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AUTECOLOGY OF SPECIES BELONGING TO THE FALCO FAMILY SPREADING IN THE NAKHCHIVAN AUTONOMOUS REPUBLIC

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АВТОЭКОЛОГИЯ ВИДОВ СЕМЕЙСТВА СОКОЛИНЫХ (*Falconidae*), РАСПРОСТРАНЕННЫХ В НАХЧЫВАНСКОЙ АВТОНОМНОЙ РЕСПУБЛИКЕ

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Abstract. The article provides information on the autecology of species belonging to the Falco genus spreading in the Nakhchivan Autonomous Republic. From the conducted research, it was found that 7 species of the genus Falconidae of the Falco family are found. Also, from the research it is clear that 2 species of birds belonging to the Falco genus are wintering, 1 species is migratory, 3 species are nesting, and 1 species is sedentary.

Аннотация. Представлены сведения об аутоэкологии видов рода Falco, распространенных в Нахчыванской Автономной Республике. По результатам проведенных исследований, установлено, что на территории региона встречаются 7 видов, принадлежащих роду Falco из семейства Falconidae. Также из исследований выясняется, что из птиц рода Falco, 2 вида зимуют, 1 вид является мигрирующим, 3 вида гнездятся, а 1 вид ведет оседлый образ жизни.

Keywords: Falconidae, avifauna, falcons, habitat.

Ключевые слова: Falconidae, орнитофауна, соколиные, ареал.

According to the geographical division, the territory of the Nakhchivan Autonomous Republic is included into two districts of the Mediterranean subregion of the Palearctic region. The Lesser Caucasus highland region of the Caucasus region covers the highland part of the Nakhchivan Autonomous Republic. The Nakhchivan-Talysh steppes region of the Front Asian region covers all parts of the Autonomous Republic except the high mountainous part.

As can be seen, the relief of the Nakhchivan Autonomous Republic, located at the southwestern end of the Lesser Caucasus, consists mainly of plains and mountainous parts.

The absolute altitude of the territory varies between 600 meters above sea level (Araz valley inclined plain) and 3906 meters (Gapichik peak). In this area, there are the Araz valley, plains, foothills, low, medium and high mountain belts. The average altitude of the republic reaches 1400 meters.

The Araz valley plain, which constitutes 32 percent of the Autonomous Republic, is rich in bushes and greenery, and therefore has favorable conditions for the survival and reproduction of a

number of birds. From our long-term observations and literature, it is clear that the rich fauna and flora of the Nakhchivan Autonomous Republic has always attracted the attention of foreign scientists, and occasional research has been conducted in this area [2-4].

Research material and methodology

Research has been carried out in the Nakhchivan Autonomous Republic in recent times. The research object was mainly the Araz valley plain, middle and high mountain belts. Species belonging to the Falcoes genus were studied as research material. A number of literatures were used to clarify the names of the species [1, 7, 10].

Discussion and results of the research

Recently, as in all parts of the world, economic measures carried out in Nakhchivan, such as the creation of artificial water bodies, the construction of roads and buildings, etc. have had a negative impact on the living conditions of birds. In particular, birds of prey, which have always been persecuted by humans as harmful birds, have suffered more and most of them have become rare species.

Based on the ornithological research, I have conducted over the past 30-40 years, I can firmly say that the population density of these birds has decreased by 20-30 percent.

For this reason, we have conducted research and collected a lot of material on these beautiful birds, which were once a decoration of nature, but have recently left nature and become an ornament of the "Red Book" [9, 11].

Table 1

SPECIES COMPOSITION OF BIRDS BELONGING TO THE FALCO GENUS

<i>Family</i>	<i>Genus</i>	<i>Species</i>
Falconidae	<i>Falco</i>	<i>Falco cherrug</i> Gray, 1834
		<i>Falco biarmicus</i> Temm, 1825
		<i>Falco peregrinus</i> Tunst, 1871
		<i>Falco subbuteo</i> Linn, 1758
		<i>Falco columbarius</i> Linn, 1758
		<i>Falco naumanni</i> Linn, 1758
		<i>Falco tinnunculus</i> Linn, 1758

As can be seen from the table above, 7 species of the Falco genus are widespread in the territory of Nakhchivan. As a result of my long-term autecological research on these birds, the following information was obtained [5, 6, 8].

1. *Falco cherrug* Gray. Its breeding area covers Europe and Asia. It migrates south to North Africa for wintering. These birds that come to Nakhchivan for wintering settle in lowland regions. From October to March, they are observed in sparse greenery and open areas in the Araz-valley plain. They migrate in early March. The Nakhchivan fauna includes the subspecies *Falco cherrug cherrug*. The back of the adult bird is dark-brown, the underside of the belly is white, and there are drop-shaped spots on it. The tail is long, with dark brown and longitudinal yellowish lines. The legs are yellow.

Its main prey is mouse-like rodents, small and medium-sized birds. Since their numbers have and the Nakhchivan Autonomous Republic.

2. *Falco biarmicus* Temm. It is a polymorphic species. The Nakhchivan fauna includes the subspecies *F. Biarmicus feldeggii*. It can be considered a migratory bird in Nakhchivan. Because it

is not observed anywhere in the area after April during spring migration. In April 2022, we encountered it many times around the village of Gulustan in the Julfa region, but we could not find its nest. It is included in the Red Book of Azerbaijan as a rare species. Its biology has not been studied.

3. *Falco peregrinus* Tunst. It is a polymorphic species. The Nakhchivan fauna includes the subspecies *Falco peregrinus brookei* and *F.p.harterti*. It can be considered a bird that nests and partially winters in Nakhchivan. It is observed everywhere from the Araz valley plain to the high mountains. In winter, the number of falcons in the Araz valley plain increases relatively due to individuals descending from the mountain belts. In the summer, falcons that stay in the Nakhchivan region and breed build nests in trees and rocks. Sometimes they use the old nest of a raven to breed, lay 2-4 yellowish eggs with brown-red spots, and incubate for 28 days. After a month, the fledglings leave the nest and forage with their parents for a while. They are ornithophagous birds. They usually feed on small and medium-sized birds. Due to the gradual expansion of the anthropogenic landscape and the influence of other abiotic factors, their numbers are decreasing and they are at risk of extinction, so they are included into the Red Book of Azerbaijan and the Nakhchivan Autonomous Republic as a rare species.

4. *Falco subbuteo* Linn. Polymorphic. The fauna of Nakhchivan includes the nominal subspecies (*Falco subbuteo subbuteo*). It is a nesting bird in Nakhchivan. In the spring, the birds arrive in the first decade of April and settle in all landscapes, gardens, forests and open areas in the Nakhchivan Autonomous Republic, from the Araz-river plains to an altitude of 1800 meters above sea level. They nest in tall trees in forests and bushes. Often, they use the nests of crows, magpies and other birds, and after laying 3-4 eggs, the female bird hibernates for 4 weeks and hatches the chicks. The male bird feeds and raises the hatched chicks. The main food is chicks and small birds. The falcon hunts its prey in the air. Since their numbers have decreased by 20-30% over the past 20 years, it has been included in the Red Book of the Nakhchivan Autonomous Republic. After breeding, they migrate completely in the second half of September.

5. *Falco columbarius* Linn. A polytypical species. The Nakhchivan fauna includes the subspecies *F. Columbarius insignis* and *F.C.pallidus* of the mallard. The upper back and head are dark blue, and the lower side of the belly is whitish, with brown lines on it.

The autumn migration of birds coming to Nakhchivan to winter occurs in September-November, and the spring migration in March-April. To spend the winter, these birds settle in the Araz valley plain and foothill regions. They are ornithophagous birds. Their main preys are small birds. Previously, they were hunted by people as harmful birds, but now their numbers have sharply decreased due to the increase in noise and the reduction of the food base due to the development of technology and the reduction of the food base, and they have been included in the "Red Book" of Azerbaijan.

6. *Falco Naumanni* Linn. A polymorphic bird. The fauna of Nakhchivan includes the subspecies *Falco naumanni naumanni*. Its head is dark blue, the upper part of its back is reddish-brown in color. There are black stripes on its tail. Its claws are white.

Birds that come to Nakhchivan in March to breed settle in the Araz valley plain and foothill regions. They use the old nests of gray crows, magpies and other birds, and even suitable places in human constructions, to breed. At the end of May, they lay 3-4 eggs in the prepared nest and incubate for 28-30 days. The hatched chicks are fed by the parent birds for a month and grow up. The basis of their food is reptiles, shrews and mouse-like rodents.

If 30-40 years ago, the steppe falcons formed camps and bred, now it is rarely seen nesting. The main reason for this is the shrinking of their habitat due to the increasing negative impacts of

the anthropogenic landscape. For this reason, they have been included in the Red Book of the world, Europe, including Azerbaijan and Nakhchivan, and hunting is prohibited.

7. *Falco tinnunculus* Linn. Polymorphic. The Nakhchivan fauna includes the subspecies *Falco tinnunculus tinnunculus*. The male bird belonging to this subspecies has a gray head. There are reddish-brown circular patterns on the back, the belly is yellowish, and there are brown longitudinal spots on it. The head of the female bird is brown, and brown stripes extend along the middle of its feathers. The upper cover feathers of the tail are grayish.

The species is found in Europe, Asia and Africa. It is a sedentary bird in Nakhchivan. It is observed in all seasons of the year.

It is the most widespread and numerous species among birds of prey in the area we studied. It is observed in all landscapes, from lowlands to high mountain meadows. However, it does not like dense forest areas, and usually prefers to live in mountain steppes.

Common kestrels are found in various places; They nest and breed in tree hollows, rock crevices, old nests of crows and magpies, and other places. They line the nest floor with fine grasses, wool, cotton, underbark fibers, and other fine materials. In the second half of May, they lay 4-6 yellowish eggs with reddish-brown stripes in the prepared nest. The chicks hatch on the eggs for up to 4 weeks and are fed and raised in the nest for up to a month. The fledglings walk and feed with their parents for 15-20 days. On May 12, 2015, we found the nest of the common jay in a willow tree in the Rustam forest. It was located 3 meters above the ground and contained 3 eggs. The average size of the eggs was 37x30 mm.

The number of these birds decreases relatively in the winter season. Most likely, some individuals migrate to southern countries to winter. In early April, their numbers increase again due to migrating individuals. They are very useful birds, as their diet consists mainly of voles and mouse-like rodents.

Conclusion

It is clear from the conducted studies that 2 species of birds belonging to the genus *Falco* (*Falco cherrug* and *Falco columbarius*) winter in the Nakhchivan Autonomous Republic, 1 species (*Falco biarmicus*) is migratory, 3 species (*Falco peregrinus*, *Falco subbuteo* and *Falco naumanni*) are nesting, and 1 species (*Falco tinnunculus*) is sedentary.

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