Micropontica annae sp. nov., a new species of Clausiliidae (Gastropoda, Pulmonata) from Northwest Caucasus

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ABSTRACT. A new species Micropontica annae Kijashko sp. nov. (subgenus Micropontica s. str.) from the high-mountainous part of Northwest Caucasus is described.

The genus Micropontica (O. Boettger, 1881) is an endemic West Caucasian clausiliid genus consisting of species dwelling on limerocks. According to the most recent review [Schileyko, 2000], the genus Micropontica consists of two subgenera: Micropontica s. str. and Baleopsina Lindholm, 1924. The first subgenus includes Micropontica closta (O. Boettger, 1881) according to Nordsieck [1975], or two species; M. closta and M. circassica (O. Boettger, 1888), according to Egorov [2002]. The subgenus Baleopsina contains two species — Micropontica retowskii (O. Boettger, 1888) (= caucasica A. Schmidt, 1868) and M. circassica, according to Nordsieck [1975], or M. caucasica (A. Schmidt, 1868) [= retowskii (O. Boettger, 1888)] and M. interjecta (Rosen, 1914) according to Egorov [2002]. Currently, of the above-mentioned species the anatomy was studied only for M. closta. Probably it causes divergences of views (based on the conchological features) concerning the interspecific relationships of the species of Micro-pontica and the taxonomy of this genus.

In summer 2000, extensive alcohol material on three species of Micropontica has been obtained as a result of the expedition to valley of the Belaya River and Lagonaki Mountains (Adygeja and Kras-nodar Territory). Two species were identified as M. retowskii and M. circassica. The third species is described below.

Family Clausiliidae Mörch, 1864
Subfamily Baleinae A. Wagner, 1913
Genus Micropontica O. Boettger, 1881
Type species: Clausilia (Micropontica) closta O. Boettger, 1881

Subgenus Micropontica (Micropontica) s. str.

Micropontica (Micropontica) annae
Kijashko sp. nov.
(Figs. 1 A-E, 2 A, B)

Material. Northwest Caucasus, Adygeja, Lagonaki Mountains, western part of Lagonaki Ridge, southern slope of Mt. Zhitnaya (~ 1900 m above sea level), lime rocks, August 6, 2000; coll P.V. Kijashko (holotype and paratypes). Holotype and 68 paratypes are stored in the Zoological Museum of Moscow State University.

Type locality. Northwest Caucasus, Adygeja, Lagonaki Mountains, western part of Lagonaki Ridge, southern slope of Mt. Zhitnaya (~ 1900 m above sea level).

Diagnosis. Shell small, with larger and widely spaced ribs; whorls convex, last whorl weakly narrowed; superior lamella high, continuous with spiral lamella through a light curvature, reaching aperture margin; spiral lamella below superior lamella, starts on right side. There are lunella and principal plica; lunella expanded in lower portion and located right-dorsally; principal plica long (almost 0.75 of last whorl in length), stretches at a small angle upwards and practically reaches margin of aperture. Palatal wall of last whorl with a strong longitudinal palatal crest clearly seen at direct view of aperture. Vas deferens smoothly passing in fusiform penis. Penis internally with longitudinal folds (two strong and a series of smaller, irregular), a circular pilaster and a sphincter on top. Spermatic reservoir adjoins albuminous gland, diverticle weakly curled and expanded in the final part.

[Диагноз. Раковина небольшая, с крупной и редкой ребристостью: обороты выпуклые, последний оборот слабо сужен. Верхняя пластинка высокая, впереди достигает края устья, сзади сливается со спиральной, формируя небольшой изгиб. Спиральная пластинка ниже верхней, начинается на правой стороне. Имеется полулунная и главная складки; полулунная складка в нижней части расширина, располагается на право-спинной стороне; главная складка длинная (почти 0.75 от длины последнего оборота), тянется несколько под]
FIG. 1. *Micropontica annae* sp. nov. Holotype.

A - shell; B - left side of last whorl; C - plate of clausilium; D, E - closing apparatus (part of the last whorl wall and clausilium are removed), il - inferior lamella; l - lunella; pc - palatal crest; pp - principal plica; sl - superior lamella; scl - subcolumellar lamella; spl - spiral lamella.

РИС. 1. *Micropontica annae* sp. nov. Голотип.

A - общий вид раковины; B - левая сторона последнего оборота; C - лопасть клузилия; D, E - замыкательный аппарат (часть стенки последнего оборота и клузилий удалены). il - нижняя пластинка; l - полулунная складка; pc - палатальный гребень; pp - главная складка; sl - верхняя пластинка; scl - субколумеллярная пластинка; spl - спиральная пластинка.
Description. Shell turret-shaped, with large widely spaced ribs (24-25 on last whorl), intervals between them smooth, opaque, mat, brownish-corneous. Embryonic whorls (about 2.5) smooth. Definitive whorls 7-8.25. Last whorl with large leaf-shaped ribs behind the aperture margin; an occipit flat (Fig. 1 A, B). There is a distinct palatal depression on the periphery of last whorl behind aperture. Aperture small, free, pear-shaped, with more or less wide and shallow sinus; margins thin, a little reflexed. Superior lamella high, continuous with spiral lamella through a light curvature, reaching aperture margin. Spiral lamella below superior lamella, starts on dextral side, curved in the opposite direction to the shell axis. Inferior lamella low, steeply ascending, weakly visible in direct view of aperture; closely approaches spiral lamella, starts on right side, lower end weakly curved (Fig. 1 D). Lamella sub-columellaris high but not visible in frontal view. Lunella well developed, expanded at base, located on right-dorsal side. Principal plica long (almost 0.75 of last whorl in length), running a little at some angle, approaches the suture and practically reaches the margin of aperture, upper end of this lamella lies deeper than lunella. Palatal wall of last whorl with strong longitudinal palatal crest, starting on left-dorsal side and clearly seen at direct view of aperture (Fig. 1 A, E). Lobe of clausilium rather broad, strongly curved, with thickened distal end (Fig. 1 C).

Dimensions: height 8.7-10.8 mm; diameter 2.5-2.7 mm; height of aperture 1.9-2 mm; width of aperture 1.5-1.6 mm. Dimensions of holotype: 10.3, 2.5, 2.1, 1.7 mm, respectively.

Reproductive anatomy. Vas deferens smoothly passing in fusiform penis (Fig. 2A). Penis internally with longitudinal folds (two strong and a series of smaller, irregular), circular pilaster and sphincter on top (Fig. 2B). Strong retractor attached to vagina. Besides, vagina and distal male ducts intertwined with muscular fibres. Free oviduct somewhat longer than vagina. Spermathecal reservoir reaching albumen gland, diverticle not convoluted, extended at end, shorter than reservoir duct.

Ecology. Ovoviviparous species. It inhabits calcareous rocks of alpestrine and alpine zones (at 1800-2000 m above sea level), frequently along with M. retowskii.

Ethymology. The species was named in honour of the author.

FIG. 2. Reproductive tract of *Micropontica annae* sp. nov. Paratype. A - general view of reproductive tract; B - interior of penis; ag - albumen gland; dst - diverticule of spermatheca; fo - free oviduct; hd - hermaphroditic duct; p - penis; rs - reservoir of spermatheca; sod - spermoviduct; ss - spermathecal stalk; va - vagina; vd - vas deferens.

РНС. 2. Половая система *Micropontica annae* sp. nov. Паратип. A - общий вид половой системы; B - внутреннее строение пениса; ag - белковая железа; dst - дивертикул семяприемника; fo - яйцевод; hd - гермафродитный проток; p - пенис; rs - резервуар семяприемника; sod - спермовидукт; ss - проток семяприемника; va - вагина; vd - семяпровод.
Table 1. Comparison of conchological characters of species of the genus *Micropontica*

<table>
<thead>
<tr>
<th>Features</th>
<th><em>M. closta</em></th>
<th><em>M. circassica</em></th>
<th><em>M. annae</em></th>
<th><em>M. retowskii</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>Shell height, mm</td>
<td>9.0-12.5</td>
<td>11.0-14.0</td>
<td>8.7-10.8</td>
<td>9.0-13.0</td>
</tr>
<tr>
<td>Postembryonic sculpture</td>
<td>Radially ribbed (distinct)</td>
<td>Radially ribbed (distinct or fine) or irregular striated</td>
<td>Radially ribbed (distinct)</td>
<td>Radially striated (fine, irregular)</td>
</tr>
<tr>
<td>Superior lamella</td>
<td>Low</td>
<td>Low</td>
<td>High</td>
<td>Low or rudimentary</td>
</tr>
<tr>
<td>Spiral lamella</td>
<td>Starts on ventral side</td>
<td>Starts on right-ventral side</td>
<td>Starts on right side</td>
<td>Rudimentary or absent</td>
</tr>
<tr>
<td>Lamella subcolumnellaris</td>
<td>Low, almost not visible in oblique position</td>
<td>Low, almost not visible in oblique position</td>
<td>High, distinctly visible in oblique position</td>
<td>High, distinctly visible in oblique position</td>
</tr>
<tr>
<td>Lunella</td>
<td>Strong, located on right side</td>
<td>Rudimentary, located on right-dorsal side</td>
<td>Strong, located on right-dorsal side</td>
<td>Strong, located on left-dorsal side</td>
</tr>
<tr>
<td>Principal plica</td>
<td>0.5 of last whorl</td>
<td>0.33 of last whorl</td>
<td>Almost 0.75 of last whorl</td>
<td>Absent</td>
</tr>
<tr>
<td>Palatal plica</td>
<td>Strong, its end visible through aperture</td>
<td>Absent</td>
<td>Absent</td>
<td>Absent</td>
</tr>
<tr>
<td>Palatal callus/crest</td>
<td>Absent</td>
<td>Rudimentary callus or absent</td>
<td>Crest</td>
<td>Rudimentary callus or absent</td>
</tr>
<tr>
<td>Basal keel and groove</td>
<td>Absent</td>
<td>Absent</td>
<td>Absent</td>
<td>Distinct</td>
</tr>
</tbody>
</table>

Remarks. Conchologically *M. annae* differs from all other species of the genus by a smaller size, high superior lamella, deep position of top end of spiral lamella, long principal plica and presence of palatal crest. Besides, it differs from other species of the subgenus *Micropontica* s. str. by the absence of palatal plica, less deep position of lunella (from *M. closta*) and strong lunella (from *M. circassica*) (Table 1).

Acknowledgements

The work was supported by the Competitive Centre for Basic Natural Sciences (CCBNS) at the Ministry of Education of the Russian Federation; grant № E 00-6.0-230.

References


*Micropontica annae* sp. nov. — новый вид клаузилид (Gastropoda, Pulmonata) с Северо-Западного Кавказа

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РЕЗЮМЕ. Новый вид *Micropontica annae* Kijashko sp. nov. относящийся к подроду *Micropontica* s. str. описывается по экземплярам, добытым в высоко-горной части Северо-Западного Кавказа.