

# The analysis of the genus *Rosa* L. in the flora of Dagestan

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**Abstract.** The given article dwells upon the floristic composition of the wild roses in Dagestan which includes 46 species. The species composition of roses of Dagestan has not been sufficiently researched and requires a more serious and detailed approach. The aim of the given work is the inventory of the flora of the wild roses of Dagestan. Stemming from this, the following tasks are being solved: specification of the species composition and geographic dissemination of the species of the genus *Rosa* L. in Dagestan. In sum, the taxonomic composition of the genus *Rosa* in Dagestan is not homogeneous. Within it there can be definitely singled out large species characterized by wide distribution and close concordance with the diagnoses of descriptions. These are the species *R. canina* L., *R. corymbifera* Borkh., *R. pimpinellifolia* L., *R. oxyodon* Boiss.. All of them possess high polymorphism and for these species there has been pointed out a great number of forms with different variations of signs. The second group is composed of the species with smaller natural habitats, and they are usually less changeable. It has been established that the leading geoelements are the Caucasian and Dagestani ones. A high percentage of the endemic species testifies to the fact that the examined area, as well as the Caucasus in general, is the centre of intensive speciation.

## 1 Introduction

The first data on wild roses in Dagestan can be found in the works of M. Bieberstein. In 1872 E. Boissier, based on the collections of F.J. Ruprecht, cited 9 species and 3 varieties in reference to Dagestan: *R. pimpinellifolia* var. *tomentella* Boiss., *R. oplitthes* Boiss., *R. tuschetica* Boiss., *R. oxyodon* var. *pleiantha* Boiss., *R. pomifera* Herrm., *R. ruprechtii* var. *daghestanica* Boiss., *R. hamaetodes* Boiss., *R. didoensis* Boiss., *R. canina* L. [1]. Later on, the data on the species composition of wild roses in Dagestan were published in the works of F.I. Schmalhausen and V.I. Lipsky. In sum, by the beginning of the 20<sup>th</sup> century different researchers had cited 16 species, 5 varieties and 1 form of a rose [2]:

- R. pimpinellifolia* L.
- R. pimpinellifolia* var. *myriacantha* DC.
- R. pimpinellifolia* var. *elasmacantha* Trautv.
- f. *typica* Schmalh.

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*R. tuschetica* Boiss.  
*R. oxyodon* Boiss.  
*R. oxyodon* var. *pleiantha* Boiss.  
*R. oplisthes* Boiss.  
*R. pomifera* Herrm.  
*R. ruprechtii* Boiss.  
*R. ruprechtii* var. *daghestanica* Boiss.  
*R. hamaetodes* Boiss.  
*R. didoensis* Boiss.  
*R. glutinosa* Smith  
*R. leucantha* Bieb.  
*R. iberica* Stev.ex Bieb.  
*R. boissieri* Crep.  
*R. tomentosa* Smith  
*R. cuspidata* Bieb.  
*R. dumetorum* Thuill.  
*R. canina* L.  
*R. canina* var. *hispida* Schmalh.

S.V. Yuzepchuk pointed out 13 species on the territory of Dagestan in his work “Flora of the U.S.S.R.” [3]. Later on, S.G. Tamamshyan [4] and A.A. Grossheim [5] dedicated their works to the roses of the Caucasus in general and Dagestan, in particular. In 1958 there was published a research by V.G. Khrzhanovsky [6] which was a revision of the species *Rosa* in the European part of the former USSR and the Caucasus. The author cited 16 species and 3 varieties in reference to the territory of Dagestan.

In the following years the roses of the Caucasus were described in the works of A.I. Galushko [7, 8, 9]. In 1985 in the work “Roses of Dagestan” E.S. Kolobov [2] cited 31 species and 4 varieties in reference to Dagestan: *R. canina* L. (*R. canina* var. *didoensis* (Boiss.) Grossh., *R. canina* var. *hispida* Schmalh.), *R. corymbifera* Borkh. (*R. corymbifera* var. *setoso-pedicellata* Chrshan.), *R. teberdensis* Chrshan., *R. pomifera* Herrm., *R. ruprechtii* Boiss., *R. brotherorum* Chrshan., *R. svanetica* Crep., *R. galuschkoi* Demirova, *R. tomentosa* Smith, *R. prilipkoana* Sosn., *R. boissieri* Crep., *R. cuneicarpa* Galushko et Bagath., *R. komarovii* Sosn., *R. obtusifolia* Desvaux, *R. tuschetica* Boiss., *R. pulverulenta* Bieb., *R. azerbaijchanica* Novopork. et Rza-zade, *R. nisami* Sosn., *R. sachokiana* P. Jarosch., *R. danaiorum* Bagath., *R. marschalliana* Sosn., *R. zangezura* P. Jarosch., *R. iberica* Stev., *R. oxyodon* Boiss., *R. sosnovskyana* Tamamsch., *R. prokhanovii* Galushko, *R. glabrifolia* C.A.Mey. ex Rupr., *R. buschiana* Chrshan., *R. spinisissima* L., *R. elasmacantha* Trautv. (*R. elasmacantha* var. *elasmacantha* Shmalh.), *R. tschatyrdagi* Chrshan.

Nevertheless, despite the valuable data offered by the aforementioned researchers, the species composition of roses of Dagestan has not been sufficiently researched and requires a more serious and detailed approach.

The aim of the given work is the inventory of the flora of the wild roses of Dagestan. Stemming from this, the following tasks are being solved: specification of the species composition and geographic dissemination of the species of the genus *Rosa* L. in Dagestan.

## 2 Methods

To meet these challenges a routing method of the study of the territory with the description of the characteristics of the bushes or clumps has been applied. There have been registered the general sizes of the plant and peculiarities which are hard to reflect in the herbarium. A number was attributed to each object, several digital photos were taken and herbarium specimen with the fruits were selected (1-4 herbarium sheets).

Later on, an office processing of herbarium sheets was performed. The material for the research was gathered along the rivers Avarsk-Koisu, Andis-Koisu and Samur. In the course of the conducted research 140 specimen were studied.

### 3 Results

According to the “Summary of the flora of Dagestan” [10], there are 46 species on the examined territory (Table 1). The species composition of the genus *Rosa* in Dagestan belongs to four sections: *Gallicanae* DC, *Pimpinellifoliae* DC, *Cinnamomea* DC, *Caninae* DC. The section *Gallicanae* is represented by one species, *R. gallica* L., which in reference to Dagestan is indicated in the suburbs of Derbent. A.A. Grossheim [5] cites this species of Dagestan as a cultivated plant. *R. gallica* is the most ancient species out of the modern roses in the Caucasus. The current species has not been found in the course of large-scale expeditions carried out by the researchers from the Mountain Botanical Garden of the Dagestan Federal Scientific Centre of the Russian Academy of Sciences.

The section *Pimpinellifoliae* has been represented by 4 species: *R. pimpinellifolia* L., *R. elasmacantha* Trautv., *R. myriacantha* DC. ex Lam., *R. tschatyrdagi* Chrishan. The species of this section are encountered in Intramountain Dagestan, especially in the limestone area. They are characteristic of upland xerophyte aggregations and occur on shallow rubbly soil and stony slopes [1]. The most widespread species of this section is *R. pimpinellifolia*. It appeared in the Pleistocene and it presently occupies a vast area from the Pacific up to the Atlantic Ocean. *R. pimpinellifolia* is a highly polymorphic species [6, 2, 11, 12] which is characterised by the appearance of various forms that are markedly different from each other according to their morphological signs. A congenial species *R. elasmacantha* refers to Caucasian endemics and provenly occurs in Kabardino-Balkaria, the Chechen Republic, Karachay-Cherkessia, North Ossetia-Alania and Dagestan.

Nevertheless, for a certain while the mere existence of this species had been questioned as no one collected *R. elasmacantha* in the Caucasus after the description of S.V. Yuzepchuk [5] and V.G. Khrzhanovsky [6].

*R. myriacantha* is quite a widespread species which differs from *R. pimpinellifolia* by the double glandulous serrate leaves with the presence of glandules on the underside of the leaf.

Some researchers [5, 6] do not recognize *R. myriacantha* as a species, but consider it a variety of *R. spinosissima* (*R. pimpinellifolia*) v. *myriacantha* DC. *R. tschatyrdagi* was first cited under the name *R. myriacantha* by M. Bieberstein in the Crimea. Later on, he came to a conclusion that it was a new species. That opinion was shared by S.V. Yuzepchuk [5], but M. Biebertsein did not diagnose a new species.

V.G. Khrzhanovsky [6] described *R. tschatyrdagi* as a species and underlined its significant changeability.

The section *Cinnamomea* DC is represented by 4 species: *R. glabrifolia* C. A. Mey ex Rupr., *R. oxyodon* Boiss., *R. prokhanovii* Galushko, *R. sosnovskyana* Tamamsch. By its nature this section is a mountain one, it occurs in middle and upper mountain belts. These sections are attributed to the mesophilous phytocenoses on the thick and moderately developed soils [1].

I.O. Buzunova and R.V. Kamelin [13] argue that the species *R. oxyodon*, *R. prokhanovii*, *R. sosnovskyana* constitute an ancient group of species of affinity *R. oxyodon* Boiss. s.l. Nevertheless, personal research of the morphological signs of the aforementioned species and the polymorphism analysis of 115 ISSR markers does not warrant their singling out as independent species [1]. According to the received data, *R. oxyodon* is a unified polymorphic species which is sufficiently widely represented in the Caucasus.

*R. glabrifolia* is related to the species of the affinity *R. majalis* Herrm s. l. This species was cited for the first time in reference to Dagestan by E.S. Kolobov [2]. Nowadays a number of researchers such as I.A. Shantser, G.Y. Klinkova [14], I.A. Shantser, V.N. Voylokova [15] consider *R. glabrifolia* in the frame of the species *R. majalis*. The latter, as a highly polymorphic species, presents a complex of species *R. majalis* s. str., *R. glabrifolia*, *R. gorinkensis*, *R. pratorum* [14, 17, 18].

The section *Caninae* DC is represented by 32 species: *R. afzeliana* Fries, *R. azerbaijandica* Novopork. et Rza-zade, *R. awarica* Gussejnov, *R. balsamica* Bess., *R. boissieri* Crep., *R. brotherorum* Chrschan., *R. buschiana* Chrschan., *R. canina* L., *R. corymbifera* Borkh., *R. cuneicarpa* Galushko et Bagath., *R. danaiorum* Bagath., *R. darginica* Gussejnov, *R. didoensis* Boiss., *R. galuschkoi* Demurova, *R. iberica* Stev., *R. kamelinii* Gussejnov, *R. komarovii* Sosn., *R. marschalliana* Sosn., *R. micrantha* Borrer ex Smith, *R. mollis* Smith, *R. nisami* Sosn., *R. oplisthes* Boiss., *R. prilipkoana* Sosn., *R. pulverulenta* Bieb., *R. sachokiana* P. Jarosch, *R. subbuschiana* Gussejnov, *R. svanetica* Crep., *R. teberdensis* Chrschan., *R. tlaratensis* Gussejnov, *R. tomentosa* Smith, *R. tuschetica* Boiss., *R. irinae* Demurova (*R. usischensis* Gussejnov), *R. villosa* L., *R. zangezura* P. Jarosch. This is one of the most difficult groups for research as it is characterized by a high polymorphism [6, 2, 13, 19, 20, 21]. Its representatives are widespread in all parts of Dagestan: Lower, Foothill, Intramountain and partly in High-mountain Dagestan.

The representatives of this subsection occur among the mesophyte dumetous formations; among the alpine and subalpine grasslands, as well as on the stony substrates and in the petrous upland habitats. The most widespread representative of this section *R. canina* is highly changeable and forms highly localized forms of various degrees of isolation [5, 6, 2]. The closest to *R. canina* is the species *R. corymbifera* the geographic dissemination of which coincides with the aforementioned species.

The researchers of the institute have revealed a great part of the flora of wild roses of Dagestan in the course of the expedition (Table 1). At the same time, we have discovered the species which were close to the diagnoses which had already been known, but which had not been mentioned in the “Summary of the flora of Dagestan” [10]. Nowadays the herbarium of the institute includes some specimen the identification of which is complicated. A number of them approximates by the aggregate of signs to the already known species which were not mentioned in regard to the territory of Dagestan. Other specimen diverge from the known diagnoses.

**Table 1.** The species composition of *Rosa* in the flora of Dagestan.

№	Genus Rosa	Summary of the flora of Dagestan	Personal collections
Sectio 1. <i>Caninae</i> DC.			
1.	<i>R. afzeliana</i> Fries	+	+
2.	<i>R. azerbaijandica</i> Novopork. et Rza-zade	+	+
3.	<i>R. awarica</i> Gussejnov	+	-
4.	<i>R. balsamica</i> Bess.	+	-
5.	<i>R. boissieri</i> Crep.	+	-
6.	<i>R. brotherorum</i> Chrschan.	+	-
7.	<i>R. buschiana</i> Chrschan.	+	+
8.	<i>R. canina</i> L.	+	+
9.	<i>R. corymbifera</i> Borkh.	+	+
10.	<i>R. cuneicarpa</i> Galushko et Bagath.	+	+
11.	<i>R. danaiorum</i> Bagath.	+	+

12.	<i>R. darginica</i> Gussejnov	+	-
13.	<i>R. didoensis</i> Boiss.	+	+
14.	<i>R. galuschkoi</i> Demurova	+	+
15.	<i>R. iberica</i> Stev.	+	+
16.	<i>R. balsamica</i> Bess.	+	-
17.	<i>R. kamelinii</i> Gussejnov	+	-
18.	<i>R. komarovii</i> Sosn.	+	+
19.	<i>R. marschalliana</i> Sosn.	+	+
20.	<i>R. micrantha</i> Borrer ex Smith	+	+
21.	<i>R. mollis</i> Smith	+	-
22.	<i>R. nisami</i> Sosn.	+	+
23.	<i>R. oplisthes</i> Boiss.	+	+
24.	<i>R. prilipkoana</i> Sosn.	+	-
25.	<i>R. pulverulenta</i> Bieb.	+	+
26.	<i>R. sachokiana</i> P. Jarosch	+	+
27.	<i>R. subbuschiana</i> Gussejnov	+	-
28.	<i>R. svanetica</i> Crep.	+	+
29.	<i>R. teberdensis</i> Chrshan.	+	+
30.	<i>R. tlaratensis</i> Gussejnov	+	-
31.	<i>R. tomentosa</i> Smith	+	-
32.	<i>R. tuschetica</i> Boiss.	+	+
33.	<i>R. irinae</i> Demurova ( <i>R. usischensis</i> Gussejnov)	+	-
34.	<i>R. villosa</i> L.	+	+
35.	<i>R. zangezura</i> P. Jarosch.	+	+
Sectio 2. <i>Cinnamomeae</i> DC.			
36.	<i>R. glabrifolia</i> C.A.Mey.ex Rupr.	+	+
37.	<i>R. oxyodon</i> Boiss.	+	+
38.	<i>R. prokhanovii</i> Galushko	+	+
39.	<i>R. sosnovskiyana</i> Tamamsch.	+	+
Sectio 3. <i>Pimpinellifoliae</i> DC.			
40.	<i>R. elasmacantha</i> Trautv.	+	+
41.	<i>R. myriacantha</i> DC. ex Lam.	+	+
42.	<i>R. pimpinellifolia</i> L.	+	+
43.	<i>R. tschatyrdagi</i> Chrshan.	+	-
Sectio 4. <i>Gallicanae</i> DC.			
44.	<i>R. gallica</i> L.	+	-
Unclear state			
45.	<i>R. altidaghestanica</i> Gussejnov	+	-
46.	<i>R. cziragensis</i> Gussejnov	+	-
47.	<i>R. pseudovalentinae</i> Bagath.	+	+

The analysis of the floristic composition of the roses of Dagestan allows us to single out 16 geographic elements which confirm the idea of the contacts with the adjacent territories (Table 2). Based on the number of species and percentage participation, the most prevalent group is the group of geoelements of the Caucasian type of natural habitats which includes 28 species that constitute 59,5 % of the whole composition of the roses in Dagestan (Table 2). Almost all the species constituting the group of elements of the caucasian type are endemics. Out of them dagestani endemics make up 21,3% of the whole spectrum of wild roses. The second place is occupied by the geoelements of boreal type (23,3%) among which european elements prevail. The third place is occupied by the group of elements of

xerophyte type (14,8%) which is represented by the mediterranean (*R. micrantha*), eastern mediterranean (*R. pulverulenta*), Asia Minor Caucasian (*R. boissieri*, *R. iberica*, *R. svanetica*), atropotan (*R. zangezura*) and northern atropotan (*R. sosnovskyana*) geoelements. The lowest percentage is the steppe type of natural habitats (2,1%) represented by one subpontian geoelement (*R. tschatyrdagi*).

**Table 2.** The ratio of botanico-geographical elements of the flora of *Rosa* L. in Dagestan.

Type of zone	Geoelements according to A.A. Grosheim (1935)	Species	%
boreal	western palearctic	<i>R. canina</i> , <i>R. glabrifolia</i>	4,2
	southern palearctic	<i>R. pimpinellifolia</i>	2,1
	european	<i>R. corymbifera</i> , <i>R. afzeliana</i> , <i>R. mollis</i> , <i>R. tomentosa</i> , <i>R. gallica</i>	10,6
	euro-caucasian	<i>R. balsamica</i> , <i>R. villosa</i> , <i>R. myriacantha</i>	6,4
steppe	subpontian	<i>R. tschtyrdagi</i>	2,1
xerophilous	mediterranean	<i>R. micrantha</i>	2,1
	eastern mediterranean	<i>R. pulverulenta</i>	2,1
	asia minor caucasian	<i>R. boissieri</i> , <i>R. iberica</i> , <i>R. svanetica</i>	6,4
	atropotan	<i>R. zangezura</i>	2,1
	northern atropotan	<i>R. sosnovskyana</i>	2,1
caucasian	caucasian	<i>R. azerbaijanshanica</i> , <i>R. brotherorum</i> , <i>R. danaiorum</i> , <i>R. galushkoi</i> , <i>R. nisami</i> , <i>R. teberdensis</i> , <i>R. tuschetica</i> , <i>R. oxyodon</i> , <i>R. buschiana</i> , <i>R. prokhanovii</i> , <i>R. elasmacantha</i> , <i>R. prilipkoana</i> , <i>R. pseudovalentinae</i>	29,8
	eastern caucasian	<i>R. komarovii</i>	2,1
	evcaucasian	<i>R. marschalliana</i>	2,1
	eucaucasian	<i>R. oplisthes</i>	2,1
	dagestani	<i>R. cuneicarpa</i> , <i>R. didoensis</i> , <i>R. awarica</i> , <i>R. darginica</i> , <i>R. kamelinii</i> , <i>R. usischensis</i> , <i>R. altidagestanica</i> , <i>R. cziragensis</i> , <i>R. subbuschiana</i> , <i>R. tlaratensis</i> ,	21,3
albanian	<i>R. sachokiana</i>	2,1	

Nowadays there have been singled out 13 floristic zones in Dagestan based on the endemism and geobotanical peculiarities: Coastal, Tersko-Kumsky (Ter.-Kum.), Tersko-Sulaksky (Ter.-Sul.), Kazbekovsky (Kazb.), Primorsky (Primor.), Buynaksky (Buyn.), Kaitagsko-Tabasaransky (Kayt.-Tab.), Samursky (Sam.), Central Dagestani (Cent. Dag),

Akhtinsko-Kurinsky (Akht.-Kur.), Diklosmto-Dultydagsky (Dik.-Dult.), Bezhtinsko-Didoysky (Bezht.-Did., Trans-Samur [17, 10]. The data in the table show the distribution of geoelements in the frame of these districts.

The widest species in terms of natural habitats are the species of the boreal group which are practically represented in 10 floristic districts. At the same time, the main species diversity is attributed to Intramountain and High-mountain Dagestan. The xerophyte and Caucasian type of natural habitats are quite widely represented in 7 and 8 floristic districts in accordance with the main diversity in the mountainous part of Dagestan. The steppe type of natural habitats has the lowest distribution rate (in 4 floristic zones).

**Table 3.** Distribution of geographic elements of the flora of wild roses in Dagestan within the limits of its floristic zones.

Zone type	Geographic elements of flora	Floristic zones/ number of species												
		Coastal	Ter.-Kum.	Ter.-Sul.	Kazb.	Primor.	Buyn.	Kayt.-Tab.	Sam.	Cent.-Dag.	Akht.-Kur.	Dikl.-Dult.	Bezht.-Did.	Trans.-Samur.
Boreal	western palearctic	-	-	-	1	1	1	1	-	-	2	-	-	-
	southern palearctic	-	-	-	-	-	-	-	-	1	1	1	1	1
	european	-	-	1	1	4	1	1	2	3	3	2	1	-
	euro-caucasian	-	-	-	-	1	-	-	-	2	3	2	2	1
Steppe	subpontian	-	-	1	-	1	1	-	-	-	1	-	-	-
Xerophilous	mediterranean	-	-	-	-	1	-	-	-	1	1	-	1	-
	eastern mediterranean	-	-	-	-	-	-	-	-	1	1	-	-	-
	asia minor caucasian	-	-	-	1	2	-	-	-	2	3	2	1	2
	antropotan	-	-	-	-	-	-	-	-	1	-	1	-	-
	northern antropotan	-	-	-	-	-	-	-	-	-	-	1	-	-
Caucasian	caucasian	-	-	-	-	2	1	3	1	6	8	6	2	-
	eastern caucasian	-	-	-	-	1	1	-	-	-	1	-	-	1
	evcaucasian	-	-	-	-	1	-	-	-	-	-	-	-	-
	eucaucasian	-	-	-	-	-	-	-	-	1	1	1	-	-
	dagestani	-	-	-	-	-	1	1	-	5	3	4	3	-
	albanian	-	-	-	-	-	-	1	-	1	1	-	1	-

Wild roses grow practically in all areas of Dagestan, in all its physiographic zones: Lower, Foothill, Intramountain and High-mountain. They essentially tend to occur in two zones: Intramountain Dagestan and High-mountain Dagestan. Less frequent is their occurrence in Foothill Dagestan (mainly the representatives of the section *Caninae*). As for

Lower Dagestan, wild roses sporadically grow mainly in the deltas of the rivers Sulak, Samur and Terek.

## 4 Discussion

Thus, the flora of wild roses in Dagestan is a conglomeration of species varying in terms of their origin. The prevailing geoelements form the following row based on the influence on the formation of the general flora spectrum of wild roses: Caucasian – boreal – xerophilous – steppe. Its core is formed by the Caucasian and Dagestani species. A high percentage of endemic species points to the fact that the examined region, as well as the Caucasus in general, is the centre of intensive speciation. It becomes clear if one takes into account the fact that the flora of Dagestan began to develop in the Tertiary period when, as a result of orogeny in the Tethys ocean, there appeared the Caucasian island [23-26]. A high percentage of the roses of boreal type can be explained by the ancient nature of the genus *Rosa*. As was pointed out by A.A. Fyodorov [24], the boreal influence in regard to the flora of the Caucasus must be attributed to the Pliocene period, and the appearance of ‘boreal’ species in the Caucasian forests is explained by the fact that by that period of glaciation there had increased the number of specimens of these species which had themselves originated from the bosom of tertiary flora. The geoelements of the xerophyte type constitute 14,8%, although, taken within the limits of the entire Caucasus, their share amounts to the half of all the species of the flora [27]. The lowest percentage rate is the steppe type of natural habitats represented by one geoelement (*R. tschatyrdagi*). It coincides with the general tendency in the Caucasus as a whole [27].

The received data demonstrate that Caucasian species prevail in the spectrum of geoelements of the genus *Rosa* (59,5%). The isolating of endemics, as can be seen from the data given earlier, was realized mainly on the basis of the species of the sections *Caninae* и *Cinnanomomea*. At the end of the 20<sup>th</sup> century within the section *Caninae* there were discovered 7 new species [28]. A special attention should be given to *R. oxyodon* from the section *Cinnanomomea*. As it is known, *R. oxyodon* is a cross-pollinated self-incompatible species which is characterized by a high changeability of morphological signs [6, 2, 13, 1]. Our previous research showed its hybridogenic origin as a result of multiple reciprocal crossing between *R. pendulina* и *R. majalis* [1, 29]. All of this points to intensive processes of speciation ongoing within the genus [30, 31].

According to ecological estimation, all the roses in Dagestan can be conventionally divided into two rows: xerophilous and mesophilous. The most prominent representative of the xerophilous trend is *R. pimpinellifolia*. The species of the xerophilous row occur in Intramountain and Foothill Dagestan. They grow mainly on stony substrates and raw soil with low level of humidification. Some scientists believe that the species of the xerophilous row are derivative, with a comparatively weak manifestation of form diversity [2].

The species of the mesophilous row develop on moistened, moderately developed or thick mountain meadow, mountain meadow forest and mountain forest soils. The most prominent representative is *R. oxyodon* which is characterized by the highly developed polymorphism. In sum, the species of the mesophilous row are florogenetically primary [2].

## 5 Conclusion

In sum, the taxonomic composition of the genus *Rosa* in Dagestan is not homogeneous. Within it there can be definitely singled out large species characterized by wide distribution and close concordance with the diagnoses of descriptions. These are the species *R. canina* L., *R. corymbifera* Borkh., *R. pimpinellifolia* L., *R. oxyodon* Boiss.. All of them possess

high polymorphism and for these species there has been pointed out a great number of forms with different variations of signs. The second group is composed of the species with smaller natural habitats, and they are usually less changeable.

The genus *Rosa* in Dagestan is represented by the endemics and species demonstrating the connection between the flora of the region with the flora of the mediterranean, as well as with the asia minor caucasian flora and european flora. The core of endemism is represented by the species of the sections *Caninae* and *Cinnanomomea*.

Thus, the species composition of the wild roses in Dagestan requires a thorough revision and possibly replenishment.

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