



Irina Buzunova, Jerzy Zieliński, Angel Romo

Rosa rubiginosa (Rosaceae) in Morocco – first records from northern Africa

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Abstract: Data about the occurrence of *Rosa rubiginosa* in northern Morocco are presented in this article. Until now the species was thought to be endemic to Europe.

Additional key words: wild roses, section Caninae, taxonomy, chorology

Addresses: I. Buzunova, Russian Academy of Sciences, Komarov Botanical Institute, Prof. Popova str. 2, St. Petersburg, Russia

J. Zieliński, University of Life Sciences, Faculty of Forestry, Department of Forest Natural Foundations, Wojska Polskiego 71D, PL-60 625 Poznań, Poland

A. Romo, Consejo Superior de Investigaciones Científicas, Institute of Botany, Passeig del Migdia s/n. 08038 Barcelona, Spain

Introduction

The geographical range of the genus *Rosa* is limited to the temperate zone of the northern hemisphere. None of the wild roses reach the equator and only a few species occur below the latitude of 20 degrees (Zieliński 1985). Except for *Rosa abyssinica* occurring in Abyssinia and Ethiopia (Browicz and Zieliński 1991) the roses in Africa are native only to northwestern regions of the continent: Morocco, Algeria, and Tunisia (Meusel et al. 1965; Henker 2000). The newest information about their occurrence in these countries can be found in the *Flore d'Afrique du Nord* (Maire 1980) and in the recently edited *Catalogue des plantes vasculaires du Nord du Maroc* (Silvestre 2002).

The exact number of species growing in Africa is still difficult to state precisely because of serious controversies between botanists with reference to the morphological range of some taxa. Except for two “good” morphologically well-defined species, *Rosa sempervirens* L. (sect. *Synstylae*) and *R. spinosissima* L.

(sect. *Pimpinellifoliae*), the African roses belong to the taxonomically unclear section *Caninae*, whose species are very differently understood by specialists. *R. canina* L., the type species of this section, is treated either as a single species that is very diverse morphologically (Nilsson 1972; Zieliński 1985; Stace 2005) or as a group of “small” species: *R. canina* s. str., *R. andegavensis* Bastard, *R. squarrosa* (A. Rau) Boreau, *R. blondeana* Ripart ex Déségl., *R. corymbifera* Borkh., and *R. deseglisei* Boreau (Klásterský 1968; Silvestre and Monserrat 1998; Silvestre 2002). Whether *R. stylosa* Desv. exists at all is questioned by some rhodologists; according to Boulenger (1937) individuals of *R. canina* having more protruding styles are gathered under the above name. *R. pouzinii* Tratt. is so closely related and similar to *R. canina* that some authors include it in the latter species in the rank of subspecies or variety (Crépin F. 1890; Keller 1931; Maire 1980). Special studies are required concerning *R. sicula* Tratt., which is widespread in the western Mediterranean region and often very difficult to distinguish from the

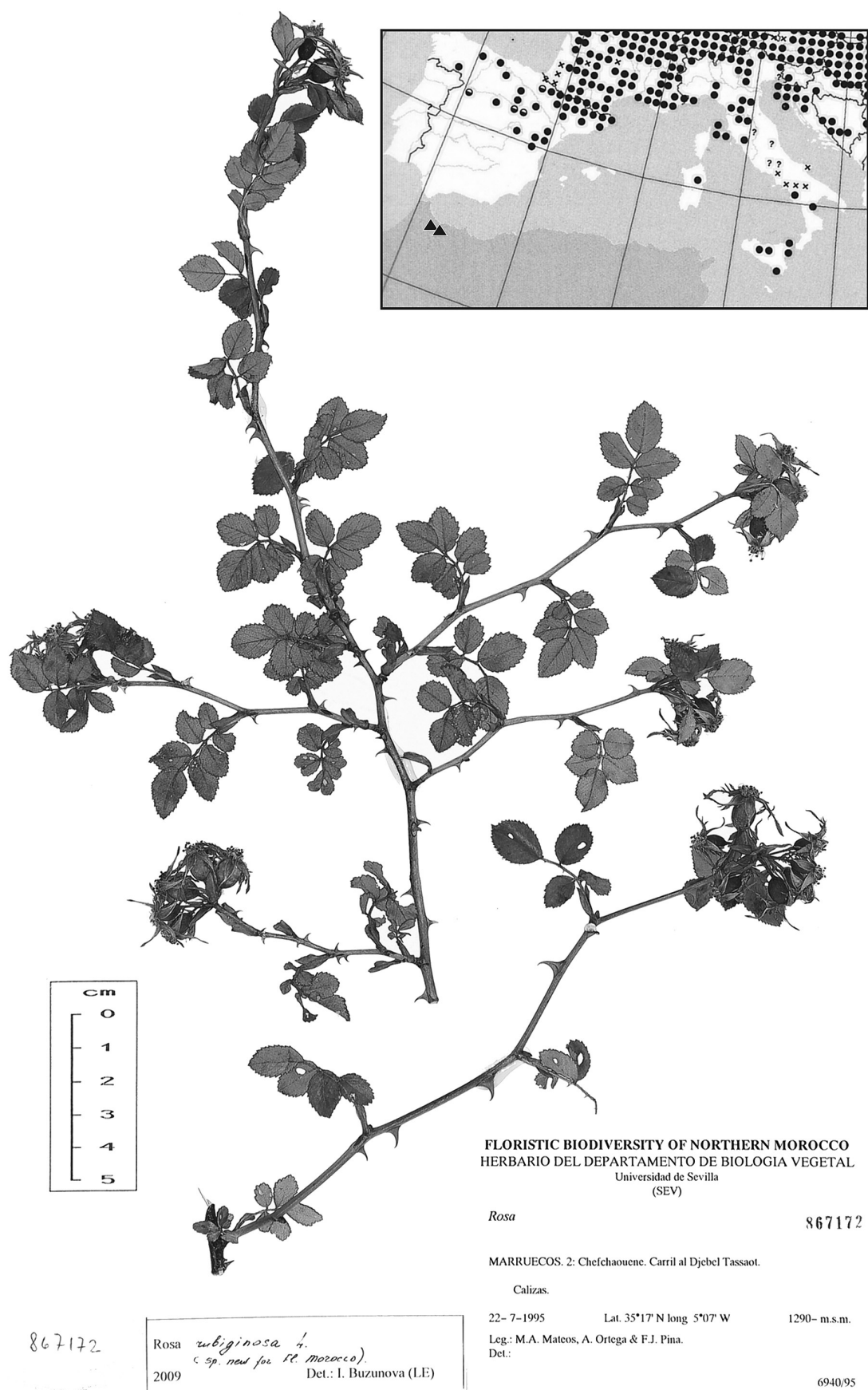


Fig. 1. Herbarium specimens of *Rosa rubiginosa* collected in Morocco (SEV 6940/95). In the upper right corner: southwestern part of the range of *R. rubiginosa* (according to Kurtto et al. 2004, supplemented), African localities marked with triangles

east-Mediterranean *R. glutinosa* Sibth. and Sm. and *R. pulverulenta* M. Bieb., described from Caucasus; all are temporarily discussed as an aggregate species under the latter, oldest name (Zieliński 1982, 1985, 1986; Kurtto et al. 2004). Finally, special attention should also be given to the endemic, poorly known *R. mesatlantica* H. Lindb., mainly with regard to its relation with *R. agrestis* Savi, *R. micrantha* Sm., and *R. pulverulenta* agg.

Except for the typical Mediterranean *Rosa semper-virens* and puzzling *R. mesatlantica* the other roses mentioned above are widespread on the European continent; it seems then rather obvious that they reached Africa from Europe. Among them there is also a species not recorded so far from northern Africa, namely *R. rubiginosa* L., which was collected in the second half of the last century in Morocco (Fig. 1).

Rosa rubiginosa is a typical central-European species. It is frequent or locally even common in central and northwestern Europe, being very rare or absent from the north-east and south of the continent (Kurtto et al. 2004). Until now it was thought to be endemic to Europe.

Methods

Two interesting, unnamed Moroccan *Rosa* specimens have been found by the first author (I.B.) in herbarium collections of Sevilla University (SEV) and in Botanische Staatssammlung Munich (M). They were tentatively determined as *R. rubiginosa*, and then precisely compared to numerous herbarium specimens of this species collected in Europe.

Results and discussion

Thorough comparisons of herbarium material confirmed the earlier conjectures, that the plants mentioned above belong to *Rosa rubiginosa*.

In Morocco *Rosa rubiginosa* was collected twice: in 1954 (voucher at M) and in 1995 (voucher at SEV). In both cases the unnamed specimens of this species were found in herbarium collections by the first author (I.B.). Both specimens were gathered in northern Morocco, one of them in West Rif, the second in the central Rif mountains (Fig. 2).

On the herbarium sheet of the *Rosa rubiginosa* kept in Seville there are two branchlets of the species with young fruits crowned by lobed sepals (Figs 1, 3).

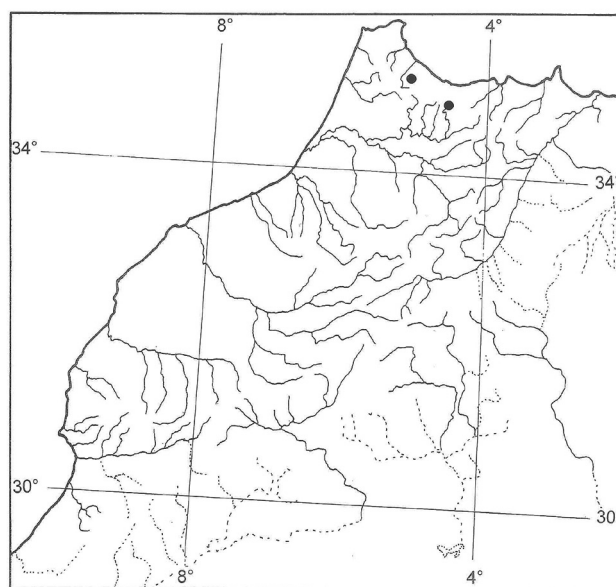


Fig. 2. Map distribution of *Rosa rubiginosa* in Morocco

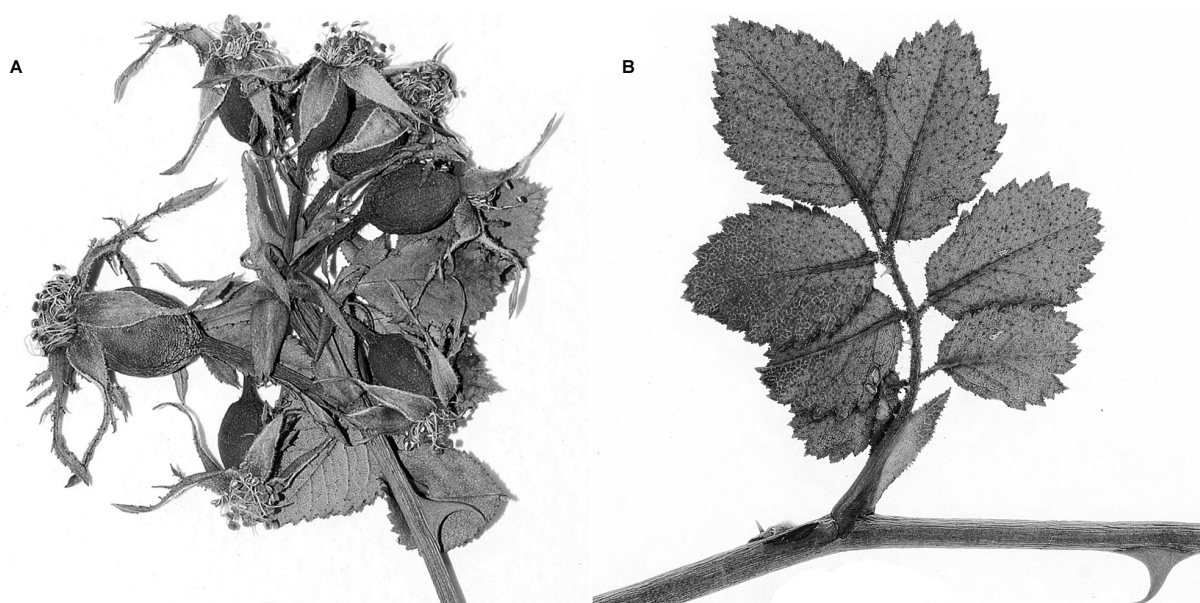


Fig. 3. Details from the herbarium specimen of *Rosa rubiginosa* (SEV 6940/95); A – infructescence; B – leaf from the fruiting branchlet (underside)

Flowering stems are up to 19 cm long, slightly zigzag, smooth, and without glands; prickles are broad-based, hooked, and placed just below or between the nodes. Leaves are 5–7-foliolate and ca 3–4 cm long; leaflets are up to 1.5 cm long, broadly elliptic to broadly ovate, connivent or slightly overlapping, and doubly glandular serrate, with short, broad teeth, glabrous and smooth above, and sparsely hairy and densely glandular beneath. Fruits are congested at the end of branchlets. Pedicels are up to 15 mm long with scattered stipitate glands. Hypanthia are smooth. Sepals are patent or ascending, slightly broadened at the apex, glandular ciliate, and smooth outside; outer ones have lateral lobes. Densely hairy styles form a compact, sessile head.

The specimen kept in M herbarium collected by Rechinger is sterile. In comparison with the above described plant it has slenderer, less curved prickles but in other characteristics both specimens hardly differ from each other.

Rosa rubiginosa is one of the most characteristic species of the section Caninae, and is rather difficult to confuse with any other European roses. However, in the southwestern part of the range, mainly on the Iberian Peninsula and in Africa, it meets a closely related and very similar *R. sicula* Tratt. (= *R. pulverulenta* agg.), also belonging to the section Caninae. Generally speaking there is no single feature that would allow the above taxa to be distinguished, and therefore all possible characteristics should be analysed for their identification.

Unlike *Rosa rubiginosa*, which reaches a height of up to 2–3 m and has somewhat arched branches, *R. sicula* is usually a low, compact, erect shrub, up to 1 m tall, with subterranean rhizomes. Its prickles are straight to distinctly curved, usually \pm uniform. Internodes on flowering branchlets are short, so leaves are usually densely set on flowering stems and distinctly overlap each other. Leaflets are broadly elliptic to broadly obovate, usually not more than 15 mm long, sharply serrate, with narrow, glandular teeth, and also sometimes \pm glandular above. Flowering branchlets are usually not more than 8 cm long. Flowers are single or few and are 1.2–2.5 cm in diameter. Pedicels are (2–)3–8(–10) mm long and densely stipitate-glandular. Sepals are erect or ascending in fruit and are persistent for a long period. Styles are densely hairy and form a compact, rather large, sessile head.

The African specimens of *Rosa rubiginosa* generally do not differ from the European plants. They are easy to distinguish from the typical *R. sicula*, by their loose habit, longer flowering branchlets, and leaves which are loosely set on the stems and leaflets, which are mostly ovate, normally smooth and eglandular on the upper surface.

The presence of Euro-Siberian taxa in the Rif mountains has been pointed out by Quézel (2002) and

Valdés et al. (2006), but taking into consideration the fact that *Rosa rubiginosa* easily naturalizes, sometimes far from its natural range, e.g. in south America, in Australia and southern Africa (Hencker l.c.), the question arises if it is native to Morocco. In both cases, however, the species were found in mountains, in natural plant communities (*Quercus rotundifolia* and *Cedrus atlantica* woodlands) far from settlements, so it seems to be indigineous to this country.

Herbarium specimens of *Rosa rubiginosa* collected in Morocco.

Marruecos.2: Chefchaouene. Carril al Djebel Tassaot. Calizas. Lat. 35° 17' N Long. 5° 07' W, 1290 m.s.m., 22.07.1995, leg. M. A. Mateos, A. Ortega, and F. J. Pina 6940/95 (SEV 867172).

Marocc. hisp.: In Atlante riphæo (Rif – Atlas) prope Ktama (Ketama), substr. silic. in apertis cedretorum, 1800 m.s.m., 2.08.1954, leg. K. H. Rechinger 848 (M).

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