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NEW RECORDS OF RECENT BRACHIOPODA FROM THE EASTERN PART OF THE NORTHERN ADRIATIC SEA

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Data for four Brachiopoda species found in three new locations are cited: in a sediment sample from the sea cave Medova buža at a depth of one meter (*Novocrania turbinata, Argyrotheca cuneata* and *Joania cordata*), on an amphora fragment in Velo kolo at a depth of 25 m (*Argyrotheca cuneata* and *Megathiris detruncata*) and from Rab Island and in Unije channel at the depth of 52 m (*Joania cordata*).

Key words: Brachiopoda, Rab Island, Unije channel, eastern part of the northern Adriatic Sea

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Navode se podaci za četiri vrste ramenonožaca nađenih na tri nova nalazišta: u uzorku sedimenta iz morske špilje Medova buža s jednog metra dubine (*Novocrania turbinata, Argyrotheca cuneata* i *Joania cordata*), s obraštaja fragmenta amfore u Velom kolu na dubini od 25 m (*Argyrotheca cuneata* i *Megathiris detruncata*) otok Rab i u Unijskom kanalu s dubine od 52 m (*Joania cordata*).

Ključne riječi: Brachiopoda, otok Rab, Unijski kanal, istočni dio sjevernog Jadrana

For the eastern part of the northern Adriatic Sea, eight brachiopod species are known: *Argyrotheca cistellula* (Searles-Wood, 1841) and *A. cuneata* (Risso, 1826) at five sites, *Gwynia capsula* (Jeffreys, 1859) at two sites, *Joania cordata* (Risso, 1826) at three sites, *Megathiris detruncata* (Gmelin, 1790) at one site, *Megerlia truncata* (Linnaeus, 1767) at one site, *Novocrania turbinata* (Poli, 1795) at two sites, *Tethyrhynchia mediterranea* Logan, 1994 at two sites (SIMON & WILLEMS, 1999; LOGAN, 2003).

In the course of revision in the collection of Natural History Museum Rijeka specimens of four species were found: *Novocrania turbinata* (Poli, 1795), *Argyrotheca cuneata* (Risso, 1826), *Joania cordata* (Risso, 1826), and *Megathiris detruncata* (Gmelin, 1790). They represent new findings for the areas of Rab Island and Unije channel.

During speleological research in the sea cave Medova buža (the island of Rab, 44°40'47.6"N, 14°44'45.8"E) in October 2010, speleologist Petra Kovač-Konrad collected sediment from the second hall at the depth of one meter. The sifted sediment consisted of gravel with many drifted-in fragments and whole specimens of exclusively modern species of marine fauna. The results of faunal analysis of this sediment was published in KOVAČ-KONRAD *et al.* (2012). Particular attention was paid to the Brachiopoda described below. They were all entered in the inventory of the museum.

The species *Novocrania turbinata* (Fig. 1) belongs to the family Craniidae. Eleven dorsal valves sized 5–10 mm (Inv. No. 13325) were collected and over twenty frag-

Fig. 1. *Novocrania turbinata* (Medova buža): (A) exterior of dorsal valve, (B,C) interior of dorsal valves (Photo: B. Kružić).

ments were recorded. The interiors of dorsal valves in some specimens indicate damaged muscular scars. However, with most specimens anterior adductor muscle scars have prominent ridges, and brachial retractor scars have less distinct scars, not separated from adductors, which are similar to illustrations in LOGAN & LONG (2001, Fig. 8.1).

The species *Argyrotheca cuneata* (Fig. 2) belongs to the family Megathirididae. In the Medova buža sediment, 5 specimens and 2 valves sized 2.5–3.5 mm in width (Inv. No. 13324) were found. Besides the Medova buža findings, two more specimens sized 2.0 and 2.5 mm (Inv. No. 09704) were collected by I. Legac during SCUBA diving in August 1969, from fronds of the algae *Peyssonnelia* sp. attached to an amphora fragment. The findings of these specimens are at the location Velo kolo (Rb-52, at the depth of 25 m, 44°50'22.3''N, 14°40'56.2''E) in the area of the Sorinj peninsula (island of Rab).

In the sediment sample from Medova buža the species *Joania cordata* (Fig. 3) (Megathirididae) was also found. Ten specimens were separated and one valve sized 1.8–3.5 mm in length and width, respectively (Inv. No. 13323). While exploring the Unije channel by the research vessel *Bios* of the Institute of Oceanography and Fisheries, Split, *J. cordata* was found on 24 July 1971 at the station 44/1 (44°34'09''N, 14°21'06''E). M. Legac separated two specimens sized 3 mm (Inv. No. 09705) from sand sediment rich in fragments of the coralline alga *Lithothamnion* sp., sifted from collection taken by Petersen grab 0.2 m².

Fig. 2. *Argyrotheca cuneata* (Medova buža) (Photo: B. Kružić).

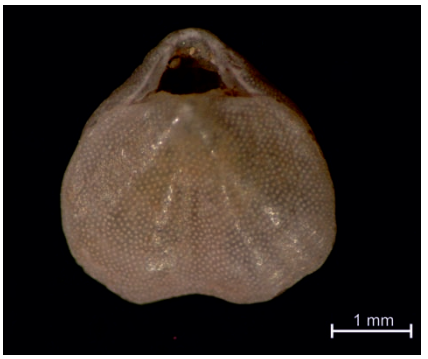

Fig. 3. *Joania cordata* (Medova buža) (Photo: B. Kružić).

Fig. 4. *Megathiris detruncata* (Rb-52, Velo kolo) (Photo: B. Kružić).

cies of the superfamily Megathiridoidea ALVAREZ *et al*. (2008) have described the new genus *Joania*, with *J. cordata* as type species. LOGAN (1979, 2003) previously recorded it as *Argyrotheca cordata* (Risso, 1826).

The species *Megathiris detruncata* (Fig. 4) belongs to the same family. Two specimens were collected by I. Legac together with *A. cuneata* at the locality Velo kolo. The size of the living specimen attached to the algae *Peyssonnelia* sp. is 3.8 mm in length and 5.0 mm in width, whilst the dead shell is 2 mm in length and 2.8 mm in width (Inv. No. 13322).

According to LOGAN (2003) 14 species of Brachiopoda have been recorded in the Mediterranean basin and 11 in the Adriatic Sea. All species recorded in this paper are known for the Mediterranean and eastern North Atlantic (LOGAN *et al*., 2004).

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REFERENCES

ALVAREZ, F., C. HOWARD, C. BRUNTON & S. L. LONG, 2008: Loop ultrastructure and development in Recent Megathiridoidea, with description of a new genus, *Joania* (type species *Terebratula cordata* Risso, 1826). Earth and Environmental Science Transactions of the Royal Society of Edinburgh **98**, 391–403.

KOVAČ-KONRAD, P., BUZJAK, N., KLJAKOVIĆ-GAŠPIĆ, F. & LEGAC, M., 2012: Speleoronilačka i biospeleološka istraživanja Medove buže na otoku Rabu. Rapski zbornik II, Sveučilište u Zadru, Grad Rab i Ogranak Matice hrvatske Rab, Rab (in press).

LOGAN, A., 1979: The Recent Brachiopoda of the Mediterranean Sea. Bull. Inst. océanogr., Monaco **72** (1434), 1–112.

LOGAN, A., 2003: Marine fauna of the Mljet National Park (Adriatic Sea, Croatia), 3. Brachiopoda. Nat. Croat. **12** (4), 233–243.

LOGAN, A. & S. L. LONG, 2001: Shell morphology and geographical distribution of *Neocrania* (Brachiopoda, Recent) in the eastern North Atlantic and Mediterranean Sea. In: BRUNTON C. H. C. *et al*. (eds) Brachiopods Past and Present Systematics Association Spec. Vol., Ser. 63, 71–79.

LOGAN, A., C. N. BIANCHI, C. MORRI & H. ZIBROWIUS, 2004: The present-day Mediterranean brachiopod fauna: diversity, life habits, biogeography and paleobiogeography. Scientia Marina **68** (Suppl. 1), 163–170.

SIMON, E. & G. WILLEMS, 1999: *Gwynia capsula* (Jeffreys, 1859) and other Recent brachiopods from submarine caves in Croatia. Bulletin de L'Insitut Royal des Sciencies Naturelles de Belgique, Biologie **69**, 15–21.

SAŽETAK

Novi nalazi recentnih ramenonožaca (Brachiopoda) u istočnom dijelu sjevernog Jadrana

M. Legac

U podmorju otoka Raba iz uzorka sedimenta u Medovoj buži izdvojeni su ramenonošci *Novocrania turbinata*, *Argyrotheca cuneata* i *Joania cordata*. Primjerci *A. cuneata* i *Megathiris detruncata* sakupljeni su s alge *Peyssonnelia* sp. pričvršćene na fragmentu amfore nađenom u području Velo kolo. Na postaji 44/1 u Unijskom kanalu, iz prosijanog sedimenta pijeska s ulomcima alge *Lithothamnion* sp. izdvojeni su primjerci *J. cordata*. Četiri sakupljene vrste ramenonožaca, pohranjenih u muzejskoj zbirci, predstavljaju nove nalaze u području istočnog dijela sjevernog Jadrana. U Jadranu je poznato 11 vrsta ramenonožaca, a u Sredozemnom moru 14 vrsta. Vrste navedene u ovom radu poznate su za Sredozemno more i sjevernoistočni Atlantik.