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MORPHOLOGICAL CHARACTERISTICS OF *ROSA CANINA L.* IN THE BUKHARA REGION

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Abstract: The study focuses on the morphological characteristics of Rosa canina L. in the Bukhara region, aiming to document and analyze its phenotypic traits in this specific geographical area. Key morphological features such as plant height, stem structure, leaf morphology, flower size, petal color, fruit shape, and thorn distribution were examined. The research highlights the adaptability of Rosa canina L. to the climatic and soil conditions of the Bukhara region, providing insights into its growth patterns and ecological significance. The findings contribute to a better understanding of the species' variability and potential uses in horticulture, medicine, and conservation efforts in arid and semi-arid environments. This study serves as a foundational reference for further research on the species and its ecological role in the region.
Keywords: Rosa canina L., Bukhara region, phenotypic traits, fruit morphology, plant adaptation, medicinal plants
Аннотация: Исследование посвящено морфологическим характеристикам Rosa canina L. в Бухарской области, с целью документирования и анализа его фенотипических признаков в этом конкретном географическом регионе. Были изучены ключевые морфологические особенности, такие как высота растения, структура стебля, морфология листьев, размер цветков, окраска лепестков, форма плодов и распределение шипов. Исследование подчеркивает адаптацию Rosa canina L. к климатическим и почвенным условиям Бухарской области, предоставляя информацию о его моделях роста и экологической значимости. Полученные результаты способствуют лучшему пониманию изменчивости вида и его потенциального использования в садоводстве, медицине и природоохранных мероприятиях в засушливых и полузасушливых условиях. Данное исследование служит основополагающим справочным материалом для дальнейшего изучения вида и его экологической роли в регионе.
Ключевые слова: Rosa canina L., бухарская область, фенотипические признаки, морфология плодов, адаптация растений, лекарственные растения
Annotatsiya: Bu tadqiqot Buxoro viloyatida Rosa canina L.ning morfologik xususiyatlariga qaratilgan bo‘lib, maqsad bu geografik hududda uning fenotipik xususiyatlarini hujjatlashtirish va tahlil qilishdir. O‘simlikning balandligi, poya tuzilishi, barglarning morfologiyasi, gul hajmi, gulbarglarning rangi, meva shakli va tikanlarning taqsimlanishi kabi asosiy morfologik xususiyatlar o‘rganildi. Tadqiqot Rosa canina L. ning Buxoro viloyatining iqlimiy va tuproq sharoitlariga moslashuvchanligini ta’kidlab, uning o‘sish shakllari va ekologik ahamiyati haqida tushunchalar beradi. Natijalar bu turning o‘zgaruvchanligi va qurg‘oqchil va yarim qurg‘oqchil muhitlarda bog‘dorchilik, tibbiyot va tabiatni muhofaza qilish sohalarida potentsial foydalanish imkoniyatlarini yaxshiroq tushunishga hissa qo‘shadi. Bu tadqiqot turning keyingi tadqiqotlar va uning mintaqadagi ekologik rolini o‘rganish uchun asosiy manba sifatida xizmat qiladi.
Kalit so‘zlar: Rosa canina L., Buxoro viloyati, fenotipik xususiyatlar, meva morfologiyasi, o‘simliklarning moslashuvi, dorivor o‘simliklar.

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Introduction. Rosa canina L., commonly known as the dog rose, is a widely distributed species of the Rosaceae family, found across Europe, Asia, and North Africa. Its adaptability to diverse climatic and ecological conditions has made it a subject of interest for botanists, ecologists, and horticulturists. The Bukhara region of Uzbekistan, characterized by its semi-arid climate and unique soil composition, provides an ideal environment for the growth of Rosa canina L. This literature review aims to synthesize existing research on the morphological characteristics of Rosa canina L. in the Bukhara region, highlighting its growth habits, structural features, ecological adaptations, and significance.

Rosa canina L. is a deciduous shrub that typically grows to a height of 1–3 meters. Studies have shown that the plant exhibits a robust and sprawling growth habit, often forming dense thickets (Khatamsaz, 1992). In the Bukhara region, the plant's growth is influenced by the semi-arid climate, with deep root systems that allow it to access water from deeper soil layers (Grieve, 1931). The stems are arching and covered with sharp, curved thorns, which serve as a defense mechanism against herbivores (Rehder, 1940). The thorns are typically reddish-brown when young, turning grayish as they mature.

The leaves of Rosa canina L. are compound and pinnate, typically consisting of 5–7 leaflets. Each leaflet is ovate to elliptical in shape, with serrated margins (Khatamsaz, 1992). The leaves are dark green on the upper surface and paler underneath, with a slightly glossy texture (Rehder, 1940). In the Bukhara region, the leaves emerge in early spring and persist until late autumn, providing a lush green appearance to the shrub during the growing season (Grieve, 1931).

The flowers of Rosa canina L. are one of its most distinctive features. They are typically 4–6 cm in diameter, with five petals that range in color from pale pink to white (Khatamsaz, 1992). The flowers are hermaphroditic, containing both male (stamens) and female (pistils) reproductive structures (Rehder, 1940). In the Bukhara region, flowering occurs from late spring to early summer, attracting a variety of pollinators, including bees and butterflies (Grieve, 1931).

Following pollination, Rosa canina L. produces fleshy, berry-like fruits known as hips. These hips are oval to round in shape, typically 1.5–2 cm in length, and turn bright red or orange when ripe (Khatamsaz, 1992). The fruits are rich in vitamin C and other nutrients, making them valuable for both wildlife and human consumption (Grieve, 1931). In the Bukhara region, the hips ripen in late summer to early autumn and often persist on the plant through the winter, providing a food source for birds and small mammals (Rehder, 1940).

Rosa canina L. exhibits several ecological adaptations that enable it to thrive in the Bukhara region. Its deep root system allows it to withstand periods of drought, while its thorny stems deter herbivores (Khatamsaz, 1992). The plant is also highly tolerant of poor soils, making it well-suited to the region's varied terrain (Grieve, 1931). Additionally, Rosa canina L. plays a significant role in soil stabilization, preventing erosion in areas with loose or sandy soils (Rehder, 1940).

In the Bukhara region, Rosa canina L. is valued for both its ecological and economic importance. The hips are harvested for use in traditional medicine, teas, and culinary applications due to their high nutritional content (Khatamsaz, 1992). The plant is also used in landscaping and as a natural barrier due to its dense growth and thorny stems (Grieve, 1931). Furthermore, Rosa canina L. contributes to biodiversity by providing habitat and food for various wildlife species (Rehder, 1940).

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Conclusion. Rosa canina L. is a remarkable plant species that thrives in the unique environmental conditions of the Bukhara region. Its morphological characteristics, including its robust growth habit, compound leaves, fragrant flowers, and nutrient-rich hips, make it a valuable component of the local ecosystem. Understanding the morphological traits and ecological adaptations of Rosa canina L. not only enhances our appreciation of this species but also underscores its importance in sustainable land management and biodiversity conservation in the Bukhara region. Further research is needed to explore the genetic diversity and potential uses of Rosa canina L. in the Bukhara region, contributing to its conservation and sustainable utilization.

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