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SPECIES OF ROSA DISTRIBUTED IN THE FLORA OF UZBEKISTAN

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Abstract

The article presents the results of a study on the biodiversity, vitamin activity and potential use of species of the rose family (Rosa L.) in the flora of Uzbekistan. It was noted that rose species of the flora of Uzbekistan are widespread mainly in the mountainous and mountainous regions of the western Tien Shan and western Pamir and are not found in the steppe plains, only the R. beggeriana species is adapted to grow in forest phytocenoses, and the Rosa persica species is adapted to grow in steppes and steppes. 17 species distributed in the flora of Uzbekistan are included, which differ from each other not only morphologically, but also in their vitamin composition.

Keywords

Ascorbic acid, phytocenosis, polyvitamin shrub, rosebush, rose varieties, rosebush, geoxyl shrub, rose plantation, hultemia.

Introduction. Vitamin preparations such as arfazetin, bronchitis, carotalin, rosanol, holosas, namatak syrup, namatak balsam are produced on the basis of namatak fruits. They are widely used in the treatment of avitaminosis, scurvy, hemophilia, atherosclerosis, and gastrointestinal diseases. The namatak fruits contain a large amount of potassium, manganese, calcium, and magnesium microelements, and the seeds are used to obtain “namatak oil” rich in vitamin E. Representatives of the Rosa L. genus are widespread in the temperate and subtropical zones of the Northern Hemisphere, i.e. their range is limited to the Arctic Circle in the north, North Africa, northern Arabia, southern Iran, Afghanistan, along the Indian Ocean, and to the east by the Philippine Islands and North America.

Roses can be found on the shores of the White Sea, on Sakhalin Island, in Siberia, Central Asia, in the Crimea and the Caucasus. Some species of the genus Rosa L. have been recorded as reaching the Arctic Circle, and in the south they have been distributed in Ethiopia, Arabia, and in North America - to Mexico. The genus includes about 400 species and about 10,000 cultivated and ornamental forms. The flora of Central Asia is rich in the gene pool of roses (36 species), and this region is one of the world centers of high biodiversity of the genus Rosa L. [2].

RESEARCH RESULTS AND DISCUSSION

As a result of studying the systematics, natural hybridization, karyology, and phylogeny of Central Asian rose species, it was concluded that the evolutionary stages of rose species can be determined only by studying their continuous spontaneous hybridization process in nature [4]. Based on the results of long-term scientific research on the study of representatives of the genus, it was noted that out of 40 rose species listed by V.V. Fisyu [6] for the Central Asian flora, 7 were synonymized, 6 species are sterile hybrids, and 2 species do not occur in nature at all. 12 new species were included in the 24 species left in the Rosa L. genus by N.F. Rusanov [5]. Thus, today, out of 36 species distributed from the Central Asian flora, 17 species are found in the flora

of Uzbekistan. The species in the genus are divided into sections according to their genealogical and morphological proximity as follows:

1. Rosehip (Rosa canina L.) A multi-branched, spreading shrub up to 3 m tall. Perennial shoots are gray, young shoots are brownish-green. The shoots are covered with 5–6 mm long spines, which are straw-colored and bent downwards relative to the shoots. The leaves consist of 5–7 leaflets, 5–11 cm long. The leaflets are 2–5 cm long, elliptical, obovate.

Flowers are solitary or in clusters of 2–4 at the tips of generative branches. The inflorescence is 1–1.5 cm long, covered with hairs or glabrous. The corolla is pink, rarely white. The ripe fruit (hypanthium) is 1–2 cm long, ovoid, ovoid-elliptic or round. The carpel is 2–2.5 cm long, with leaf-like projections at the tip. The fruit is fiery red when fully ripe. There are 956 fruits in 1 kg of fruit. There are 31–32 seeds in 1 fruit, and the average weight of 1000 seeds is 11.4 g. Its seedlings are considered the best rootstocks for rose varieties. This type is mainly in Iliort of Tien-Shan, Kyrgyz, Talas Olatov, Karatov, Qorjontov, Ugam, Chotkal, Fergana and Kurama mountain range, Oloy in Pamir-Oloy, Mountains of Turkestan, Zarafshan, Hisar, Karategin, Darvaz, Southern Tajikistan, It is naturally distributed in Kuhitang and Kopettog mountains.

2. Rosa achburensis Chrshan. Rosa achburensis Chrshan.

A multi-branched shrub 1.5–3 m high. Perennial shoots are gray, young shoots are brownish-green. The shoots have spines 5–8 mm long, curved sickle-shaped, straw-colored. The leaves are 6–11 cm long, consisting of 5–7 leaflets. The leaves are 2–5 cm long, sparsely pubescent on the upper and lower parts and broadly oval or obovate along the veins.

The inflorescence is covered with hairs 1–2 cm long. The flowers are 3–5 cm in diameter, white, located in one or 2–3 pairs at the ends of the generative branches. The fruit is 1–2 cm long, with sparse glandular hairs, ovate or ovate-elliptic in shape. The sepals are 1.8–2 cm long, a parsimonious. The fruit is bright red when fully ripe, with juicy red flesh. It blooms in May, and the fruits ripen in August-September. This species is mainly found as a mesophytic species in thermophilic juniper forests, walnut and maple forests at altitudes of 600–2200 m above sea level. It is an endemic species widespread in the Pamir-Alai and Western Tien-Shan mountain systems of Central Asia. It can be used as a good rootstock for roses. It is recommended for cultivation in plantations as a vitamin plant, its fruits contain 0.6–2.1% vitamin C and 0.02–0.03% carotene.

3. Rosa ambigua N. Russanov. A multi-branched shrub up to 4 m tall. The branches are green and grayish-brown, erect, with single or paired spines up to 7 cm long, directed downwards. The compound leaves are up to 11 cm long, the petioles are hairy. The leaves are 5–7, oblong or broadly ovate, up to 3.5 cm long, 2.2 cm wide, with a sharp tip, the lower part of the leaflets is hairy along the veins, the edges are large serrate. The flowers are up to 4.5 cm in diameter, pink, smooth, glabrous, 3 in a raceme, with a 1.5 cm long inflorescence. The inflorescence is a reverse delta-shaped. The calyx is lanceolate, broadly branched. The fruit is elliptical or ovoid, up to 3 cm long, 1.5 cm wide. The seeds are 4 mm long. This species is closely related to R. achburensis, from which it differs in the absence of hairy stipules on the flower stalk and leaf stalk, from R. arnoldii in the oblong fruit shape, from R. canina in the hairy leaves, and from R. corymbifera in the larger fruit and the upper and lower parts of the leaves covered with hairs.

This species of this genus was described by N.F. Rusanov [4] based on a specimen growing on the slopes of the Chatkal mountain range in the Oksakata River basin and was included in the genus as a new species in 1991.

4. Transturkistan rose (Rosa transturkestanica N. Russanov.). This species is a multi-branched shrub growing up to 4 meters tall. The branches are green, gray, light brown. The branches are erect and covered with 1.2 cm long sickle-shaped, pointed lanceolate spines. The leaves are up to 11 cm long. The leaf blade is tufted, with curved spines. The petiole, which develops from the leaf blade axil, is 1.5 cm long and 2 mm wide, and grows into the leaf blade. The leaves are 5. They are elliptical, broadly lanceolate, up to 3 cm long and 1.8 cm wide, with a sharp-pointed petiole. The leaves are sparsely pubescent on 2 sides and are located along the veins. Flowers 5.5 cm in diameter, 3 in a panicle. The inflorescence is 2.5 cm long, covered with sparse hairs with scales. The corolla is oppositely cordate, white. The calyx is lanceolate. The fruit is ellipsoidal, 2.2 cm long, 1.3 cm wide, red, hairless, but with several glandular hairs on the fruit band. The seeds are 4 mm long. This species of marigold was described by N.F. Rusanov [4] based on a specimen growing in the Korzhontog mountain range of the Western Tien Shan, around the Tavaksoy mound, and was included in the genus as a new species in 1981.

This species is cultivated by the local population in cultural conditions. It is distributed in Central Asia, Tien Shan, Pamir-Alai, Kopetdag.

Figure 1. Rosa ambigua N. Russanov.

5. Arnoldi's rose (Rosa arnoldi Sumn.ex. V.Tkaezenko). The height of the bush is 1.5–1.7 m, with a spreading crown. The shoots are erect, 2– 3(4) cm. in diameter, covered with brownish-gray bark. The shoots are covered with light brownish-straw, wide-based, pointed

triangular-shaped, strongly woody spines with a downward-pointing tip, 10–13 mm long. On one- two-year-old shoots, the spines are much smaller - up to 5 mm long. The leaves are 10–15 cm. long, consisting of 1–2(3) pairs of oblong, sharply pointed leaflets. The leaves are 35–65 mm. in length, 25–35 mm. in width, both sides are softly hairy. Young shoots are lanceolate, 5 mm long. The leaves are lanceolate, 3–4 cm long, covered with feathers. Blooms in April-May. Petals are feathery, 2-4 cm. in length.

The inflorescence is white, pink, turned inward. The fruits of the berry have a smooth surface, with sparse pubescent hairs at the base. The fruits are large, 2 cm. in diameter, fiery-red in color, serrated, ripen in September. 1 kg of fruits contains 340 fruits, 34–46 seeds per fruit, and the weight of 1000 seeds is 25.5 grams. This species is a good graft for rose varieties. This species grows on the edges of walnut forests, maple groves, mountain rivers, streams and ravines. It is widespread in the Fergana, Chatkal, Talas mountain ranges and in the Western Tien Shan.

6. Rosehip (Rosa huntica Chrshan). This species is endemic to the Pamir-Alai, described and included in the genus based on a plant specimen from the Gunt River basin. Rosehip is a mesophyllous shrub up to 2 meters high. The shoots are brownish-brown. The shoots are covered with large, downward-curving, flat spines up to 1.7 cm long. The leaves are up to 8 cm long, consisting of 7–9 leaflets, 0.8–1.8 cm long, elliptical, obovate or broadly ovate, smooth or pubescent, with serrated-toothed edges. The petals are few, 0.8–1 cm long, irregularly lanceolate, lanceolate purple in color. Flowers are solitary or 3–6, evenly spaced along the generative stem. The inflorescence is 1.2–1.5 cm long, smooth, sometimes pubescent or pubescent. The fruit is 1.3–2 cm long, elliptical, oblong-ovate, rarely round, covered with smooth or pubescent hairs. The sepals are narrowly lanceolate, up to 2 cm long, the corolla is white or light pink. The female stem is pubescent. The fruit is a drupe, red, and sheds when ripe. It blooms in May-June, and the fruit ripens in September. It is a promising species for use as a vitamin plant, distributed only in the Pamir-Alai Mountains. The fruit contains 3.5–13% vitamin C and 0.06% carotene.

7. Karaalm rose (Rosa karaalmensis V. Tkaczenko.). This rose bush has many branches, reaching a height of 2.5 meters. The perennial shoots of the bush are thornless, the annual shoots have paired, small and downward-turned, quickly falling thorns. The leaves are up to 7 cm long. The leaf blade is pubescent. It blooms in May. The flowers are up to 3.5 cm in diameter, white or light pink. They develop one or 2-3 in the upper leaf axils. The corolla petals are opposite-deltoid. The sepals are lanceolate, entire, expanded at the top. The fruits ripen in September. The fruits are oblong-ovate, smooth. The sepals fall off together with the disc when the fruit is ripe. This species was described by V. I. Tkachenko [2] based on a specimen growing in the Kara-Alma River basin of the Tien Shan and was included in the genus as a new species in 1976.

8. Rosa vassilczenkoi V. Tkaczeko. This species of rose grows in nature as a shrub reaching a height of 2-3 meters. This species was separated by V.I. Tkaczeko from the species Rosa Albertii and included in the genus as a separate taxonomic species. This species differs from the species Rosa acicularis in the absence of thorns on its shoots. N.F. Rusanov studied the chromosome set of this species and noted that it is a truly new species. The leaves are 5-7, the upper part is smooth, the lower part is densely pubescent, the edges are serrated. The flowers are white, large, located on the branches one by one or 2-3 at the ends of short generative shoots. Large and beautiful flowers bloom in May, they resemble the flowers of clematis. The fruits are oblong-cylindrical in shape, the surface is smooth. Fruits in September is cooked. The fruit is 1-3 cm long and 0.8-1 cm in diameter. This type of mountain Talas It is common in the mountain ranges of Uzunakhmat and Fergana.

CONCLUSION

1. The systematics, natural hybridization, karyology, phylogeny of Central Asian rosebushes, the stages of evolution of rosebushes species can be clarified only as a result of studying the process of their continuous spontaneous hybridization in nature. The genus Rosa L. includes 36 species from the Central Asian flora, including 17 species from the flora of Uzbekistan. The species in the genus are divided into sections according to genealogical, morphological proximity and vitamin activity.
2. Rosebushes of the flora of Uzbekistan are mainly widespread in the mountainous and mountainous regions of the western Tien Shan and western Pamirs and are not found in the steppe plains, only R. beggeriana is a species adapted to grow in forest phytocenoses, and Rosa persica is a species adapted to grow in steppes and steppes. The species Rosa beggeriana of the genus is found on sandy-gravelly and alluvial substrates in river basins, Rosa persica on sandy-loamy steppe soils, but the most suitable soils for the genus are humus-rich, moderately moist loamy soils. 3. For cultivation in genus plantations, large-fruited and servitaminous species of the genus Rosa achburensis Chrshan., Rosa ambigua N. Russanov, Rosa transturkestanica N.Russanov, Rosaarnoldii Sunm.ex.v.Tkaczenko, Rosa karaalmensis M.Kult., Rosa Beggeriana Schrenk., Rosa Fedtshenkoana Rgl. are recommended.

References :

1 .Бердиев Э.Т. Ғарбий Тянь-Шанда наъматакнинг генетик ресурслари ва истиқболли шаклларини танлаш //Ўзбекистон аграр фани хабарномаси- Вестник аграрной науки.- Тошкент, 2013. -№1 [51]. Б.55-61.
2. Бердиев Э.Т. Наъматак табиий витаминлар хазинаси **(**монография) Тошкент давлат аграр университети, ТошДАУ таҳририят-нашриёт бўлими, Тошкент, 2019 –131 б.
3. Бердиев Э.Т. Морфологическая и биохимическая характеристика шиповника Федченко *(Rosa Fedschenkoana* Rgl.*),* произрастающей на Западном Тянь-Шане. // «Вестник Мичуринского государственного аграрного университета».– Мичуринск, 2016.–№4. – С. 20-25

4. Русанов Н.Ф. Среднеазиатские виды розы. Отдаленная гибридизация, филогения, кариология, витаминоносность (монография).Ташкент: Изд-во ФАН АН РУЗ, Ташкент, 1996.-188 с.
5. Русанов Н.Ф., Бердиев Э.Т. Обзор шиповников *(Rosa L)* Узбекистана //Селекция ва уруғчилик бўйича илмий тадқиқотларни ташкил этишнинг муҳим йўналишлари: Республика илмий-амалий анжумани материаллари.(20 май 2013 йил) Тошкент, 2013, - Б.328-330.
6. Фисюн В.В. Rosa L – Шиповник //Определитель растений Средней Азии. Критический конспект флоры.-Ташкент: Изд-во ФАН УзССР, 1976. том V. С.205-222.