

TWO NEW SPECIES FROM THE FAMILY *SUCCINEIDAE* (BECK, 1837) (*GASTROPODA: PULMONATA*) TO THE FAUNA OF BULGARIA

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Abstract: Two species of land snails to the Bulgarian fauna are recorded: *Oxyloma sarsii* (Esmark, 1886) and *Oxyloma dunkeri* (L. Pfeiffer, 1865) (*Gastropoda: Pulmonata*). One specimen from each of the species was collected on the right bank of the estuary of Yantra River, close to the Danube River and north-west from village of Krivina (GPS: N 43° 38' 22.2" EO 25° 34' 14.3"; UTM: LJ83). A morphological and anatomical description of the found specimens are presented.

Key Words: *Succineidae*, *Oxyloma*, Bulgaria.

INTRODUCTION

The Bulgarian gastropod family *Succineidae* (Beck, 1837) is still not well studied. There are three species found in Bulgaria till now: *Succinea putris* (Linnaeus, 1758), *Succinea oblonga* Draparnaud, 1801 and *Oxyloma elegans* (Risso, 1826). The fourth species always included in the gastropod check-lists for Bulgaria was *Oxyloma sarsii* (Esmark, 1886) which occurrence in the country was supposed but not confirmed (DAMJANOV & LIHAREV, 1975; DEDOV, 1998; HUBENOV, 2005). There was no any information from Bulgaria about the occurrence of *Oxyloma dunkeri* (L. Pfeiffer, 1865), considered by DAMJANOV & LIHAREV (1975) as a morphological form of *O. elegans* but in later studies it was separated as a distinct species (STAROBOGATOV et al., 2004).

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MATERIAL AND METHODS

On 03.07.2006 two specimens of *Succineidae* gastropods were collected by hand on the right bank of the estuary of Yantra River, close to the Danube River and north-west from village of Krivina (GPS: N 43° 38' 22.2'' EO 25° 34' 14.3''; UTM: LJ83). The habitat was a *Salix* spp. river flood forest with some bush species on muddy banks. The gastropods were fixed in 75% ethanol and were dissected under a binocular microscope in the laboratory. The species were determined according to the shell morphology and the genital system structure (DAMJANOV & LIHAREV, 1975; KERNEY et al., 1983; STAROBOGATOV et al., 2004).

RESULTS AND DISCUSSION

According to the anatomical and morphological characteristics one of the two specimens of *Succineidae* collected was *Oxyloma sarsii* and the other – *O. dunkeri*. These species are newly recorded to the fauna of Bulgaria.

1. Description of *Oxyloma sarsii* found:

Morphology (Fig. 1): The sole and the skin of the collected specimen of *O. sarsii* were lighter, and yellow-gray compared to the dark gray coloration of *O. elegans* and to the light yellow body of the species with the closely similar shell *Succinea putris*. The shell of *O. sarsii* was egg-shaped with three whorls, the last of them was highly protruded. The shell measurements of the specimen collected were: shell height 17.7 mm, shell width 10.4 mm, aperture height 12.4 mm, and aperture width 8.5 mm.

Anatomy (Fig. 2): The genital system structure of *O. sarsii* was well distinctive from this one of *O. elegans* and *O. dunkeri*. The penis was longer, and broader at its apical part. The vagina was longer and S-shaped. The *bursa copulatrix* was highly situated.

2. Description of *Oxyloma dunkeri* found:

Morphology (Fig. 1): The pigmentation of the body was the same as this one of *O. elegans* – dark grey and blackish but the shell had very flat whorls, thick walls and well distinctive growth lines. The first whorl was exclusively small and hardly visible from a front view. Shell measurements: shell height 19.0 mm, shell width 8.3 mm, aperture height 14.5 mm, and aperture width 7.3 mm

Anatomy (Fig. 2): The genital system is similar to this one of *O. elegans*. The differences between them we found were: broad vagina, about two times broader than the penis, and a thick and long penis retractor muscle, longer than the penis.

CONCLUSIONS

As a conclusion we suggest an identification key to the Bulgarian species of the genus *Oxyloma* Westerlund 1837:

1 (2). The shell is ovoid and with very protruded last whorl in a profile view. The penis is long and broad at its apical part. The vagina is long and S-shaped
*Oxyloma sarsii*.

2. The shell is elongated with flat whorls. The penis and the vagina are short.

3. (4). The shell is relatively smooth, moderately elongated with not very flat whorls, which sometimes are a little protruded in a profile view. The first whorl is not very small and it is well visible. The vagina is a little bit broader than the penis. The penis retractor muscle is thin and almost equal to the length of the penis.
*Oxyloma elegans*.

4. The shell is extremely elongated with very flat whorls and well distinctive growth lines. The first whorl is small and hardly visible. The vagina is about two times broader than the penis. The penis retractor muscle is very thick, wide and it is longer than the penis.
*Oxyloma dunkeri*.

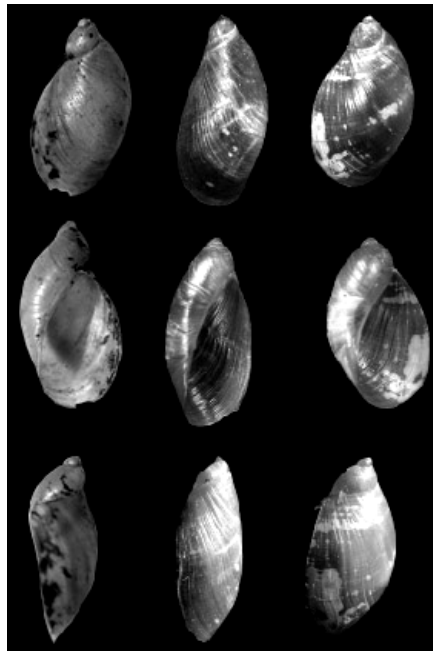


Figure 1. Shells of *Oxyloma elegans* (on the left) – specimen from the vicinities of Stara Zagora Town (Upper Thracian Valley), *Oxyloma dunkeri* (in the middle) and *Oxyloma sarsii* (on the right) – specimens from the estuary of Yantra River (Danube River Valley).

Фигура 1. Черупки на *Охулома elegans* (вляво) – екземпляри от околностите на град Стара Загора (Горнотракийска низина), *Охулома dunkeri* (в средата) и *Охулома sarsii* (в дясно) – екземпляри от устието на река Янтра (Дунавска равнина).

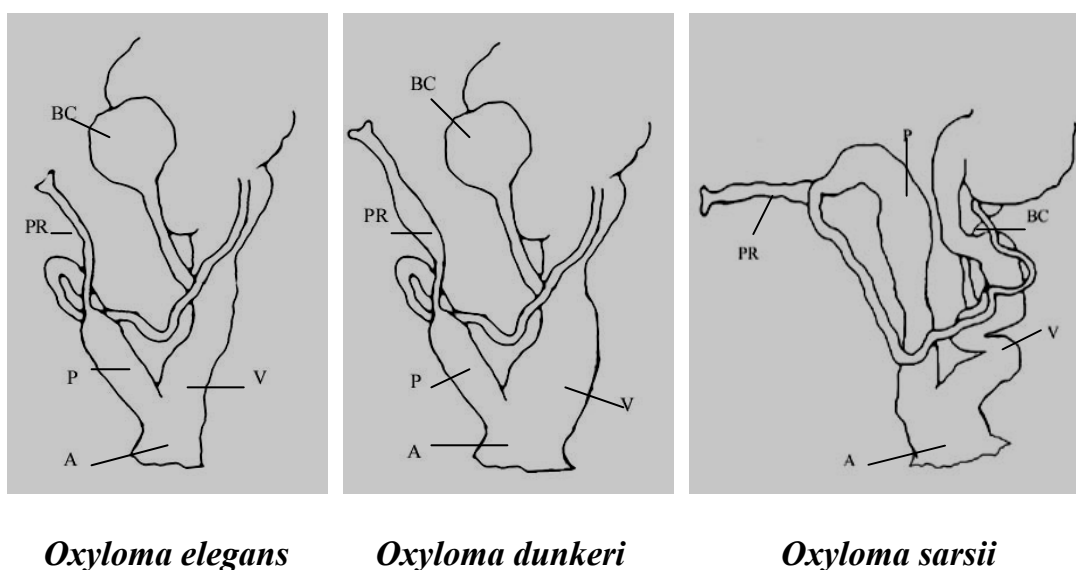


Figure 2. Genital systems of the Bulgarian species from the genus *Oxyloma* Westerlund 1885: *Oxyloma elegans* – specimen from the vicinities of Stara Zagora Town (Upper Thracian Valley), *Oxyloma dunkeri* and *Oxyloma sarsii* – specimens from the estuary of Yantra River (Danube River Valley). Legend: A – atrium, V – vagina, BC – bursa copulatrix, P – penis, PR – penis retractor muscle.

Фигура 2. Полови системи на българските видове от род *Oxyloma* Westerlund 1885: *Oxyloma elegans* – екземпляр от околностите на град Стара Загора (Горнотракийска низина), *Oxyloma dunkeri* и *Oxyloma sarsii* – екземпляри от устието на река Янтра (Дунавска равнина). Легенда: А – атриум, V – вагина, BC – семенприемник, P – пенис, PR – мускул ретрактор на пениса.

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**ДВА НОВИ ВИДА ОТ СЕМЕЙСТВО *SUCCINEIDAE*
(BECK, 1837) (*GASTROPODA: PULMONATA*)
ЗА ФАУНАТА НА БЪЛГАРИЯ**

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(резюме)

Съобщават се два нови вида гастроподи за фауната на България – *Oxyloma sarsii* (Esmark, 1886) и *Oxyloma dunkeri* (L. Pfeiffer, 1865) (*Gastropoda: Pulmonata*). Събрани са по един екземпляр от вид на десния бряг на устието на река Янтра, северозападно от село Кривина, Северна България (GPS: N 43° 38' 22.2'' E O 25° 34' 14.3''; UTM: LJ83). Представено е кратко морфологично и анатомично описание на регистрираните индивиди и е съпоставено с това на широко разпространения в България вид *Oxyloma elegans*. Предложен е ключ за определяне на видовете от род *Oxyloma* Westerlund 1885 в България.

