



CURRENT STATE OF THE BUKHARA DEER (CERVUS ELAPHUS BACTRIANUS) IN THE SOUTHERN ARAL REGION

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ANNOTATION

The article examines the current state of the Bukhara deer (*Cervus elaphus bactrianus*) in the Southern Aral region. Bukhara deer (*Cervus elaphus bactrianus*) as an endangered, locally distributed deer subspecies is included in the Red Book of the Republic of Uzbekistan in category 1 (EN). It is also included in the International Red Book and Appendix II of CITES.

KEY WORDS: Amudarya, Syrdarya, Central Asia, Badai tugai, Zarafshan, open-air cage, nursery.

The Bukhara deer (*Cervus elaphus bactrianus*) is a subspecies of red deer that lives in the tugai forests along the rivers of Central Asia and is assessed as vulnerable by the IUCN. In total, there are less than four thousand individuals in the wild, living in four countries. The largest number of animals has been preserved in Uzbekistan, and the largest group of deer lives on the territory of the Lower Amudarya Biosphere Reserve (NABR) in Karakalpakstan (Uzbekistan).

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In the 1960s and 70s, it was on the verge of extinction due to the economic development of land, the reduction in the area of tugai forests and uncontrolled hunting. At present, thanks to the creation of tugai reserves in Uzbekistan, Kazakhstan and Tajikistan (including Kyzylkum, Zarafshan, Badai-Tugai), breeding in nurseries, the implementation of a special interstate program and other conservation measures, the population has been restored. Mining is prohibited.

The Bukhara deer (*Cervus elaphus bactrianus*) is a large hoofed animal of graceful build, on high legs. Dimensions: height at the withers about 120 cm, weight of adult males 165-250 kg, females - about 150 kg.

Horns are present only in males, they are medium in size, usually with five processes. Coloration brownish gray. The tail is short. At the base of the tail there is a well-defined light spot, the so-called "mirror"; it is smaller than other subspecies, reddish above, white below. The lips and chin are white.

Previously, it was widely distributed in the valleys of the Amudarya, Syrdarya and their main tributaries. Currently, only a few isolated populations have survived in Uzbekistan, Tajikistan, Turkmenistan, Kazakhstan and Afghanistan. In Uzbekistan, the natural population lives in the middle reaches of the Amu Darya (on the territory of the Kyzylkum Reserve). In the lower reaches of the Amu Darya (in the Lower Amudarya Biosphere Reserve), in the Zarafshan Reserve and in the upper reaches of the Zeravshan River (on the border of Uzbekistan and Tajikistan), groups created as a result of the artificial resettlement of deer live.

Bukhara deer (*Cervus elaphus bactrianus*) inhabits only tugai - floodplain forests growing in a narrow band along river valleys.



Bukhara deer feed on turanga twigs and various herbaceous and woody-shrub plants. The total list of plants eaten by deer is more than 230 species. Deer are excellent swimmers. They live in family groups, the composition of which is unstable. The rut begins in the fall, in late August - early September, accompanied by a roar and fights of males. During the mating season, "harems" are formed, consisting of a male and 2-3 females. In March-April, males shed their antlers, which grow back in summer. The duration of pregnancy in deer is about 8 months. In the second half of May - early June, the female gives birth to one calf, some females give birth in July. The young stay with their mother for up to 1 year, reaching sexual maturity at the age of 2.5 years. Horns grow in males in the second year of life. Currently, deer often die from wolves, severe floods, harsh winters, and fires.

Due to the narrow confinement to limited habitats, the Bukhara subspecies of the red deer is very vulnerable and, due to the degradation of the tugai and predatory extermination, quickly found itself on the verge of complete extinction. In 1976, three deer (two females and one male) were brought to the Badai-Tugai reserve from the Ramit reserve (Tajikistan), and in 1979 another 9 deer were brought. In 1981-1982, deer were released from enclosures into the wild. The reindeer took root well and bred. The success was achieved thanks to the serious actions of national and international organizations for the conservation of the reindeer. In addition, in connection with the increase in the number in the Badai-Tugai reserve, there have been problems associated with overpopulation and insufficient space and forage capacity of habitats.

The territory of the reserve became small, and the deer began to independently settle in the neighboring tugai forests of Taldyk-tugai and Sherembet-tugai.

In order to further restore the habitat and population of the Bukhara deer, the Badai-Tugay reserve was reorganized in 2011 into the Lower Amu Darya Biosphere Reserve with a protected area of 11,568 hectares.

The Lower Amudarya State Biosphere Reserve (LABR) was established in 2011 as part of a joint project of the United Nations Development Program, the Global Environment Facility and the government of the Republic of Karakalpakstan "Preservation of the tugai forests of Karakalpakstan in the Amudarya river delta" on the basis of the Badai-Tugai reserve. In addition to the territory of the former reserve, the tugai forests of the Beruni and Amu Darya regions of Karakalpakstan were transferred to the biosphere reserve.

The Lower Amudarya Biosphere Reserve (NABR) occupies a vast territory of 68,717 hectares, divided into three zones:

The protected zone of the reserve (a zone with a strict protection regime) is 11568.3 hectares. The territory of the protected zone is intended for the conservation of old forests, forests of natural regeneration, rare and endangered species while preserving the biodiversity of the zone. Any economic activity is prohibited in this zone and only scientific research and monitoring is allowed.

A buffer zone of 6,731.4 ha surrounds the protected area and provides a "buffer" or barrier between the protected area and the area of increased resource use. The buffer zone provides important ecological corridors between sections of the protected area for the movement of wild animals, contributes to the conservation of forests and their renewal.

The transition zone or economic development zone 50,418.1 ha is adjacent to the main zones (reserve and buffer) and is intended for the development of sustainable nature management. This zone provides for the presence of the rural population, excludes large settlements and harmful and dangerous economic production facilities. Demonstration pilot projects are being implemented here on resource-saving technologies (drip irrigation, development of bio-organic farming, energy-efficient houses and stoves, stall keeping of cattle and small cattle), planting trees as a living barrier between the forest and the sown areas of local residents, development of beekeeping.

At present, the Lower Amudarya State Biosphere Reserve is the custodian of the world's largest population of the Bukhara deer in the Republic of Uzbekistan. Today, the number of Bukhara deer in the reserve is more than 1800 individuals. Thus, in order to further increase the number and create favorable conditions for deer in the biosphere reserve, it is important to carry out protective measures:

- improve the forage base,
- create artificial watering places;
- create protective conditions, remedies;



- to carry out preventive measures to protect against diseases and other harmful effects;
- it is necessary to install modern feeders, observation towers,
- to carry out propaganda work among the population on the protection of the Bukhara deer.
- conduct a census of the number of deer using modern innovative technologies;
- activate compensation mechanisms.

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