

THREE BIVALVE SPECIES NEW TO THE TURKISH LEVANTINE SEA

Serhat Albayrak^{*}, Senem Çağlar
Istanbul University, Faculty of Science, Department of Biology 34134
Vezneciler – Istanbul TURKEY

***Corresponding author:** Serhat Albayrak (E-mail: serhatal@istanbul.edu.tr)

(Received:30.10.2009 Accepted:31.12.2009)

Abstract

????

Keywords: ??

***Corresponding author:** ??

Introduction

Studies on the invertebrate fauna of the Turkish seas started in the late 19th century and centred first in the Marmara Sea and later in the Aegean Sea. Until recently, such faunistic studies were absent in the Turkish Levantine Sea for a long time when interest on the malacofauna revived, triggered by an intensive interest in alien species. Despite the plethora of studies on alien mollusca, native molluscs of the Turkish Levantine coast have been investigated by few researchers (Ünsal 1981; Demir 2003; Bodur et al. 2004; Çevik and Sarıhan 2004). An inventory of the native molluscan throughout the Turkish Levantine Sea is therefore far from complete.

This study was carried out in Iskenderun Bay aimed at making an inventory of the bivalve fauna of NE Levantine Sea and its distribution under a variety of environmental variables (temperature, salinity and dissolved oxygen of sea water, depth, and mud percentage of the sediment). Benthic material was collected in November 2005 from 24 stations (Fig. 1) by means of dredge, rinsed in 1 mm mesh-sieves, bivalve specimens were picked up and preserved in 4% formalin-sea water solution. Identification to species level of the material revealed the presence of three bivalve species new to the Turkish Levantine Sea. These species in question are Mediterranean species, known from the Aegean Sea (Zenetos et al., 2005):

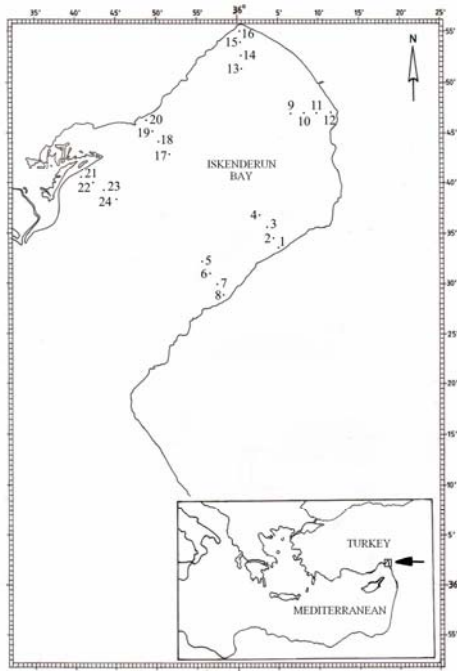


Figure 1: The map showing sampling stations in the Iskenderun Bay

Nucula nitidosa Winckworth, 1930

Found in stations 2 (2 ind.), 3 (22 ind.), 4 (9 ind.), 5 (28 ind.), 6 (61 ind.), 7 (11 ind.), 9 (71 ind.), 10 (7 ind.), 13 (6 ind.), 14 (7 ind.), 17 (10 ind.), 18 (46 ind.), 19 (8 ind.), 20 (3 ind.), 22 (1 ind.) and 24 (4 ind.); between 20.4-22 °C temperature; 38-39.3 ‰ salinity; 5.8-8.6 mg/l dO; 2-30 m depth; 1.8-97.4 % mud.

Acanthocardia echinata (Linnaeus, 1758)

Found in stations 9 (14 ind.) and 11 (2 ind.); between 21-21.8 °C temperature; 38.9-39.3 ‰ salinity; 5.9-6.1 mg/l dO; 10-30 m depth; 5.1-78.8 % mud.

Abra longicallus (Scacchi, 1835)

Found in station 17 (1 ind.); at 21.1 °C temperature; 38.8 ‰ salinity; 6.2 mg/l dO; 30 m depth; 95.4 % mud.



Figure 2: *Nucula nitidosa* a) Left valve b) Right valve

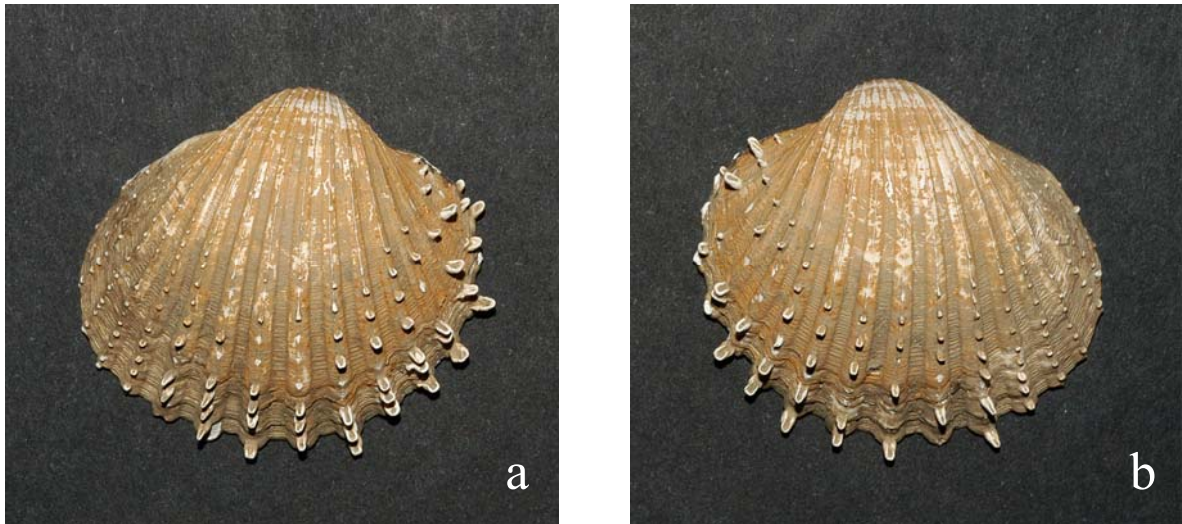


Figure 3. *Acanthocardia echinata* a) Left valve b) Right valve

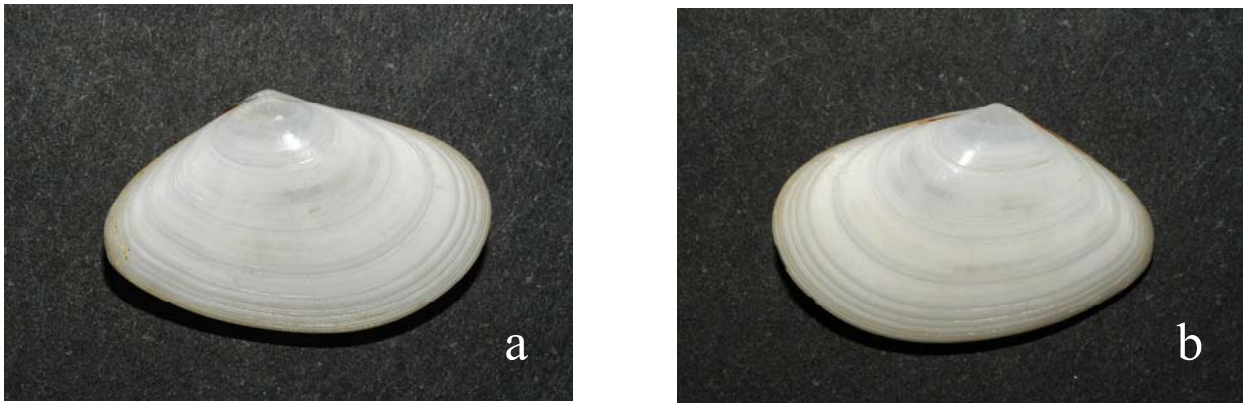


Figure 4: *Abra longicallus* a) Left valve b) Right valve

N. nitidosa has been reported from the Marmara Sea by Demir (1952; 2003), from the Turkish Aegean Sea by Albayrak (2002), Demir (2003), Çınar et al. (2006), Doğan et al. (2007); *A. echinata* is known from the Turkish Black Sea (Öztürk et al., 2004), from the Marmara Sea [Balkıs (1992), Albayrak et al. (2004)], from the Aegean Sea (Geldiay and Kocataş, 1972); *A. longicallus* is known only from the Marmara Sea by Ostroumoff (1896). With this study, we present a first range expansion of two species to the Turkish Levantine Sea. Of

particular interest appears to be the occurrence of *A. longicallus* which was never found again after the citation of Ostroumoff (1896). However, our results confirm its presence in the Turkish seas thus adding the species to the list of Turkish malacofauna.

To date, a total of 198 bivalve species, of which 171 are native and 27 alien, were known from the Turkish Levantine coasts. This figure is increased to 201 by adding the three native species reported in this study. The fact that new finds were discovered from Iskenderun Bay,

only a small part of Turkish Levantine Sea, indicates the presence of many more species that remain to be discovered in the course of new studies to be conducted throughout the Levantine Sea.

Acknowledgements

This work was supported by the Research Fund of the İstanbul University, project number: 410/13092005.

References

- Albayrak S. (2002) Bivalvia fauna of the Imbros Island (NE Aegean Sea). *Istanbul University Faculty of Science The Journal of Biology*, 65: 1-24.
- Albayrak S., Balkıs H. and Balkıs N. (2004) Bivalvia (Mollusca) fauna of the Sea of Marmara. *Acta Adriatica*, 45 (1): 9-26.
- Balkıs H. (1992) Marmara Adası littoralinin makrobentosu üzerine bir ön araştırma. *Bülten*, 9: 309-327.
- Bodur T., Kaya Y. and Gökoğlu M. (2004) Antalya Körfezi'nde, Nuh'un Gemisi (*Arca noae* L. 1758)'nin dağılımı ve bazı biometrik ölçümleri. *Türk Sucul Yaşam Dergisi*, 2: 243-246.
- Çevik C. and Sarıhan E. (2004) İskenderun Körfezi molluska faunası. *Türk Sucul Yaşam Dergisi*, 2: 93-97.
- Çınar M.E., Katağan T., Öztürk B., Egemen Ö., Ergen Z., Kocataş A., Önen M., Kırkım F., Bakır K., Kurt G., Dağlı E., Kaymakçı A., Açık S., Doğan A. and Özcan T. (2006) Temporal changes of soft-bottom zoobenthic communities in and around Alsancak Harbor (Izmir Bay, Aegean Sea), with special attention to the autecology of exotic species. *Marine Ecology*, 27: 229-246.
- Demir M. (1952) *Boğaz ve adalar sahillerinin omurgasız dip hayvanları*. İst. Üniv. Fen Fak. Hidrobioloji Araş. Enst. Yayın. 3. Osman Yalçın Matbaası, İstanbul.
- Demir M. (2003) Shells of Mollusca collected from the seas of Turkey. *Turkish Journal of Zoology*, 27: 101-140.
- Doğan A., Önen M. and Öztürk B. (2007) Ildır Körfezi (İzmir-Çeşme) Bivalvia (Mollusca) faunası. *Türk Sucul Yaşam Dergisi*, *Ulusal Su Günleri 2007 Sempozyum Özel Sayısı*: 27-35.
- Geldiay R. and Kocataş A. (1972) İzmir Körfezi'nin benthosu üzerine preliminier bir araştırma. *Ege Üniversitesi Fen Fakültesi Monografiler Serisi*, 12: 1-34.
- Ostroumoff A. (1896) Comptes rendus des dragages et du plancton de l'expédition de "Selanik". *Bull. Acad. Sci. St. Petersb.*, 5 (5): 33-92.
- Öztürk B., Çulha M. and Ürkmez D. (2004) Sinop yarımadası ve civarının Bivalvia faunası. *Türk Sucul Yaşam Dergisi*, 2: 71-80.
- Ünsal S. (1981) Akkuyu Körfezi kayalık sahillerinde ekolojik ve bentik araştırmalar. Doçentlik Tezi. *Ege Üniv. Deniz Bilimleri ve Teknolojisi Enstitüsü*.
- Zenetos A., Vardala-Theodorou E. and Alexandrakis C. (2005) Update of the marine Bivalvia Mollusca check list in Greek waters. *Journal of the Marine Biological Association U.K.*, 85: 993-998.