



Territory Molluss Gelmint Larvae, Distribution And Morpho-Biological Properties

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ABSTRACT

This article discusses the morphology of Tamerlania zarudnyi cercarium and helminth larvae developing in the presence of terrestrial mollusks in the Fergana Valley, the taxonomic composition of the species, the intermediate host and the degree of infestation with larvae, species distribution and ecology, as well as research methods used to identify this species. and methods are described.

Keywords:

Helminth, larva, fauna, biotope, sporocyst, serkari, intermediate host, metacercaria, morological method.

Introduction

Currently, the total number of mollusks in the world fauna is about 113,000 in some literature sources and more than 200,000 species in others, and about 600 species are distributed in Central Asia. Of these, more than 200 are terrestrial mollusks, and more than 130 species are found in Uzbekistan. Mollusks play a number of important roles in nature and in human life, one of which is their economic importance, i.e. they play an intermediate role in the spread of dangerous helminthiasis diseases in many mammals and birds. In some cases, this will cause serious damage to agriculture, livestock and poultry. The Resolution of the President of the Republic of Uzbekistan No. PP-4243 of March 18, 2019 "On measures to further develop and support the livestock sector" has been developed, and a number of tasks are set in the relevant architectural documents. Based on these tasks, it is important to determine the species composition of helminth larvae that develop in terrestrial mollusks in different natural and ecological regions of the Fergana Valley, to develop measures to prevent agricultural helminthiasis. Terrestrial mollusks are found in a variety of terrestrial landscapes, sinking into

the ground or leading a connected lifestyle. Terrestrial mollusks are an ecological group that includes all terrestrial mollusks, unlike freshwater and marine mollusks.

Subject study.

Materials on the fauna and taxonomy of helminth larvae of terrestrial mollusks were obtained by a number of foreign scientists A.W.Demiaszkiewicz & I.Przybysz (2003), P.S.Grewal et al. (2003), M.Panayotova-Pencheva, (2006), Köse et al. (2015), R.G.Forsyth et al. (2015), I.B.Igbinosa et al. (2016), M.Nakao et al., (2017), T.Waki (2017), G.C.Onyishi et al. (2018).

Studies on the morphology, biology, ecology and role of terrestrial mollusks in helminth larvae in the CIS countries T.Ginetsinskaya (1968), T.N.Soboleva (1971), K.K.Uvalieva (1975), V.Ya.Panin (1984), L.E.Ursova (1986). , E.N.Korol (2000), V.V.Kornyushin (2009), S.O.Movsesyan et al. (2010), A.A. Lopatkin (2011) and others.

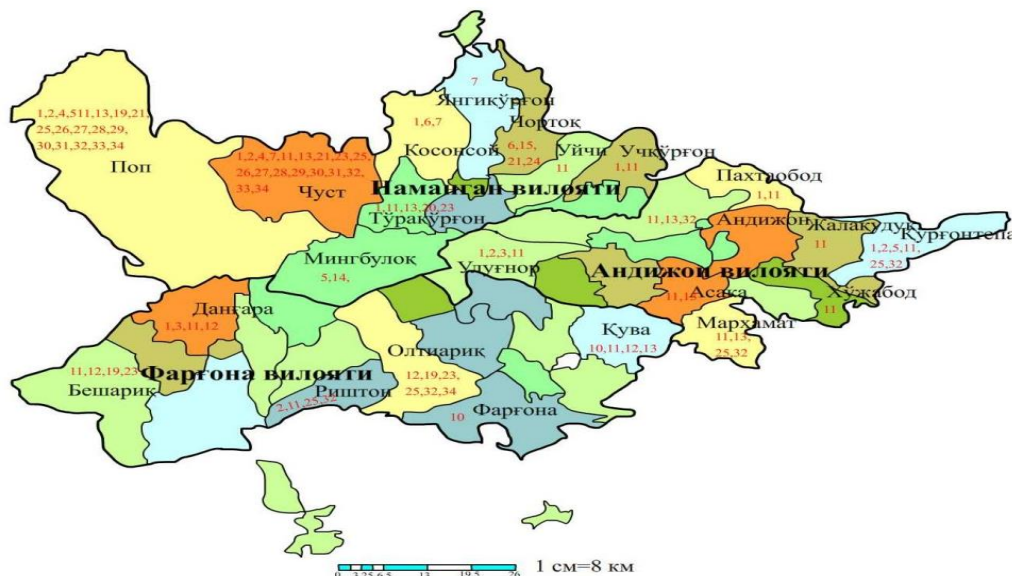
Preliminary work on the study of taxonomic composition, owner, distribution and morphology of helminth larvae species found in terrestrial mollusks in Uzbekistan, in particular in the Fergana Valley, was carried

out by KS Samadov (1963), B. Salimov (1963), MA Sultanov (1963).), D.A. Azimov et al. (1963), Ya.U. Ubaydullaev (1971), MA Sultanov et al. (1971, 1978), D. Ernazarov (1972) and T.Q. Kobilov et al. (1978). Later, E. Kulmamatov et al. (1994), B. Davronov, (1999), A.E. Kuchboev et al. (1998), F.D. Akramova (2003), B.Kh. Ruziev (2008), A.E. Kuchboev (2009), E.B.

Materials and research methods. Method of collecting mollusks. In collecting land mollusks, A.A. It was carried out according to the Shileyko method. The material was mostly hand-typed. The composition and number of species were studied as follows: species with large bodies and shells were counted in an area of 1 m², and species with shells smaller than 5 mm were counted in an

area of 0.25 m². The materials were collected mainly in the morning in humid weather, as the dew had not yet dried and could be easily found as many mollusks were active. Due to the low humidity in the plain, the material was collected only in the early hours of the morning, when most of the slugs were active. During the summer months, when temperatures are high, terrestrial mollusks gather between fallen trees and bark, under rocks and various migrations. Certain species penetrate the soil to a depth of 20-25 cm. For this reason, despite the presence of shells of the species, large rocks were dug to a depth of several centimeters, as no living representatives were found

Figure 1. Map of the place where the research was conducted and the material was collected.



1. *Cochlicopa nitens*, 2. *C. lubrica*, 3. *Vallonia costata*, 4. *Gibbulinopsis signata*, 5. *Pupilla muscorum*, 6. *Pseudonapaeus albiplicatus*, 7. *Pseudonapaeus sogdianus*, 8. *Fruticicola lantzi*, 9. *Fruticicola dichrozona*, 10. *F. phaeozona*, 11. *Xeropicta candacharica*, 12. *Angiomphalia regeliana*, 13. *Deroceras laeve*, 14. *D. reticulatum*, 15. *Candaharia levanderi*, 16. *Zonitoides nitidus*, 17. *Novosuccinea evoluta*, 18. *Succinea putris*, 19. *V. pulchella*, 20. *Deroceras sturanyi*, 21. *Sphyradium doliolum*, 22. *L. mesoleuca*, 23. *Macrochlamys sogdiana*, 24. *Oxyloma elegans*, 25. *Pupilla sterrii*, 26. *P. turcmenica*, 27. *Vertigo antivertigo*, 28. *V. pygmaea*, 29. *Pseudonapaeus regelianus*, 30. *Fruticicola almaatini*, 31. *Br. plectotropis*, 32. *Leucozonella rufispira*, 33. *L. crassicosta*, 34. *Monacha carthusiana*.

Anatomical method.

The anatomical study of mollusks was carried out on the basis of the methods of AA Shileyko, A. Pozilov, J. Azimov. MBS-2 or MBS-9 binoculars were used to study mollusks. To dissect it, a genital hole was first found under

the right eye socket, cut short across, and the lower part of the body was torn with sharp surgical scissors and a very small needle to the folds of the mantle. We did this very carefully, trying not to damage the organs that touch the inner lining of the skin.

The mantle folds were then slowly cut, and the cutting continued until the internal organs were fully visible. Once the internal organs are fully visible, we pay special attention to their placement, especially the genital retractor. Each internal organ was studied separately.

Discussion and results. Mollusks live in a variety of biotopes. Therefore, species with large helicoid and buliminoid shells can be found in the stems of plants, on top of rocks or under rocks, small shells (pupilloids) under small stones, and under the stems of semi-shrubs.

Below we consider the characteristics, bio-morphology, ecology of some terrestrial mollusks.

Trematoda (Rudolphi, 1808) class
 Plagiorchida La Rue, 1957 series
 Eucotylidae Skrjabin, 1924

family
 Tamerlania Skrjabin,
 1924 generation

There are 4 species of this genus in Uzbekistan (Tamerlania zarudnyi, T. atra, T. fedtschenkoi and T. longivitellata).

Tamerlania zarudnyi Skrjabin, 1924, cercaria

Intermediate host: Xeropicta candacharica, Novisuccinea evoluta.

Location: Tamerlania zarudnyi sercarium were found in the liver of mollusks collected from Pop, Mingbulak districts of Namangan region, Ulugnor and Boz districts of Andijan region, Rishtan, Besharik and Qoshtepa districts of Fergana region.

Morphology (according to Soboleva, the female spores are spherical (see Figure 2). The walls of the spores are tegumentary, regardless of the stage of development. The embryo is composed of spherical spores. The number of embryonic spheres is 2 to 5, sometimes up to 20.

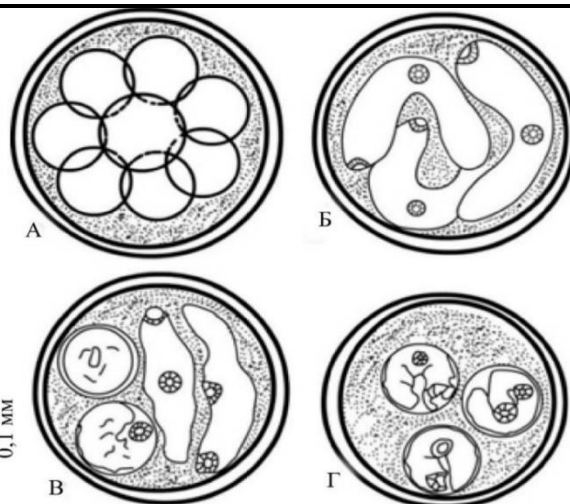


Figure 2. Tamerlania zarudnyi sporatsistasi (according to Sobolev-57).

A – sporocysts composed of embryonic spheres; B – sercores in sporocysts;

V – with serkariya and metatserkariyalari; G – metatserkariyalari with.

Sericarium.

Some sporangia consist only of sericariums. When gently squeezed, the sporatsista wall ruptures and the cercariae protrude. Crushed sericides are not permanent and break down quickly. The length of the cercariae is 0.285–0.376 mm and the width is 0.075–0.088 mm (see Figure 3 in Annex 7, a, see Table 1). There are diagonal bumps on the surface of the body. The oral pacifier is larger than the abdominal pacifier. The diameter of the oral nipple is 0.050 mm, and that of the abdominal nipple is 0.040 mm. The pharynx is visible, measuring 0.025-0.030 mm. A long separation bladder runs along the second part of the center of the body. Excretory formula 2 [(2 + 2 + 2) + (2 + 2 + 2 + 2)] = 28. Below the pharynx is the undifferentiated genital bud. The whole body is filled with granules.

Table 1

Morphological size of Tamerlania zarudnyi sercarium, n = 10

Dimensions	(Lim, M±m)
Body length	0,285-0,376, (0,313±0.009)
Tana eni	0,075-0,088, (0,805±0.004)
Oral suction	0,045-0,052,

	(0,048±0,0007)
Abdominal suction	0,043-0,049, (0,046±0,0006)
The length of the tail	0,258-0,320, (0,296±0,009)

Note 1 .: n- number of samples tested, variable limit of lim symbols, M- arithmetic mean, m- arithmetic mean error

The length of the metacercaria is 0.512 to 0.538 mm and the width is 0.108 to 0.128 mm (see Figure 3). The nipples are clearly visible. The diameter of the oral nipple is 0.045-0.052 mm, slightly larger than the abdominal funnel, with a diameter of 0.043-0.049 mm. Sometimes the pharynx falls into the oral cavity, measuring 0.024-0.028 x 0.028-0.030 mm.

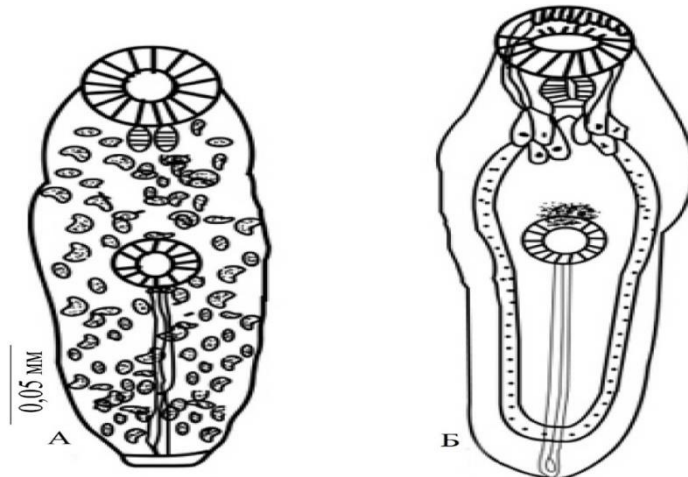


Figure 3. Tamerlania zarudnyi Skrjabin, 1924 larvae (T.N.Soboleva, 57):

A – sericarium, B – metatsercarium

A total of 32,636 terrestrial mollusks were examined for morphological and molecular studies in the study of the intermediate host of the helminths - terrestrial molluscs, of which 28,719 were 88% terrestrial shells and 3,917 were 12% slugs. Our use of morphological features in determining the type of each mollusk allowed us to obtain information only at the family or generation level.

Conclusion

As a result of our research, we found that the mollusks of the genus Tamerlania zarudnyi Skrjabin in Pop district of Namangan region, Rishtan district of Fergana region and other similar places were found in the liver of mollusks collected between trees and at different depths. biological and ecological properties. There are 46 species of terrestrial mollusks in the Fergana Valley, belonging to 13 families and 24 genera. Of these, 14 species out of 18 species of mollusks participating as

intermediate hosts of helminth larvae were found in Namangan region.

List of used literature:

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