International Journal of Science and Research (IJSR)
ISSN: 2319-7064
ResearchGate Impact Factor (2018): 0.28 | SJIF (2018): 7.426

Biodiversity of Birds in Northern Tajikistan

Shakhnoza Mirzobakhodurova

Khujand State University named after Academician B. Gafurov Republic of Tajikistan

Abstract: ***Our research has established that the diverse conditions of the upper reaches of Zarafshan favor the habitat of numerous valuable representatives of vertebrates.***

Keywords: ecosystem, population, migration, relict, diversity, Tajikistan

1. Introduction

1.1 The relevance of the problem

Biological diversity is the totality of all living organisms living on Earth, species (populations of different ranks), biocenoses and biota [3]. In the Rio de Janeiro Convention on Biodiversity in 1992, biological diversity refers to the variability of living organisms from all sources, including, but not limited to, terrestrial, marine, and other aquatic ecosystems and the ecological complexes of which they are a part. This concept includes diversity within the species, between species and the diversity of ecosystems. This is an extremely broad concept, of which species and intraspecific diversity is a part [5]. An inventory of biological diversity is of great importance, since it makes it possible to more objectively assess the importance of an ecoregionfor the purpose of preserving the biodiversity of our planet [1,2,4].

2. Materials and Methods

In this work, the biodiversity of birds is understood as all varieties of variability of this systematic group within the indicated territory: ecological groups (birds of prey, high-mountainous complex, etc.), variety of species with different nature of stay (nesting, migratory, wintering), the main manifestations of intraspecific variability: populations (subspecies), biological races, (ecotypes), polymorphism.

The species composition of birds in the ecoregion of Northern Tajikistan is quite diverse; about (250) avifauna of the total number of birds of the Republic of Tajikistan are registered here.

3. Results and their Discussion

The total area of the ecoregion is 12 thousand km^2. In conditions of high mosaic landscapes of the ecoregion of the study area, diverse ecological groups of birds are formed that coexist side by side, forming not only the spotting of their territorial distribution, but also interpenetration. In total, 47 species nest in the mountain and zonal steppes of the intermountain basins, taking into account the birds that live here in intrazonal conditions, 41 of which are typical inhabitants of the steppe communities, are representatives of the Wetland complex of steppe reservoirs and near-water habitats.

The most characteristic and highly adapted to anthropogenic changes associated with nomadic cattle breeding, the ecological grouping of birds in the ecoregion of Northern Tajikistan is represented by *Collumbiformes*, *Charadriformes*, *Coconiformes*, *Galliformes*, *Gruiformes*, *Falconiformes*. There are 26 species of birds listed in the Red Book of the Republic of Tajikistan. Non-nesting birds within this territory constitute a significant part of the biodiversity of the ecoregion. The species of birds that are in the region only during the spring and autumn migrations significantly complement the species diversity. Migratory species make up the majority of the region's avifauna within the region. This group consists mainly of representatives – shorebirds, geese, Passerins and, in one species, Loons and Falcons.

The presence of flyways lying within its territory plays an important role in the biodiversity of birds in the ecoregion of Northern Tajikistan.

Many of the selected water bodies, as shown by a retrospective analysis, were the most important places for stops of migratory birds. During migrations, a significant part of the species of the water bog complex is concentrated on lake-type water bodies in the mountainous parts located in large intermountain basins. It is these areas that are most favorable as places of feeding and rest. It seems no coincidence that the waders, as in different directions to wintering places, converge at intersections. There is no doubt that a significant imprint on the pattern of migration, which significantly complement the migration of birds of the wetland complex, is imposed by the middle position of the region.

Simultaneously with the migration of water and near-water birds along the main direction passing through the rivers and lakes of the intermountain basins of this ecoregion, a diffuse flight of some migrants with a wide front through the mountains with altitudes of 2000-2500 m and a stop on high mountain water bodies is established only for recreation.

During the spring migrations for most species of birds of the mountain system, it is the final destination of the route. Birds fly ecologically associated with water bodies (ducks, geese, waders, wagtails) in transit. For a number of species (pink starling, shore swallow, swifts), the nature of migration is unclear. With the coincidence of some species and groups of birds, which form the basis of the migration flow, there are few corvids, weavers, warblers, flycatchers,

and village and city swallows. The most characteristic for the region are geese, with wagtail.

The study of bird migrations in the north of Tajikistan is of key importance in understanding the history of the formation of avifauna of this ecoregion. Sandpipers are found on the reservoirs of the Syr Darya and Zarafshan, the wintering area of which extends to neighboring states.

Flood species also make up a significant proportion of bird biodiversity. Already one thing - this circumstance requires a more careful attitude to this category of birds. However, until now, flying as a phenomenon has attracted little attention from researchers. There is even an opinion about the safety of avian species to analyze the characteristics of regional faunas. However, vagrant forms quite often are pioneers in terms of the resettlement of birds in other territories. A number of spreading species in vaginal forms have developed many territories of the Zarafshanecoregions, and are now common and significantly affect the structure and condition of ecological bird groups and biodiversity in general.

Of great interest for knowing the history of regional faunas are the “borderline” cases when the appearance of certain species is in the nature of flights, but essentially refers to extinct migration and, from this point of view, can be interpreted as a relict passage. In our opinion, such are the spoonbill and curly pelican for the region under study. A significant proportion of the flying species is comprised of loners or small groups of birds that deviate from traditional migration routes. In general, flights show a pronounced connection with seasonal migrations and a change in aspects of the regional fauna. As a rule, flights of such species as the red-throated goose, mute swan, avdotka, meadow perennial bird, pink starling, occur during migration periods.

Within the Northern ecoregion, under the influence of various historical, geographical and environmental reasons, two or three subspecies have formed in many bird species.

As a result of an inventory of fauna based on available collection materials and literature published in the last three or four decades, the status of subspecies and some species of the SyrDarya and Zarafshan ecoregions has been critically rethought.

4. Conclusions

In the described territory, biological races were formed in the populations of some bird species, which are considered in this work using the example of *Cuculuscanorus*. An essential component of the biodiversity of birds in the ecoregion is polymorphism manifested in color variations in color. SyrDarya and Zarafshan ecoregions are a mountainous country where this phenomenon is quite widespread in populations of many birds. In some species, dark-colored populations are localized to mountain conditions (*Falco cherrugmilivipes, Buteohemilasius,* etc.). The polymorphism is most pronounced in Falcons and less often in owl-like ones (*Otusscopspulchellus*).

In landscapes and at the limit of distribution, many species form specific ecological populations.

References

[1] Abdusalyamov I.A. Fauna of the Tajik SSR. t. XIX, part 1. Birds of Dushanbe.,Donish., 1971, pp. 24-26.
[2] Abdusalyamov I.A. Birds of mountain Zarafshan. Dushanbe. Ed. Academy of Sciences of the Tajik SSR. 1964, p. 19.
[3] Lebedeva M.I. Ornithology. Issue 3, M., ed. Moscow State University, 1969, pp. 413-418.
[4] The Red Book of the Tajik SSR, Dushanbe, 1988, p.85.
[5] The life of animals, v.5. Birds. M., Education, 1979, S. 100.
[6] Abdusalyamov I.A. Fauna of the Tajik SSR. t. XIX, part 2. Birds of Dushanbe. Donish. 1973, p. 393.