

PLANT NITRARIA SIBIRICA PALL., IN THE FLORA OF KARAKALPAKSTAN

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Annotation

Shoots of the II order (less often of the III order) die off from the distal end; their number can exceed 100 pcs. After the death of the oldest xylorhizomes' sections the connection between the partial formations is lost and a clone is formed. An electronic program, depending on the characteristics of filling out the questionnaire - independently, with the help of a doctor, using an electronic application.

Key words: benign prostatic hyperplasia, lower urinary tract symptoms, erectile function, electronic questionnaire.

Nitraria (Niterbush) – *Nitraria sibirica* Pall. (family Nitrariaceae Lindl.) is a sprawling and branched halophyte with grayish-white bark. This shrub is listed in the regional Red Books of Russia. In the Republic of Khakasia it belongs to the status 3 (rare species with a narrow ecological coincidence). *N. sibirica* belongs to an ancient genus that arose in the deserts of the Upper Cretaceous period on the territory of the ancient Mediterranean. It is a relict of the xerophilic Paleogene flora with the Central Asian type of area. It is found in intermountain basins on salt licks, salt marshes and in the steppes where *Elymus paboanus* and *Achnatherum* grow. Due to its biological and ecological features, the plant is promising and can be used to reduce the soil salinization, to enrich it with organic substances, to strengthen sand deposits in protective afforestation, banks, to reclaim man-made landscapes. That is why it is of particular importance to study the population characteristics of this rare species. It will allow us to prognose its growth on the

territory of the republic. Information about such studies in Khakasia is extremely limited. The aim of the work is to study the biological features of *N. sibirica* and the structure of its coenopopulation.

The research work was carried out on the south-western lakeside in a mixed grass-grain saline steppe. The total projective cover (OPP) of the herbage was 90-95 %, the projective cover of the species was 9-12 %. The dominant species were *Achnatherum splendens* (Trin.) Nevski, *Hordeum brevisubulatum* (Trin.) Link., *Puccinellia tenuiflora* (Griseb.) Scribn. et Merr., *P. macranthera* V. Krecz., *Galatella macrosciadia* Gand., *Saussurea daurica* Adam., *Salicornia europaea* L. They were constantly accompanied by *Artemisia nitrosa* Web. ex Stechm., *Limonium gmelinii* (Willd.) O. Kuntze, *Suaeda corniculata* (C. A. Mey.) Bunge, *Atriplex fera* (L.) Bunge, *A. patens* (Litv.) Grub. *Asparagus pallassii* Misch., *Hordeum sibiricum* Roshev were met singly. In the studied plant community *N. sibirica* did not form dense thickets, it was located contagiously, on sites, which were open from *A. splendens*. *N. sibirica* is a hypogeogenic-geoxylic vegetative-mobile shrub with underground branching of axes and with the formation of thick and durable underground lignified axes. Its leaves are oblong-obovate, fasciculated per 2-4 pieces. Its fruit is a drupe (or stone fruit) of spherical shape, with dark blue juice. The pyrenes are 3-5 mm long. Each mature generative individual of *N. sibirica* is a unit («curtina») which consists of a primary bush (30-90 cm high) and several partial formations (bushy, flowering and non-flowering). The underground part of the primary bush is a xylopodium with a diameter of more than 8 cm and xylorhizomes. Xylorhizomes are extending from the xylopodium

and are usually 60- 200 cm long. There can be 70-80 xylorhizomes; 10-12 pieces of them are powerful with a diameter of 0.7-1.9 cm. They are formed from the dormant buds of the xylopodial part of the primary bush. Removing in different directions evenly xylorhizomes capture an area with a diameter of up to 2-3 meters. It strengthens the function of vegetative overgrowth. The adventitious roots extend from the xylorhizomes. The aboveground part of the primary bush is represented by 15-133 main skeletal axes of the I (first) order and shoots of formation of the II (second) order branching from the skeletal axes in turns. On the shoots of formation other shoots of branching of the III-IV orders (less often of the V order) develop. From 1 to 72 shoots of formation (50-60 cm high) and from 13 to 160 shoots of branching (20-30 cm high) can develop on one main skeletal axis. The shoots of the branching of the III-IV orders have generative organs. There are from 4 to 60 generative shoots with small, white flowers in corymbose dichasia.