* (Stev.) Boiss., Fl. Orient. 2:687 (1872).

Rosa asperrima Godet in Boiss., Fl. Orient. 2: 678 (1872); Zoh. in Dep. Agr. Iraq Bull. 31: 78 (1950).

Rosa interjecta Burnat et Greml, Rev. Orient. 4 (1887).

Rosa rubiginosa L. var. *aucheri* (Crépin) Christ in Boiss., Fl. Or. Suppl. 221 (1888).

Rosa rechingeri Klast., Stud. Bot. Cechina 5: 63, tab.8, fig.1 (1942).

Ic.: Komarov, V.L., Fl. URSS 10: t.30, f.3 (1941); Rechinger, K.H., Fl. Iranica, No. 152, tab. 18, 19 (1982). Phillips et Rix, Roses, 29 (1988);

A compact shrub up to 2 m tall with prickles rather coarse, slightly curved or hooked with a broad dilated base, without acicles or bristles. Leaves slightly sticky and aromatic; leaflets 5 (-7), ovate-elliptic, obovate, 1-3 cm x 0.5-1.5 cm, acute to truncate, usually with a cuneate rarely obtuse base; lower surface of leaflets distinctly glandular, upper surface slightly glandular; the midrib and nerves slightly shortly hairy on the lower surface; margins of leaflets doubly glandular-serrate, teeth large 10-20 on each side; stipules large 1-1.8 cm x 0.3-0.7 cm and broad with acute auricles. Flowers solitary or up to 4 together, bracts often large, pedicels 0.5-1.5 cm slightly pubescent with stipitate glands. Sepals 1.6-2.2 cm x 0.2-0.4 cm long, narrowly ovate often with elongate foliaceous tips; outer sepals with lanceolate glandular toothed lobes at each side, more or less glandular on the back, after flowering reflexed, deciduous before ripening; petals 1.8-2.5 cm x 1-1.8 cm, white to pale pink; styles slightly or densely villous to tomentose with stigma head compact and semiglobose; disc narrow, orifice wide. Fruits ovoid or slightly glandular-hispid. Achenes ovoid, 0.6 x 0.3 cm long with white or yellow colour.

Flowering time: May-July

Habitat and altitude: Banks, scrubs, subalpine woods, edges of fields. 10-2400 m.

Type: (Georgia) circa oppidum Krzchinval Iberiae occidentalis (LE; photo E)

Examined specimens: A1(E) KIRKLARELİ: Vize-Pınarhisar, 2 km to Poyralı, roadsides, 19.v.1995, Ş. and T. Kültür, ISTE 68072! Kırklareli-Koçgaz, 5 km to Koçgaz, near river, 8.v.1995, E.Akalın, N.Frieser, R.Fribul, ISTE 68244! Vize-Pınarhisar, 2 km to Poyralı roadsides, 26.v.1996, Ş. and T.Kültür, ISTE 71869! A1(E) TEKİRDAĞ: Tekirdağ-Şarköy, 20 km from Tekirdağ, roadsides, 1.vi.1996, Ş. and T.Kültür, ISTE 71894! *ibid.*, 1.vi.1996, Ş. and T.Kültür, ISTE 71897! Tekirdağ-Şarköy, 21 km from Şarköy turn, out of Ishaklı village, roadsides, 1.vi.1996, Ş. and T.Kültür, ISTE 71908 a! Tekirdağ-Malkara, 8 km from Kumbağ turn, roadsides, 13.x.1996, Ş.and T.Kültür, ISTE 72686! A2(E) ISTANBUL: Kınalı Çerkezköy, 10 km to Miltaş turn, roadsides, 19.v.1995, Ş. and T.Kültür, ISTE 68061! *ibid.*, 7.x.1995, Ş. and T.Kültür, ISTE 68568! Kınalı-Çerkezköy, 8 km from Kınalı turn, roadside, 26.v.1996, Ş. and T.Kültür, ISTE 71853! Silivri, on the road of Sinekli, 14 km from Sinekli turn, 15.vi.1997, Ş. and T.Kültür, ISTE 74284! Terkos, 1 km from Tayakadın-Terkos road, 1 km from junction, macchie area on the roadsides, 15.vi.1997, Ş. and T.Kültür, ISTE 74299!

General Distribution: Caucasia, North Iraq, Iran.

Conservation status: Rare on the investigation area.

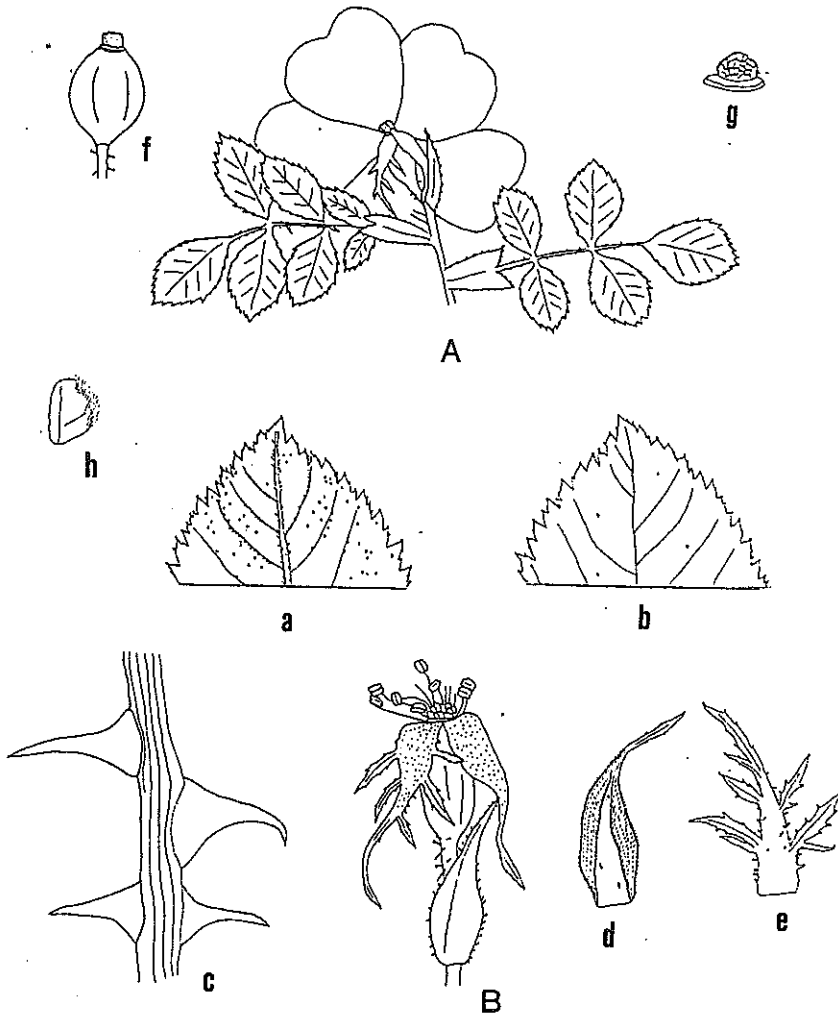


Figure 1. A. flowering branch (x1), a. lower surface of leaflet (x3.5), b. upper surface of leaflet (x3.5), c. part of shoot with prickles (x3.5), B. apetal flower (x3.5), d. inner sepal (x3.5), e. outer sepal (x3.5), f. fruit (x1), g. styles and disc (x3.5), h. acen (x3.5).

R. iberica is a complex species that related with *R. elliptica* Taucsh which is a European plant and differences between them are given as a table (Klastersky, 1968) (Table.1). The related species of *R. iberica* are *R. canina* and *R. agrestis* which grown in Turkey, the differences of them are given as below (Table.2).

Table 1: The differences between *R. iberica* and *R. elliptica*.

	<i>R. elliptica</i>	<i>R. iberica</i>
Leaflets	elliptical, pubescent on both surfaces	ovate, elliptic, obovate, glabrous or rarely the midrib shortly hairy on the lower surface
Pedicele	glabrous	slightly pubescent with stipitate glands

Table 2: The differences of *R. iberica*, *R. canina* and *R. agrestis*.

	<i>R. agrestis</i>	<i>R. canina</i>	<i>R. iberica</i>
Leaflets	narrow ovate, narrow elliptic	narrow ovate, narrow elliptic	ovate-elliptic, obovate
Pediceles	glabrous	glabrous	slightly pubescent with stipitate glands
Disc	broad, orifice narrow	broad, orifice narrow	narrow, orifice broad

The genus *Rosa* is investigated in Flora of Turkey with not dividing to section and subsection. However Mandenova (Mandenova, 1970) who researches in Turkish *Rosa* species, is investigated the *Rosa* taxa by dividing to section and subsection, according to this *R. iberica* is belong to Sect. *Caninae* DC. and Subsect. *Rubiginosae* Crep. Any hybride of *R. iberica* was not indicated in Flora of Turkey (Davis, 1972). No hybride of this species was seen in the research area.

R. iberica which has the most west occurrence, A4 Bolu in Flora of Turkey (Davis, 1972) was recorded that grows higher (1200-2400 m) but it was also recorded that the altitude of the species grows 10 m lower than that in a study was made in east Blacksea Region (Anşin et al, 1985). The specimens collected from Thrace should be identified simply as *R. iberica* for their stout leaves and have glands on the lower surfaces.

In this study *R. iberica* Stev. which named from Iberya (Iberia-Kafkasya) was collected from the west parts of Turkey at first time. Thus, this is a new taxon for the

A1(E) and A2(E) squares where the most west border of the species growing and a new species in both Flora of Thrace and Europa.

This study is a part of a PhD thesis and all the leaves of the species are investigated anatomically. The anatomical studies are based on transverse and surface sections of the leaves. It is found that anatomical characteristics of cuticle, presence of collenchyma, shape of sclerenchyma layer, characteristics of the walls of upper and lower epiderma cells, crystal and hair types, stoma shape and amount of adjacent cells are important data to differentiate the *Rosa* species anatomically. *R. iberica* is compared by the anatomical characteristics with the other *Rosa* taxa studied before (Kültür, 1998, Kültür, 2002-3). According to the anatomical characteristics *R. iberica* is related to *R. pulverulenta* and *R. pisiformis* (Kültür, 1998; Kültür, 2002-3).

According to other studies (Kültür, 1998; Kültür & Özhatay 2001) it has been observed polimorphism phenomenon in pollens of *R. iberica* thus it has been found two types pollens (tricolporate and tricolpate). The pollen shape and size of *R. iberica* are spheroidal and subprolate. Exine structure of *R. iberica* is tectate. Sculpture is granulate-striate. The pollen characteristics of *R. iberica* is similar with *R. micrantha*.

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