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COMPLEXES OF TERRESTRIAL MOLLUSKS OF VARIOUS BIOTOPES OF THE TURKESTAN RANGE

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ABSTRACT

The terrestrial malacofauna of the Turkestan Range has not been fully studied. The complex structure of the altitudinal landscape zonality of mountain systems and the anthropogenic impact on the plains strongly affect the distribution and abundance of the population of terrestrial mollusks, since all their main aspects are closely related to the conditions of the habitat.

Therefore, the formation of small complexes is best considered under the conditions of various relief elements, since the connection with certain types of landscapes and biotopes is the most important characteristic of the fauna, which makes it possible to theoretically comprehend in many directions.

The Turkestan range from the Machai pass stretches to Jizzakh for 320 km, its height decreases from east to west. The eastern part is high, so there are many glaciers in these places.The climate is varied, precipitation mainly falls in the spring, on the high mountains there are eternal snows and glaciers. Compared to Alai, the Turkestan range has a more xerophytic appearance.

The vegetation mainly consists of desert-steppe, in addition, juniper and gornoxerophyte plants are widespread.

According to the studies of M. Arifkhanov (1967), the following soil-faunistic vertical belts can be traced in the area of interest to us.

Desert, located at an altitude of 350-900 m above sea level

The desert belt occupies the entire flat part of the Turkistan Range and is located on the left bank of the Syrdarya River. Virgin areas are rare.

In the desert belt, the malacofauna has been studied in gardens and orchards. The following species of terrestrial molluscs have been found: Xeropicta candaharica (15); Candacharia levanderi (5); Deroceras laeve (4); D. caucasicum (5); D. sturanyi (6).

In the biotopes along ditches, under the canopy of tree plantations and under stones, the following species were found: *Cochlicopa nitens (13); Wallonia costata (15); V.puchella (11); Pupilla muscorum (20); Angiomphalia regeliana (8); Deroceras sturanyi (6); Zonitoides nitidus (6). In general, 11 species were found in the desert belt.*

Belt of low foothills, absolute height 700-1500 m. The low foothills are covered mainly with ephemeroid sedge-bluegrass or ephemeral-sagebrush vegetation with a predominance of Carex pachystylis, Poa bulbosa var. vivipara, Artemisia ferganensis. Among this vegetation, there is also a number of long-term vegetative perennials, for example: semi-shrub bindweed, zopnik, ak-kurai, whole-leaved, etc.

In the foothills belt, the malacofauna of the following biotopes has been studied: along the banks of the rivers, among the plants found*: Cochlicopa lubricella (12); Vallonia costata (9); Pupilla muscorum (18); Zonitoides nitidus (10); Candacharia levanderi (5); Oxyloma eleganus (3).*

On the outskirts of the slopes under the stones live*: Gibbulinopsis signata (8); Pupilla triplicata (5); Chondrulopsina intumescens (5).*

A total of 9 species were noted in the foothills. Species characteristic only for these zones were not found.

The belt of the upper foothills, the absolute height is 1500-2000 m.

On the Turkestan Ridge, the belt is represented by a complex complex of natural deserts, formed under a variety of outcrops, rocky-rubbly, gravelly and woody slopes. Among the vegetation, there are ephemera and ephemeroids, thinly dissected and Persian wormwood, Perov capers, etc. On the slopes there are iron trees, wild roses, almonds, and pistachios.

In combination with outcrops along the slopes, areas of southern (savannoid) steppes with hairy wheatgrass, bluegrass (smooth-flowered, sprawling), etc. are formed.

In this belt, terrestrial molluscs have been studied in the following biotopes: At the foot of the slopes among the vegetation live: *Sphyradium doliolum (13); Pupilla triplicata (8); Chondrulopsina intumescens (6); Leucozonella retteri (5); Xeropicta candacharica (13); Candacharia levandery (3).*

The following species were found in trees and shrubs on rubble areas: *Sphyradium doliolum (13); Gibbulinopsis signata (31); G. nanosignata (10); Pupilla muscorum (9); P. triplicate (10); Pseudonapaeus sogniana (14); Ps. miss(6); Ps. chodschendicus (6); Chondrulopsina intumescens (7); Laevozobrenus eremita (6); Bradybaena fedtschenkoi (1); Leucozonella retteri (11); Xeropicta candacharica (13); Macrochlamys kasnakovi (8); Candacharia levanderi(2)* A total of 22 species were found.

When comparing the malacofauna of the foothill belt of the Turkestn Range with that of the Alay Range, clear differences are found. Apparently, this is due to the abundance of various shelters and many biotopes in the foothill zone of the Turkestan Range.

Belt of juniper forests and light forest, tragacanth and tragacanthoid steppes, absolute height 2500-3000 m. Significant areas of the belt are represented by xeromorphic light juniper forests and woodlands. Birch groves grow in the river gorges. The steppes and meadow-steppes of the belt are diversely represented, forming almost all exposures of the slopes A. A. Konov (1966).

In this belt, mollusks have been studied in the following biotopes: Among plant remains from juniper and various xerophilous herbs, the following were found: *Gibbulinopsis signata (13); G. nanosignata (8); Chondrulopsina intumescens (5); Ponsadenia semenovi(1).*

In biotopes on the slopes, among the stony steppes live: *Sphyradium doliolum (14); Truncatellina callicratis (12) Pseudonapaeus asiatica (4); Leucozonella caryodes (5); L.*

crassicosta (3); L. retteri (5) Macrochlamys sogdiana (3); M. kasnakovi (3); Candacharia levandery (6); Deroceras laeve (3).

The following species were found in biotopes along river banks, along springs, among vegetation: *Valonia costata (9); V. pulchela (13); Pupilla muscorum (18); Monacha carthusiana (15); Oxuloma elegans (5).*

In total, 19 species were noted in the belt of the lower mountains , mainly psychro- and mesophilic mollusks.

Alpine belt, absolute height 2500-4000 m.

Consists of two belts - subalpine belt. An important role is played by: from cereals - sheep, foxtail, fescue, trichaetes, and from herbs - cuffs, geraniums, buttercups and many other species. The economic importance of subalpine meadows is significant, since they are the main and most productive type of high-mountain summer pastures ("jailau").

The following biotopes were studied in the subalpine belt: In the subalpine meadows, in the grass and on the soil, the following were found: *Cochicopa nitens (8); C. lubrica (11); Vallonia costata (5); Pupulla triplicata (6); Pseudonapaeus miser (2); Monacha carthusiana (5); Angiomphalia regeliana (5).*

Biotopes of rocks and screes are inhabited by: *Sphyradium doliolum (2); Gibbulinopsis signata (8); G. nanosignata (13); Truncatellina callicratis (5); Chondrulopsina intumescens (1); Leucozonella retteri (3); 7. Pseudonapaeus secalinus (3).*

Alpine meadows are found only in the form of small areas along the bottoms of ancient ice caravans, near melting snowfields, along the banks of springs. The most common plants here are: mountaineer, alpine cornflower, schulcia, violet, etc.

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