

FIRST RECORDS OF BLUE CRAB *CALLINECTES SAPIDUS* (RATHBUN 1869) ON THE NORTH-WESTERN BLACK SEA SHELF¹

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Recently, there have been regular reports and notes of blue crab *C. sapidus* (Rathbun, 1896) findings in different regions of the Black Sea and Azov Sea. There is an assumption that this species will be common for the Black Sea benthic fauna. There are already more than fifteen previously published reported records of the blue crab from the Black Sea and Azov Sea. In 2019 three individuals of blue crab (one male and two female) were captured by Khizhnyak dredge and bottom beam trawls in the north-western part of the Black Sea (Ukrainian part). This is the first record for the *C. sapidus* from this region.

Key words: blue crab, *Callinectes sapidus*, north-western part of the Black Sea.

Introduction

The Blue Crab *Callinectes sapidus* (Rathbun, 1896) (Portunidae), native to the Atlantic coast of the Americas, has been introduced to the North Sea, the Mediterranean Sea and to Japanese coastal waters, establishing proliferating populations. The Mediterranean population, once established, expanded its range to the Black Sea and the Sea of Azov, as expected (Petrescu, Papadopol, and Nicolaev 2000; Streftaris, and Zenetos 2006; Petrescu et al. 2010; Dulcic, Dragicevic, and Lipej 2010; Kapiris, Anastasopoulou, and Kouraklis 2011; Pashkov, Reshetnikov, and Bondarev 2011; Nehring 2011; Yağlıoğlu, Turan, and Öğreden 2014; Ak, Haşimoğlu, and Bayram 2015; Aydın 2017). Despite significant hydrological and ecological differences between the two latter seas and the Mediterranean, an assumption of the possibility of *C. sapidus* becoming a common member of the benthic communities of the Black Sea and the Sea of Azov was coined decades ago (Monin 1984; Zaitsev 1998). To date, there are approximately fifteen records of occurrences of *C. sapidus* in the Black Sea (including brackish-water areas such as the Dnieper-Bug estuary – to unconfirmed reports <https://www.unian.ua/society/822767-u-dnipro->

[buzkomu-limani-vilovili-piv-nichno-amerikanskogo-kraba-foto.html](#)) and the Sea of Azov (Fig. 1).

Here, we report the first findings of *C. sapidus* on the north-western Black Sea shelf. One male *C. sapidus* individual was collected in mid-August 2019 in the coastal area of Zhebriyanska Bay at 8.0–10.0 m depth. A female individual of this species was detected within rapa whelk (*R. venosa*) catches in Zhebriyanska Bay at 8.0 m depth on the 24th of October 2019. One more female individual was caught at Odesa Bank at 6.5–7.0 m depth on the 8th of October 2019 (refer to Fig. 1 for precise collection locations and to Fig. 2 for images of individuals collected). All three individuals were found alive in the Khizhnyak dredge (Zhebriyanska Bay) and bottom beam trawls (Odesskaya Banka) used for rapa whelk harvesting.

These first-time findings of *C. sapidus* on the north-western Black Sea shelf are in line with earlier assumptions on the hydrological characteristics of this area: relatively low salinity (compared to the Mediterranean) and winter temperatures; an appropriate environment for *C. sapidus* proliferation (Zaitsev 1998; Monin 1984; Pashkov, Reshetnikov, and Bondarev 2011). An increased number of *C. sapidus* findings in the Black Sea region during the last decade (see dates at Fig. 1) suggests the species to be naturalised in the area and widespread in the coastal waters

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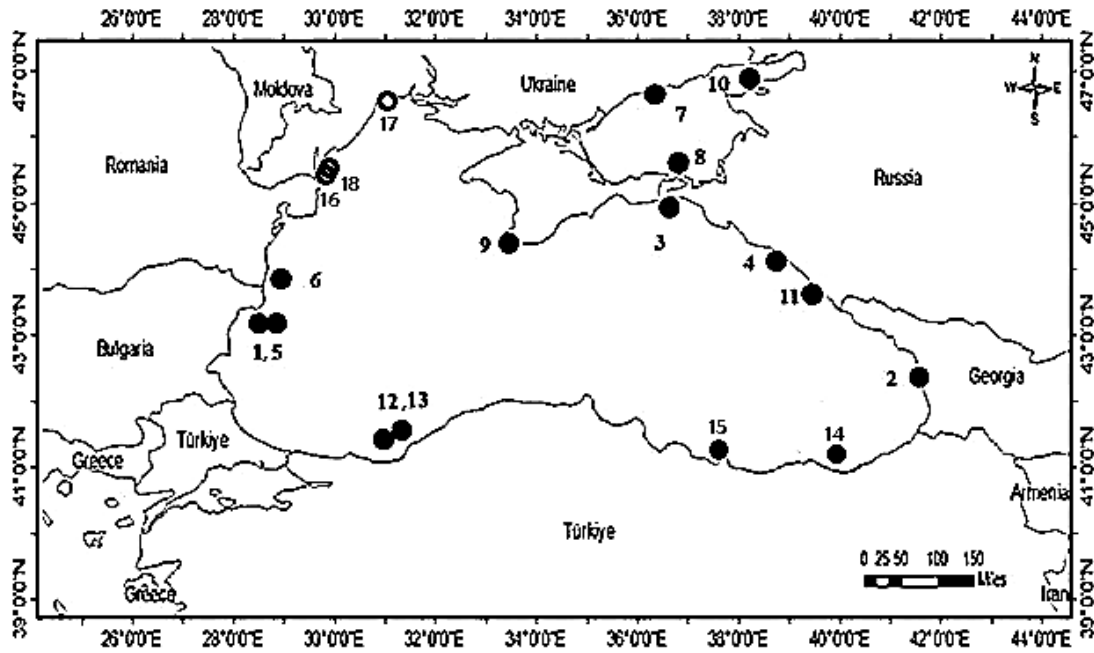


Fig. 1. Occurrences of the *C. sapidus* in the Black Sea

Note: 1 – Bulgurkov (1968); 2 – Shaverdashvili, and Ninua (1975); 3 and 5 – Zaitsev (1998); 4 – Monin (1984); 6 – Bashtannyi, Webster, and Raaymakers (2002); 7, 8 and 10 – Diripasko, Izergin, and Koshkaldal (2009); 9 – Khvorov (2010); 11 – Pashkov, Reshetnikov, and Bondarev (2011); 12 and 13 – Yağlıoğlu, Turan, and Öğreden (2014); 14 – Ak, Haşimoğlu, and Bayram (2015); 15 – Aydın (2017); 16, 18 (Zhebryanskaya bay) and 17 (Odesskaya Banka) – This study

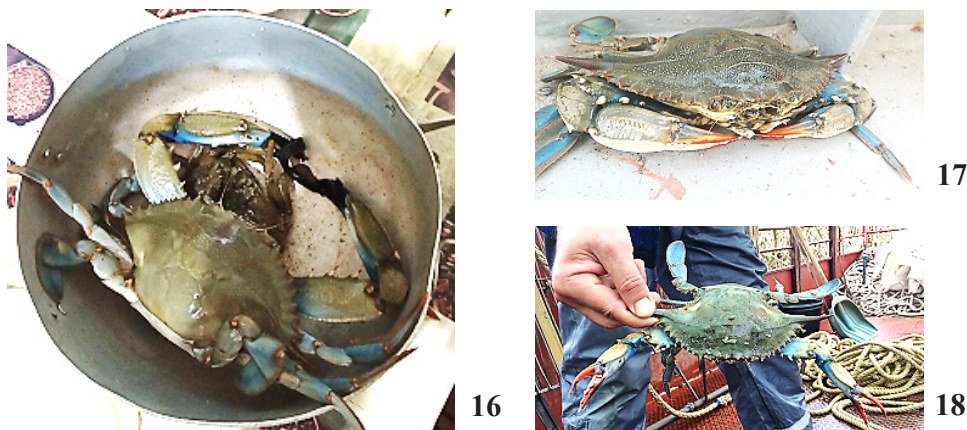


Fig. 2. The blue crab *C. sapidus* from bottom beam trawl catches in coastal region in the north-western part of the Black Sea in 2019

Note: 16, 18 from Zhebryanskaya bay and 17 from Odesskaya Banka on Figure 1

of the Black Sea. However, the present (still relatively low) number of records contradicts a hypothesis that *C. sapidus* is important element of corresponding benthic communities. Nevertheless, the reported findings

support a long-established trend of the establishment of Mediterranean species in the Black Sea (Puzanov 1965; Zaitsev 1998; Tokarev, and Shulman 2007; Snigirev, Goncharov, and Sylantyev 2012).

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ПЕРШІ ЗНАХІДКИ БЛАКИТНОГО КРАБА *CALLINECTES SAPIDUS* (RATHBUN 1896) НА ПІВНІЧНО-ЗАХІДНОМУ ШЕЛЬФІ ЧОРНОГО МОРЯ

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Останнім часом регулярно з'являються повідомлення про знахідки блакитного краба *Callinectes sapidus* (Rathbun, 1896) у різних регіонах Чорного та Азовського морів. Існує припущення, що цей вид буде звичайним для донної фауни Чорного моря. Вже є понад п'ятнадцять раніше опублікованих повідомлень про блакитного краба з Чорного та Азовського моря. У 2019 році три особини блакитного краба (один самець та дві самки) було виловлено драгою Хижняка та донним бім-тралом в північно-західній частині Чорного моря (українська частина). Це перші знахідки *C. sapidus* в цьому регіоні.

Ключові слова: блакитний краб, *Callinectes sapidus*, північно-західна частина Чорного моря.