

# Monitoring Of Mammals In The Territory Of The National Nature Park "Southern Ustyurt"

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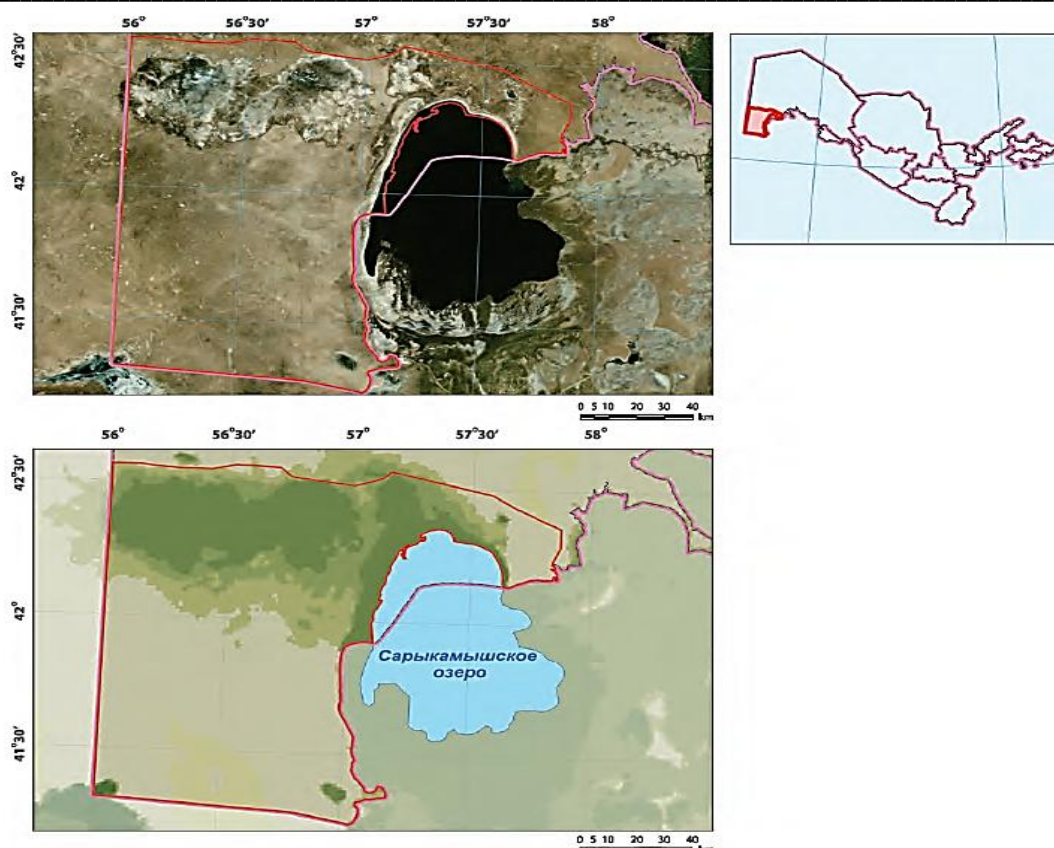
**Abstract.** This article presents data on autumn monitoring of mammals distributed in the territory of the "Southern Ustyurt" National Nature Park in 2021-2024. Research work was carried out on the basis of generally accepted bioecological methods in the vicinity of Lake Sarykamysh, in the Kulan-Takyr, Kaplan-Kyr, and Asseke-Audan depressions of Southern Ustyurt. As a result of the research, 14 species of mammals were identified. Eight of them are species listed in the Red Book of Uzbekistan.

**Keywords.** Southern Ustyurt, lake Sarykamysh, Kuluntakyr, Asseke-Audan basin, mammals, monitoring, Red Book.

**Introduction.** The southern part of the Ustyurt Plateau in Uzbekistan occupies the territory between the Sarikamysh Basin to the west, the foothills of the Kaplankyr Range to the south, and the Assek-Audan Lowland. The studied area is part of the Sarikamysh Basin, which is a relict form of a water basin much wider than the Aral Sea in the first half of the 20th century [4].

Monitoring of the animal world In order to timely detect, prevent and eliminate the consequences of negative processes and events, as well as to preserve biological diversity and ensure scientifically sound use of animal world objects, the "Southern Ustyurt" National Nature Park was established in the southern regions of the Republic of Karakalpakstan. The total area is 1.5 hectares (1-pic).

The fauna of South Ustyurt is diverse. Mammals in this area include: long-eared hedgehog (*Hemiechinus auritus*), tolai hare (*Lepus tolai*), grey hamster (*Cricetulus migratorius*), yellow ground squirrel (*Spermophilus fulvus*), midday jird (*Meriones meridianus*) and Libyan jird (*Meriones libycus*), and great gerbil (*Rhombomys opimus*), zaisan mole vole (*Ellobius talpinus*), house mouse (*Mus musculus*), small five-toed jerboa (*Allactaga elater*), corsac fox (*Vulpes corsac*), wolf (*Canis lupus*), fox (*Vulpes vulpes*), steppe cat (*Felis sylvestris ornate*), wild boar (*Sus scrofa*), goitered gazelle (*Gazella subgutturosa*), saiga (*Saiga tatarica*), transcaspian urial (*Ovis vignei arkal*) and Turkmen kulan (*Equus hemionus*) are found [1, 2, 3, 5, 6, 7, 8, 9].



1 – pic. "Southern Ustyurt" National Nature Park

This research work is devoted to the complex monitoring of mammals distributed in the southern Ustyurt chinks and areas.

**Material and methodology.** Monitoring work During 2021-2024, materials were collected on the sex, age composition and current status of the mammal population caught in the autumn seasons in the area of the Sarikamysh arm, Kulantakyr, Kaplonkyr and Assek-audan, mainly in the area of the Sarikamysh arm, in the direction of the established routes. The main research work was carried out using generally accepted bioecological research methods: visual observation, stationary, route, walking counting, as well as identifying animal tracks, feces and trails[5,6]. Observation and counting of their numbers were carried out during the day using “Bushnell” (16x52) binoculars. Also, camera traps were installed in the vicinity of Lake Sarikamysh and the western chink, in the area of Kuruk Kul, Kulantakyr and Kaplonkyr, and the data from them was obtained and analyzed.

**Research results.** As a result of monitoring, a total of 2,754 mammals were registered in the territory of the "Southern Ustyurt" National Nature Park. They are from the following families: Erinaceidae - 2 species, Leporidae - 1 species, Allactagidae - 1 species, Canidae - 3 species, Mustelidae - 1 species, Felidae - 2 species, Suidae - 1 species, Bovidae - 2 species, and Eguidae - 1 species (Table 1).

Table 1  
 Mammals distributed in the territory of the "Southern Ustyurt" National Nature Park

| №                     | Animal name | Year 2021 | Year 2022 | Year 2023 | Year 2024 | total |
|-----------------------|-------------|-----------|-----------|-----------|-----------|-------|
| Family of Erinaceidae |             |           |           |           |           |       |

|                               |   |            |            |            |            |             |
|-------------------------------|---|------------|------------|------------|------------|-------------|
| 1                             | <b>*Brandt's hedgehog</b> ( <i>Hemiechinus hypomelas</i> )        | -          | 3          | 2          | 4          | <b>9</b>    |
| 2                             | <b>Long-eared hedgehog</b> ( <i>Hemiechinus auritus</i> )         | -          | 1          | 4          | 3          | <b>8</b>    |
| <b>Family of Leporidae</b>    |   |            |            |            |            |             |
| 3                             | <b>Tolai hare</b> ( <i>Lepus tolai</i> )                          | 6          | 13         | 18         | 38         | <b>75</b>   |
| <b>Family of Allactagidae</b> |   |            |            |            |            |             |
| 4                             | <b>Small five-toed jerboa</b> ( <i>Allactaga elater</i> )         | -          | 3          | 25         | 27         | <b>55</b>   |
| <b>Family of Canidae</b>      |   |            |            |            |            |             |
| 5                             | <b>Wolf</b> ( <i>Canis lupus</i> )                                | 10         | 9          | 11         | 14         | <b>44</b>   |
| 6                             | <b>*Corsac fox</b> ( <i>Vulpes corsac</i> )                       | -          | 6          | 7          | 3          | <b>16</b>   |
| 7                             | <b>Fox</b> ( <i>Vulpes vulpes</i> )                               | 8          | 10         | 8          | 6          | <b>32</b>   |
| <b>Family of Mustelidae</b>   |   |            |            |            |            |             |
| 8                             | <b>*Honey Badger</b> ( <i>Mellivora capensis spp. Buechneri</i> ) | -          | 1          | 3          | 4          | <b>8</b>    |
| <b>Family of Felidae</b>      |   |            |            |            |            |             |
| 9                             | <b>*Sand cat</b> ( <i>Felis margarita ssp. Thinobia</i> )         | -          | 1          | 3          | 2          | <b>6</b>    |
| 10                            | <b>*Caracal</b> ( <i>Caracal caracal ss.michaelis</i> )           | -          | 1          | 3          | 3          | <b>7</b>    |
| <b>Family of Suidae</b>       |   |            |            |            |            |             |
| 11                            | <b>Wild boar</b> ( <i>Sus scrofa</i> )                            | 6          | 7          | 15         | 15         | <b>43</b>   |
| <b>Family of Bovidae</b>      |   |            |            |            |            |             |
| 12                            | <b>*Transcaspian urial</b> ( <i>Ovis vignei ssp.Arkal</i> )       | 27         | 48         | 58         | 51         | <b>184</b>  |
| 13                            | <b>*Goitered gazelle</b> ( <i>Gazella subgutturosa</i> )          | 458        | 504        | 541        | 533        | <b>2036</b> |
| <b>Family of Eguidae</b>      |   |            |            |            |            |             |
| 14                            | <b>*Turkmen kulan</b> ( <i>Equus hemionus ssp. Kulan</i> )        | 37         | 53         | 69         | 72         | <b>231</b>  |
|                               | <b>Total</b>  | <b>552</b> | <b>660</b> | <b>767</b> | <b>775</b> | <b>2754</b> |

\* Animals listed in the Red Book of the Republic of Uzbekistan

A total of 2,754 head of animals were identified during the 4-year autumn monitoring of the researched areas. As a result of the monitoring work in 2021, 552 head of animals were identified. In particular, 6 tolai hares, 10 wolves, 8 foxes, 6 wild boars, 27 Transcaspian uriales, 458 gazelles and 37 kulan were registered.

A total of 660 head of animals were identified during the monitoring work of 2022. Among them, the Brandt's hedgehog - 3, the long-eared hedgehog - 1, the tolai hare - 13, the small five-toed jerboa - 3, the wolf - 9, the corsac fox - 6, the fox - 10, the honey badger - 1, the sand cat. - 1, caracal - 6, wild boar - 6, Transcaspian urial 48, gazelle 504 and kulan 53 individuals were registered.

A total of 767 head animals were registered as a result of autumn monitoring work in 2023. Including brandt's hedgehog - 2, long-eared hedgehog - 4, tolai hare - 18, small five-toed jerboa - 25, wolf - 11, corsac fox - 7, fox - 8, honey badger - 3, sand cat. - 3, caracal - 3, wild boar - 15, Transcaspian urial - 58, 541 gazelle and 69 kulan were registered.

A total of 775 head of animals were registered as a result of autumn monitoring work in 2024. Including Brandt's hedgehog - 4, Long-eared hedgehog - 3, tolai hare - 38, small five-toed jerboa - 27, wolf - 14, corsac fox - 3, fox - 6, honey badger - 4, sand cat. - 2, caracal - 3, wild boar - 15, Transcaspian urial - 51, 533 gazelle and 72 Turkmen kulan were registered.

**Conclusion.** During the research, out of a total of 2,754 animals registered, 2,497, or 91%, were species listed in the "Red Book" of the Republic of Uzbekistan. In particular, the following species were recorded:

*Hemiechinus hypomelas*, *Vulpes corsac*, *Mellivora buechneri*, *Felis margarita thinobia*, *Caracal caracal michaelis*, *Ovis vignei arkal*, *Gazella subgutturosa*, *Equus hemionus kulan*. Among the recorded species, gazelles accounted for 74% of the total species. However, despite this, the number of these species was low compared to their distribution range.

Monitoring work has shown that since 2021, the southern part of Ustyurt has become a dryland, and to this day, the number of animals found in this area has been increasing year by year.

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