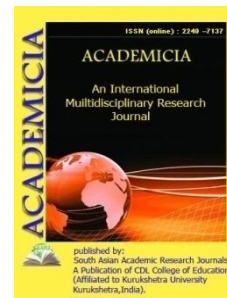




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FEATURES OF THE LIFESTYLE OF AQUATIC MOLLUSCS OF CENTRAL ASIA

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ABSTRACT

This article presents the results of a study of the lifestyle of aquatic mollusks and the ecological group of Central Asia. In the considered ecological groupings, the composition of species is very often relative, since some of the representatives of these groups can inhabit adjacent biotopes. A striking example of this is the views of the Galbas.str section. Among the small reservoirs there are both flowing (springs, streams, rivers, canals) and standing (ponds, haus, saz, swamps, reservoirs, medium-sized lakes). These bodies of water differ in origin, position above sea level, content of organic matter in them, salinity, turbidity, temperature, etc.

KEYWORDS: *Central Asia, Molluscs Ecological Group, Stagnophiles, Rheophiles, Telmatophiles,*

INTRODUCTION

Central Asia, despite the aridity of this region, has a complex hydrographic network, including numerous and varied water bodies. It is based on rivers, mainly of glacial feeding - Syr Darya, Amu Darya and others. Among the small reservoirs there are both flowing (springs, streams, rivers, canals) and standing (ponds, haus, saz, swamps, reservoirs, medium-sized lakes). These bodies of water differ in origin, position above sea level, content of organic matter in them, salinity, turbidity, temperature, etc. For each of the listed types of water bodies, certain ecological groups of mollusks are characteristic (Zhadin, 1933, 1940, 1950a, b, 1952; Izzatullaev 1981, 1982, a, b, 1983).

Molluscs that live in rivers, streams, springs, warm springs, and the surf zone of lakes are classified as rheophiles. The ecological group of inhabitants of stagnant reservoirs is made up of stagnophiles.

Molluscs - rheophiles (inhabitants of moving waters) in the reservoirs of Central Asia with respect to the biotopes inhabited by them are divided into the following groups; lithoreophiles (inhabitants of a solid substrate) - *Dreissenapolyomorpha aralensis*, *D.p.obtusicarinata*; phytophils (inhabitants of thickets) - *Lymnaea auricularia*, *L.psilia*, *Hippeutis diaphanella* and *H.euphaea*; peloreophiles (inhabitants of the silted bottom) - *Theodoxus pallasi*, *Cincinnatiensis*, *Pisidum annicum*, *Corbicula cor*, *C.fluminalis*, *C.purpurea*, *Corbicula ferghanensis*, *C.tibetensis*, *Colletopterumbactadrianum*, *C.cyreumsogdianibba*, *S. puerorum*; crenophiles (inhabitants of springs) - representatives of the genera *Bucharamnicola*, *Turkmenannicola*, *Valvatannicola*, *Martensannicola*, as well as species *Alloocinmacaspica*, *Karinarella minima*, *K.likharevi*; thermocrenophiles (inhabitants of warm springs) - *Melanoides kairanensis*, *M.pamiricus*, *M.shahdaraensis*; thermocrenophile-phytophile-*Lymnaea alticola*.

In addition to these clearly demarcated groups, there are ecological groups that form on silty-sandy soils - *Pelopsammophiles* (Neizvenova-Zhadina, 1937; Zhadin 1940). These include 6 species of *Melanopsis* and some other groups.

Stagnophiles, in turn, are subdivided into lake dwellers (limnophiles), puddles (telmatophiles), and swamp dwellers (eleophiles). Limnophils, depending on the substrate, are subdivided into ecological groups: phytophils, lithophiles, pelophiles, pelo-psammophiles. The most typical representatives of the latter in the water bodies of Central Asia are inhabitants of fresh waters (*Euglesaonica*, *E. feroense*, *E. fedderseni*, *E. zugmayeri*, *E. borealis*, some representatives of the genus *Odhneripisidium*) and brackish waters of 6 species of the genus *Caspiohydrobia* *Peudocaspia issykulensis*; : *Cincinnatiagafurovi*, *C.depressa*, *C.klinensis*, *Anisus centralis*, *Musculium hungaricum*, *Colletopterum ponderosum*, some species of the genera *Euglesa* and *Odhneripisidium*, phytophilam: *Cincinnatiastolickiana*, *Boreoelonacaerulans*, *Digonistomakashmirensis*, *crematorium* a *Dreissenacaspiapallasi* belongs to the brackish water pelolimnophiles. In the reservoirs of Central Asia there is an acclimatizer of brackish waters - pelo-psammolimnophil - *Adacnacolorata*. Telmatophiles, inhabitants of puddles, are unequal, and therefore they are divided into inhabitants of periodic water bodies (*Cincinnatiumbilicata*, *Lymnaea aberlani*, *L.liliensis*, *L.saridalensis*, *L.terebrabolotensis*, *Aplexahypnorum*) and drying up water bodies. Of the Central Asian mollusks, only *Lymnaea kazakensis* and *Planorbis stenostoma* belong to this group. These groups of reservoirs differ in that in the former the bottom is covered with moisture-loving vegetation and they dry out for a period of 1 to 3 months, in the latter the bottom is bare clay and dry up for a period of more than 4 months.

It should be noted separately phytophils - inhabitants of thickets of rivers and stagnant water bodies - *Lymnaea stagnalis*, *L.fragilis*, *Costatella acuta*, *C.integra*, *Planorbis planorbis* and 5 species of the genus *Anisus*.

In the considered ecological groupings, the composition of species is very often relative, since some of the representatives of these groups can inhabit adjacent biotopes. A striking example of this is the views of the *Galbas.str* section. (subgenus *Galba*) which include: *Lymnaea truncatula*, *L.gaupili*, *L.oblonga*, *L.subangulata*, *L.thiesseae*, *L.shirazensis*, forming a special group of madicol mollusks that inhabit wet surfaces (i.e. wet walls and slopes) ... These species can also

be found in drying up water bodies and in springs (in the latter, wet surfaces are very common), as well as at the water edge of large water bodies. The species of the section Montigalba (*L.tengriana*, *L.almaatina*, *L.bowelli*) live in springs and are thus limnocrenophilous.

L. lagotis is an inhabitant of semi-permanent water bodies (i.e., drying up for a period of 20 days-1 month - according to Klimovich's classification). *Planorbisplanorbis*, *Pl.sieversi*, *Pl.tangitarenis* and usually live there (they are all found in permanent water bodies). Semi-permanent water bodies, in contrast to periodic ones, are characterized by overgrowth with coastal aquatic vegetation.

From small bivalve molluscs - *Pisidumammicum* can live on sandy and silty soils of rivers and lakes. Typical eurybionts are phytophils - *Lymneasubdisjuncta*, *L. bactriana*, *L.fontinalis* and telmatophiles - *L. lagotis*, *Anisusladacensis*, *Planorbisplanorbis*, etc.

Thus, in the water bodies of the studied territories, aquatic mollusks of Central Asia are represented by various (6) ecological groups, the leading place among which is occupied by phytophils-9 (30.00%) species, crenophiles-5 (16.67%), pelolimnophiles-3 (10 %), pelopsammolimnophiles (6-66%), telmatophiles-1 (3.33%) and madicol-3 species (3.33%).

Distribution of ecological groups of aquatic molluscs in the river basins of Central Asia.

№	Types of molluscs	AmuDarya	Syrdarya	Environmentalgroups
1.	<i>Cincinnagafurovi</i>	+		Pelolimnophil
2.	<i>C. pisinalis</i>		+	Peloriophilus
3.	<i>Caspiohydrobiaelongata</i>	+		Pelo- psammolimnophilbrackishw ater
4.	<i>Kainarella minima</i>	+		Thermocrenophile
5.	<i>K. likharevi</i>		+	Crenophilus
6.	<i>Bucharamnicolabucharica</i>	+		Crenophilus
7.	<i>Martensamnicolabrevicula</i>	+	+	Crenophilus
8.	<i>M.hissarica</i>	+	+	Crenophilus
9.	<i>Lymneastagnalis</i>	+	+	Phytophil
10.	<i>L.gaupili</i>	+		
11.	<i>L.truncatula</i>	+	+	Madicol
12.	<i>L.subangulata</i>	+	+	Madicol
13.	<i>L.bowelli</i>	+	+	Limno-crenophilus
14.	<i>L.hookeri</i>	+	+	Telmatophilus
15.	<i>L.auricularia</i>	+	+	Phytophil
16.	<i>L.bactriana</i>	+	+	Phytophil
17.	<i>L.alticola</i>	+	+	CrenophileandThermocreno phile
18.	<i>L.subdisjuncta</i>	+	+	PhytophiltoPelolymnophil
19.	<i>Costatellaacuta</i>	+	+	Phytophil
20.	<i>C.integra</i>	+	+	Phytophil
21.	<i>Planorbisplanorbis</i>	+	+	Phytophil
22.	<i>Anisusacronuicus</i>	+	+	Phytophil

23.	<i>A.convenxiusculus</i>	+	+	Phytophil
24.	<i>Sinlanodontagibba</i>		+	Peloriophilus
25.	<i>Colletopterumbactrianum</i>		+	Peloreophilus
26.	<i>C.sogdianum</i>	+	+	Peloreophilus
27.	<i>C.kokandicum</i>		+	Pelolimnophil
28.	<i>Corbicula cor</i>	+		Peloreophilus
29.	<i>C.purpurea</i>	+	+	Peloreophilus
30.	<i>Corbiculinaferghanensis</i>	+	+	Peloreophilus

Due to the variety of types of water bodies, we will analyze the malacofauna of each type separately. Moreover, all reservoirs of Central Asia can be divided into 2 categories: natural and artificial. The first category includes streams and rivers; springs; warm and hot springs; fresh, brackish and salty lakes; carp swamps and swamps, puddles (temporary reservoirs); to the second-ditches; artificial reservoirs-haus, ponds (including ribovodny ponds); rice fields; main and shallow irrigation, drainage and discharge canals; reservoirs.

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