

# New Species of Terrestrial Molluscs of Cochlicopa (Gastropoda, Pulmonata, Cochlicopidae) Genus from the Northwestern Part of Uzbekistan

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**Abstract** In April 2022, in the northwestern part of Uzbekistan, one of the authors (I. Avazmetova) gathered 27 species of mollusks belonging to the Cochlicopa genus. In comparison with other territories, the malacofauna of this territory is generally not studied. The peculiarity of the conchological and the structure of the reproductive tract of this species forced it to be described as a new species for science (*urgenchika* sp.nov). there is no information on the malacofauna of the northwestern part of Uzbekistan until now.

**Keywords** Terrestrial mollusk, Malacofauna, Conchological character, Species, Cochlicopa urgenchika sp.nov

## 1. Introduction

The research of regional fauna serves as an important foundation for the comprehensive solution of theoretical and practical problems facing modern zoology. Consequently, any faunistic research conducted in any region of Uzbekistan is of particular interest.

It should be pointed out, that the study of Central Asian malacofauna has been going on for more than 150 years and a number of fundamental works have been published in the direction (Likharev, Rammelmeyer, 1952; Likharev, Viktor, 1980; Shileiko, 1978, 1984; Uvalieva, 1990; Shileiko and Rimjanov, 2013; Pazilov, Azimov, 2003; Pazilov, Gaibnazarova, Karimqulov, 2016) devoted to the systematic position of Central Asian terrestrial molluscs. However, there is no information about the malacofauna of the north-western part of Uzbekistan up to now.

In April 2022, one of the authors (I. Avazmetva) collected terrestrial molluscs in the north western part of Uzbekistan, or rather the vicinity of Urgench (Khorezm region) city and molluscs were collected, the shells of which are very similar to representatives of Cochlicopa genus. However, the results of further study in the conchological structure and reproductive tract of these animals showed that they are new species of Cochlicopa genus.

## 2. Materials and Methods

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The material (27 species, 12 of them alive) was collected (Fig. 1) from the vicinity of Urgench (Khorezm region) city on undeveloped lands among grass thickets (12.04. 2022, collection of I. Avazmetova). Dissections (7 copies) were carried out using the standard methods (Shileiko, 1984) of manual anatomy in 75% of alcohol under a binocular microscope "Olympus SZ".

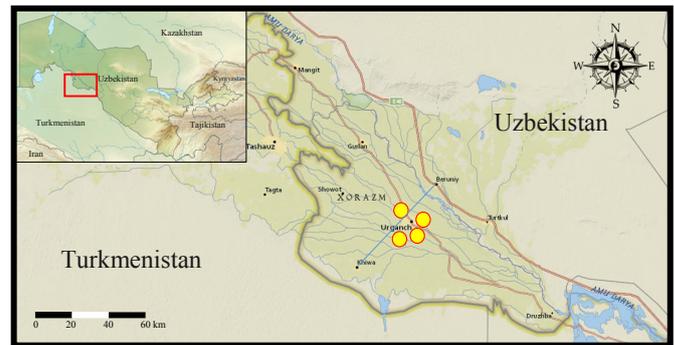


Figure 1. ○ - distribution and collection points for shellfish

### Systematic part

Superfamily Cochlicopoidea Plisbry, 1900

Family Cochlicopoidae Plisbry, 1900

Genus Cochlicopa Ferussac, 1921

*Cochlicopa urgenchika* sp.nov.

(Fig. 2)

**Locus typicus.** Vicinity of Urgench city (Khorezm region).

**Material.** 27 specimens from the type locality, 7 specimens are dissected.

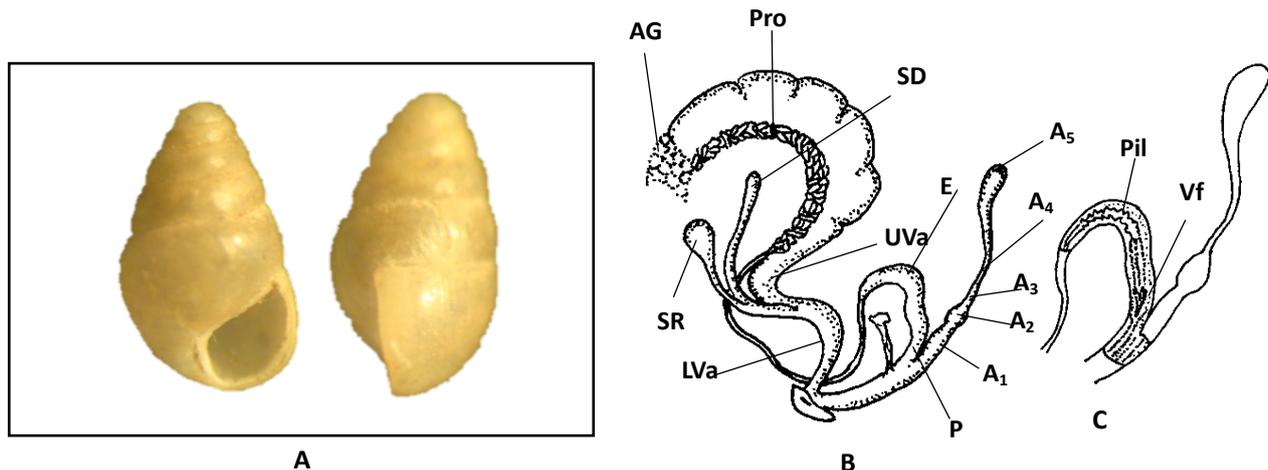
**The holotype** and 26 paratypes (14 dry shells and 12 bodies in spirit) are stored in the Biological Museum of

Gulistan State University.

**Description.** The shell (Fig. 1.A) is low conical, moderately swollen, slightly shiny, relatively thick-walled, with a widely rounded apex. Whorls 4.5-5, convex. The last whorl is almost straight. The coloration is pale horn or light brown. The surface of the shell is smooth at first glance, at a magnification of 10 times, flaccid radial wrinkles are clearly visible in the penultimate and last whorls, and the finest

spiral grooves can be seen on the upper whorls. Aperture broadly oval, slightly oblique. The margins of the mouth are retracted to varying degrees: the columellar and lower palatal margins are markedly retracted. There is a silky navel, which is absent in other species of the genus *Cochlicopa*.

Dimensions: shell height 3.4-4 mm, large diameter 2-2.5 mm



**Figure 2.** *Cochlicopa urgenchika* sp. n. (holotype). A-shell; B- reproductive apparatus; C-open penis. AG - albumen gland; Pro - prostate; A<sub>1</sub>-A<sub>5</sub> - divisions of penial appendix; E epiphallus; P - penis; Pil - pilaster; Vf-folds; SD - spermathecal diverticle; SR-spermathecal reservoir; UVa - upper division of vagina; LVa - lower division of vagina

### Inner structure.

**Material.** 7 copies (holotype and 6 paratypes) surroundings of Urgench city.

The surface of the protein gland with clear lateral grooves. The seminiferous duct smoothly passes into the epiphallus. The epiphallus is thicker than the cylindrical penis and there is no clear boundary between them, there are no clearly expressed and permanent swellings. The inner walls of the penis are slightly higher than the confluence of the appendix, there are V-shaped folds, which are developed to varying degrees. All sections of the penial appendix are well developed, but very variable and located on the penis near its border with the epiphallus. A powerful retractor is attached to the penis at the base of the appendix. The upper part of the vagina is almost half a tare shorter than the lower part. The diverticulum of the seminal receptacle is thick and long, reaching slightly to the protein gland. The oval reservoir of the seminal receptacle has a clearly defined duct of its own, the length of which is approximately equal to the length of the reservoir itself.

**Distribution and habitats.** Species is known only from the type locality, where it lives on undeveloped lands among grass thickets.

**Notes.** It differs from other species of the genus in the following conchological features, namely: the shell is low-conical; not shiny; thick-walled; slightly smaller sizes; the edge of the mouth is turned away; there is a silky navel. The structure of the reproductive apparatus is different: the epiphallus is thick; there are V-shaped folds inside the penis;

the penial appendix is variable to varying degrees. 7 species were opened, of which 4 individuals have a complete set of appendages, 3 individuals do not have the basal appendix A<sub>1</sub> + A<sub>2</sub>.

**Etymology.** The name is formed from the name of Urgench city (Urgench) - the typical localization of the species.

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