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MOLLUSCAN FAUNA AND ECOLOGY OF MOUNTAIN KARATEPA

Y.Orziyeva[1], B.Davronov[2]

Gulistan State University, PhD student

Qarshi State University, docent

y.orziyeva@mail.ru

Annotation: The study of the fauna and ecology of terrestrial molluscs is of particular importance, helping to reveal many of their biological characteristics. The fauna and ecology of terrestrial molluscs of Mount Karatepa, part of the Zarafshan mountain range, were studied. 12 families and 22 species of terrestrial molluscs were distributed in the area, being classified into 3 ecological groups: xerobiont, mesobiont, psychrobiont.

Keywords: Mount Karatepa, gastropoda, fauna, ecology, xerobiont, mesobiont, psychrobiont.

Introduction. The Karatepa mountains are the Western continuation of the Zarafshan mountain range, stretching from East to West for more than 50 km and from North to South for 35-40 km. It is separated from the Chakilkalon range in its eastern part by the Taxtakaracha pass. The average elevation is 1,000-1,500 m, with the highest point being the Kumgaza Peak (2,197 m) (I.A.Hasanov and etc. 2009).

The slopes of the Karatepa mountains are cut by many deep soy grooves, in the north by Ilonsoy, Agalik, Oqsoy, Sazagonsoy and others, in the South by several right tributaries of the Kashkadarya (Makrid, Oyokchidarya, Taragai and others). In some areas of the hippopotamus, small flattened surfaces are found in the area. The climate is temperate in the High part and continental dry in the lower and western parts. The annual rainfall is 400-450 mm at the western end and 700-750 mm at the eastern end. Typical and dark gray and brown soils are distributed in the mountains. They grow conifers, blackberries, wheat, various shrubs (almonds, rosehip etc.), Junipers. (Khasanov P.A.,2022)

Material and methodology. For the research work, over 2022-2024, more than 200 terrestrial molluscs were studied from different areas overlooking the Karatepa mountains, in particular, the area around the Kitab District: Taxtakoracha pass, the village of Ayakchi, the village of Taragai in the Chirokchi district, the Rivers Kashkadarya, the Kichikdjar River, the Oyokchidarya, scattered around as material.

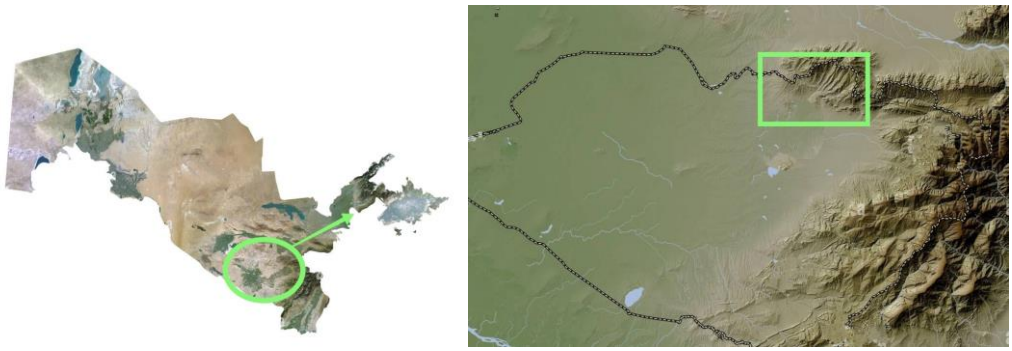

Figure 1. Map of the area under scientific research

When working with materials, the methods of Shileyko (1978,1984), Pazilov and Azimov (2003), Likharev and Rammaliers (1952) were used. Fixation used the Pazilov method, in some cases the Bratchik (1976) method. In the study of its anatomical structure, the styles Likharev and Shileyko were used. The Pazilov (2003) style has been used in ecological classification.

Results and their analysis. Various biotopes of the Karatepa dam have created ecological conditions that affect the diversity of molluscan fauna, with the area being dominated by the following species of molluscs: *Cochlicopa nitens, C.lubricella, C.lubrica, Vallonia costata, V.pulchella, Pupilla muscorum, Gibbulinopsis signata, Pseudonapaeus albiplicatus, Ps.sogdianaus, Leucozonella mesoleuca, Xeropicta candacharica, Monacha carthusiana, Deroceras laeve, D.caucasicum, Candaharia rutellum, C.roseni, Macrochlamys turanica, M. sogdianum, Zonitoides nitidus, Succinea putris, Phenacomilax annularis, Ceciliodes acicula* are found. The species has an uneven distribution across biotopes and regions.

In the upper parts of the mountain region, mowed mosses can be found on rocks along the soybeans, forming thick grass under various trees and shrubs. Although molluscs do not feed on mosses, the grass they produce is the most favorable ecological environment for small molluscs. Mosses are not consumed by most animals, are poorly damaged by bacteria and fungi, and retain moisture for long periods has the property of being fluttering(I.V.Belolipov and etc.,1997). For this reason, mosses create a stagnant ecological environment for molluscs. Soy dye is found under grasses and among various rock heaps in *Cochlicopa nitens, C.lubricella, C.lubrica, Vallonia costata, V.pulchella, Pupilla muscorum, Gibbulinopsis signata, Pseudonapaeus albiplicatus, Ps.sogdianaus Leucozonella mesoleuca, M. Sogdianum, Zonitoides nitidus* are found.

From the base of herbaceous plants under shrubs and woody plants, *Vallonia costata, V.pulchella, Pupilla muscorum, Xeropicta candacharica, Phenacomilax annularis* are distributed.

From under the large hearth stones, under the Leaf beds of the large-leaved plant *D.caucasicum, Candaharia rutellum, C.roseni, Macrochlamys turanica, M. sogdianum, Zonitoides nitidus, Succinea putris* are distributed.

Pupilla muscorum, Gibbulinopsis signata, Ceciliodes acicula are scattered among the sand heaps around the river.

Abiotic (temperature, humidity, wind) as well as biotic (plant, animal, microorganisms) factors are important in the formation of different ecological groups of terrestrial molluscs and the survival of different biotopes.

The above molluscs were classified into 3 groups according to the classification of Pazilov and Azimov(2013): xerobiont, mesobiont, psychrobiont.

№	Species name	Xerebiont	Mesobiont	Psychrobiont
1	*Cochlicopa nitens*	-	-	+
2	*C.lubricella*	-	-	+
3	*C.lubrica*	-	-	+
4	*Vallonia costata*	-	+	-
5	*V.pulchella*	-	+	-
6	*Pupilla muscorum*	-	-	+
7	*Gibbulinopsis signata*	+	-	-
8	*Pseudonapaeus albiplicatus*	-	-	-
9	*Ps.sogdianaus*	+	-	-
10	*Leucozonella mesoleuca*	+	-	-
11	*Xeropicta candacharica*	-	+	-
12	*Monacha carthusiana*	-	-	+
13	*Deroceras laeve*	-	-	+
14	*D.caucasicum*	-	-	+
15	*Candaharia rutellum*	-	+	-
16	*C.roseni*	-	+	-
17	*Macrochlamys turanica*	-	+	-
18	*M. sogdianum*	-	+	-
19	*Zonitoides nitidus*	-	-	+
20	*Succinea putris*	-	-	+

21	*Phenacomilax annularis*	-	+	-
22	*Ceciliodes acicula*	-	+	-

As can be seen from the data in this table, the largest amount belongs to ga, xerobionts include 3 (13.6%) species, mesobionts include 10 (45.4%) species, and psychrobionts include 9 (41%) species of molluscs.

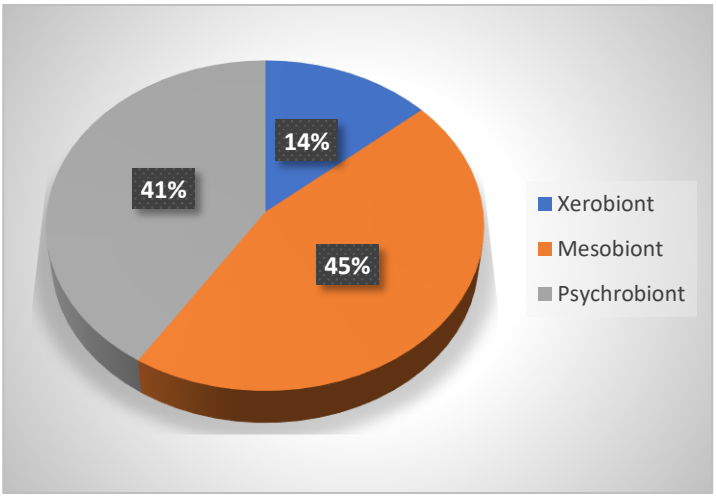

Figure 2. Ecological grouping of gastropods.

Conclusion. As a result of our observations, terrestrial molluscs distributed on Mount Karatepa are divided into 3 ecological groups, constituting 22 species. It should be noted that not all molluscs are considered moisture-loving, and moisture is one of the main factors in their life. Each species selects a biotope suitable for the organism's level of demand. Dryness is grouped by considering how much it depends on the level of humidity when dividing molluscs into ecological groups and the degree of density in the population.

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