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## **DYNAMICS OF INFESTATION WITH HELMINT LARVAE OF CANDAHARIA LAVENDERI SIMROTH, 1901**

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**Abdulazizova Shoir Karimovna**

Termez State University, Docent, Termez, Uzbekistan

**Abdulloyeva Dilnoza Boboismoilovna**

Termez State University, Docent, Termez, Uzbekistan

### **ABSTRACT**

The article discusses the dynamics of infestation by helminth larvae of Candaharia levanderi Simroth, 1901 is based on the dependence of population density of this species

### **KEYWORDS**

Candaharia lavender, helminth larvae, invasion dynamics, population density.

### **INTRODUCTION**

In recent years, the sharp expansion of the agricultural production of our country has various effects on the modern state of land molluscs in the developed areas. The development of protected lands and the development of animal husbandry, on the one hand, caused the reduction of the areas where rare and endemic species of land molluscs are distributed and the crisis of their populations, on the other hand, the increase in the number of some harmful species of land

molluscs, the increase in the rate of damage to nutritious plants of livestock importance, and the parasitic larvae of livestock leads to the expansion of the scope of the disease. From this point of view, in addition to determining the species composition of land molluscs in changing local areas, assessing the status of populations of rare species, studying their economic importance, and developing effective

methods of combating harmful species are of great scientific and practical importance.

Studying the taxonomic composition and distribution of land molluscs, which are the main causes of certain types of parasitic diseases spread in Central Asia, and the molluscs involved as intermediate hosts is one of the main problems for today.

The degree of contamination of land mollusks with protostrongylid larvae distributed in different landscapes of the south of Uzbekistan was studied by E.N. Kulmamatov and others, in the life cycle and circulation of protostrongylids *Xeropicta. candacharica*, *Subzebrinus* (*Pseudonapaeus*) *albiplicatus*, *Subz* (*Ps.*) *sogdianus* species have been found to play an important role [1].

Currently, the taxonomic composition of land molluscs that participate as intermediate hosts of helminths in Uzbekistan A. Pazilov, A. Kuchbaev [4], the taxonomic composition of helminth larvae found in land molluscs A. It is studied by Kuchbaev [2.], A.E. Kuchbaev, M. Egamberdiev and others [3].

However, the study of the degree of helminth larvae infestation of terrestrial molluscs common in the Surkhan-Sherabad valley and its surrounding mountains is currently fragmentary, and some species distributed around the village of Khatak of the Kohitang mountain range were partially studied by Kuchbaev, Egamberdiev and others. In the rest of the regions, this problem remains unsolved [3].

Therefore, the purpose of our research work was to study the degree of infection of *C. lavenderi* species

with helminth larvae and its dependence on population density.

The degree of infection of *C. lavenderi* species with helminth larvae was studied in the southeastern part of the Kohitang mountain range from the village of Aktash to the village of Vandob and from there in the north-west direction, in the areas of the Vandob section of the Surkhan state reserve.

According to the results of the conducted research, the species *C. lavenderi* is unevenly distributed by altitude regions and biotopes. For example, in the desert region: among the grass on the banks of streams, under the trees in gardens, among the plant cover in the undeveloped areas of the land near water bodies, in the hill region: on the slopes where semi-shrub plants grow and among the stone piles, in the stone piles between the grass in the land near the water bodies, in the mountain in the region, among shrubs and trees, living under stones between grass plants, the population density and level of helminth infection are as follows (table).

According to the data in the table, the dynamics of infestation of *C. lavenderi* species with helminth larvae differ by biotopes and altitude regions. For example, in the desert region, 1 out of 60 molluscs distributed among plants under trees in gardens is infected with larvae, and the infestation is equal to 1.66%, while in those living among vegetation in undeveloped areas near water bodies, the infestation is equal to 12.30%, in the hilly region, the same and in such a biotope, this indicator is 13.33%. In the mountain region, 1 out of 60-65 molluscs is affected, equal to 1.53%, 1.66%.

## Table

### Distribution of the species *C. lavenderi* by altitude regions and biotopes and infestation level by helminth larvae

Researched biotopes and the population density of molluscs in them	Altitude regions								
	Desert			Hill			Mountain		
	Total studied	Damaged	IE %	Total studied	Damaged	IE %	Total studied	Damaged	IE %
Among the grass on the banks of the stream (7-8 per 1m <sup>2</sup> )	55	3	5,45	-	-	-	-	-	-
Between plants under trees in gardens (5-6 per 1m <sup>2</sup> )	60	1	1,66	-	-	-	-	-	-
Plant cover in undeveloped areas near water bodies (10-12 per 1m <sup>2</sup> )	65	8	12,3	-	-	-	-	-	-
Slopes with semi- shrub plants (8-9 per 1m <sup>2</sup> )	-	-	-	60	4	6,66	-	-	-

Between grasses and under piles of stones in lands near water bodies (13-15 per 1m <sup>2</sup> )	-	-	-	60	8	13,33	-	-	-
Between shrubs and trees (12-14 per 1m <sup>2</sup> )	-	-	-	-	-	-	65	1	1,53
Under stones between grasses (10-12 per 1m <sup>2</sup> )	-	-	-	-	-	-	60	1	1,66

According to the results of the research, the high level of invasion of land molluscs distributed in biotopes with helminth larvae depends on the density of the mollusc population based on the characteristics of the biotope and its microclimate. For example, in the desert region under the vegetation cover of undeveloped areas near water bodies or in such a biotope in the hilly region, the population density of molluscs is high (12-15 molluscs per 1 m<sup>2</sup>), and the level of infestation with helminth larvae is 12.30% to 13.33%.

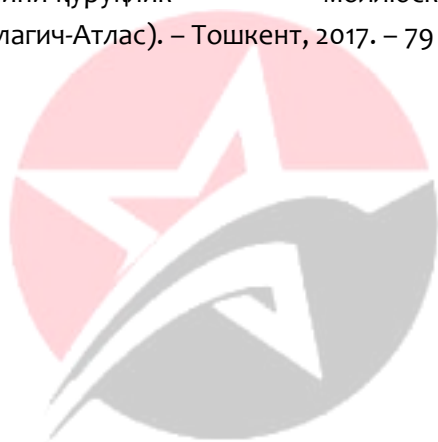
Therefore, the higher the density of molluscs in the population, the higher the level of infestation with helminth larvae.

However, in the mountain region of the Kohitang mountain range, the population density of molluscs is high, but the invasion rate is low (table). This is due to the fact that the research area in the mountain region is in the Vandob section of the Surkhan State Reserve, and the use of these lands as pasture is prohibited. This situation results in less contact between the mollusc and the larva, and accordingly infestation may be lower.

## REFERENCES

1. Кулмаматов Э.Н., Исакова Д.Т., Азимов Д.А. Гельминты позвоночных горных экосистем Узбекиста. – Ташкент: Фан, 1994. – С. 71-72.

2. Кучбоев А.Э. Популяционная экология, систематика нематод семейства Protostrongylidae и функционально-метаболические процессы в системе “паразит-хозяин”.: Автореф. дис. ...док. биол.наук. – Ташкент, 2009. – 43 с.
3. Кучбаев А.Э., Эгамбердиев М., Каримова Р., Пазилов А. Наземные моллюски-промежуточные хозяева протостронглид // Узбекский биол. журн. – Ташкент, 2018. -№1. – С. 15-20.
4. Пазилов А., Кучбаев А. Ўзбекистонда уй ва ёввойи ҳайвонлар гельминтларининг оралиқ хўжайини-қуруқлик моллюскалар (Аниқлагич-Атлас). – Тошкент, 2017. – 79 б.



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