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Two new records of marine bivalves *Sheldonella lateralis* (Reeve, 1844) and *Periglypta crispata* (Deshayes, 1854) from the Iraqi coast, Persian-Arabian Gulf

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Abstract

The goal of this research is to acquire new information on the distribution of bivalves along the Iraqi coastline. Between 2020 and 2021, new records of marine bivalves, *Sheldonella lateralis* (Reeve, 1844) and *Periglypta crispata* (Deshayes, 1854) were discovered near the Iraqi coast in the northwestern Persian-Arabian Gulf.

Key words: Bivalve distribution, Iraqi coast, Persian-Arabian Gulf

1. Introduction

Much work has been done on mollusks all along Iraq's marine coast; notable studies include those by Ahmed (1975), Al-Hassan and Al-Hasani (1985), Yasser and Naser (2021), Yasser et al. (2022a), Yasser et al. (2022b), Yasser et al. (2023a, 2023b), Yasser and Naser, 2023 and Naser et al. (2024). However, discoveries are still being made regularly.

The Noetiidae Stewart, 1930 is a small family of Bivalvia, with only a few species in the Persian-Arabian Gulf, these species are *Striarca symmetrica* (Reeve, 1844), *Sheldonella lateralis* (Reeve, 1844), *Didimacar tenebrica* (Reeve, 1844) and *Congetia chesneyi* (Oliver & Chesney, 1994). From the Iraqi coast, most species of the family Noetiidae are recorded: *Didimacar* Iredale, 1939, *Didimacar tenebrica* (Reeve, 1844) and *Congetia chesneyi* (Oliver & Chesney, 1994). *D. tenebrica* (Reeve, 1844) is already listed from the Iraqi coast (Yasser et al., 2022a). Noetiids live in a variety of settings; they can be seen burrowing in the sand and mud of the intertidal zone or adhering with byssus beneath rock (Vongpanich & Matsukuma, 2004).

In the Persian-Arabian Gulf, the family Veneridae Rafinesque, 1815 represented by many species. Nine species of the family Veneridae recorded from the Iraqi coast so far namely:

Timoclea arakana (Nevill & Nevill, 1871), *Pelecyora katiawarensis* (Fischer-Piette & Métivier, 1971), *Callista umbonella* (Lamarck, 1818), *Marcia cordata* (Forsskål in Niebuhr, 1775), *Protapes ziczac* (Linnaeus, 1758), *Periglypta reticulata* (Linnaeus, 1758), *Placamen lamellatum* (Röding, 1798), *Sunetta effossa* (Hanley, 1843) and *Dosinia prostrata* (Linnaeus, 1758).

This paper is the first to document *S. lateralis* and *P. crispata* on the Iraqi coast to the northwest of the Persian-Arabian Gulf.

2. Materials and methods

From 2020 to 2021, a survey was done to collect *S. lateralis* and *P. crispata* specimens from the Iraqi shore, which is located northwest of the Persian-Arabian Gulf. The samples were taken from two sites (Fig. 1) in the northeastern Persian-Arabian Gulf. Molluscs were collected manually from muddy and stony substrates or by dredging. The specimens were kept in a 70% ethanol solution and delivered to the Marine Science Centre (MSC) at the University of Basrah, along with voucher numbers (614 and 615). *S. lateralis* and *P. crispata* were identified using Bosch et al. (1995) and Oliver et al. (2023).

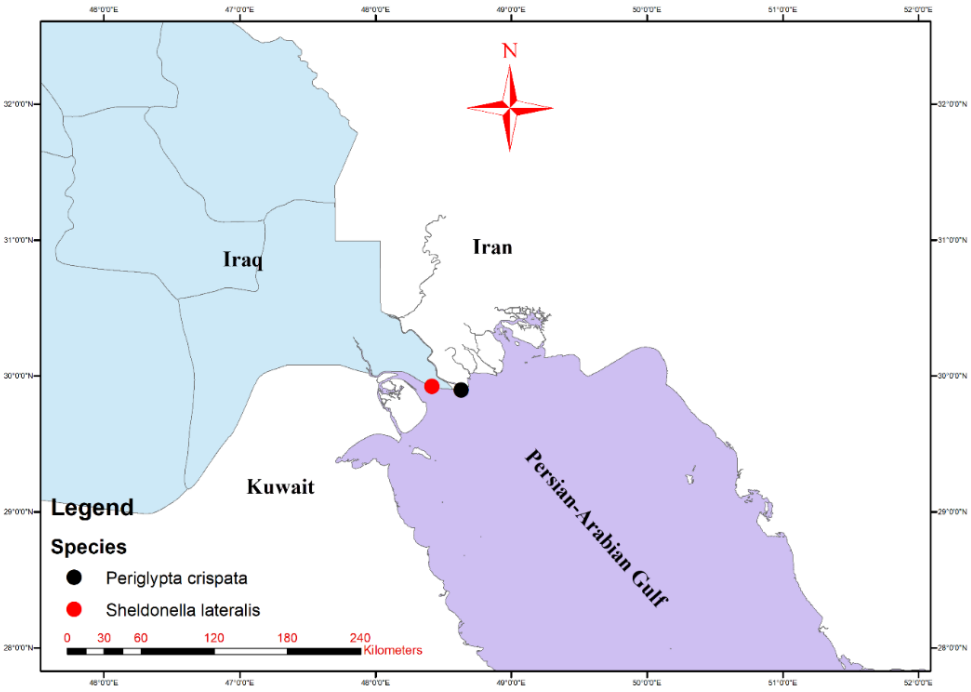

Figure 1. Sampling sites

3. Results and Discussion

Noetiidae R. B. Stewart, 1930

Sheldonella Maury, 1917

Arca lateralis Reeve, 1844: pl. 17 fig. 115
Sheldonella lateralis (Reeve, 1844)
(Fig.2)
Type locality: Philippines.

Shell rather big, attaining 24 mm in length, ovate-oblong, inflated, inequilateral, equivalves. The whole shell is covered with lamellar periostracum. Beaks in the anterior quarter. Subtrapezoidal, anterior area small, posterior expanded with round orsemicircular shape. Ligament area is narrow. Ligamental area with vertical lamellae. Sculpture of low radial riblets, those on rounded posterior keel more developed and bifurcating. Light brown. Periostracal bristles black.

Habitat: attached to rocks in crevices, lower shore and below.

Distribution: In the Persian-Arabian Gulf (Gulf of Oman, Kuwait and **Iraq**)

Figure 2. Dorsal view and Internal view of right valve of *Sheldonella lateralis* (Reeve, 1844) 24mm, Iraqi coast.

Veneridae Rafinesque, 1815

Periglypta Jukes-Browne, 1914

Venus crispata Dehayes, 1853: 107

Periglypta crispata (Deshayes, 1853)

(Fig.3)

Type locality: Unknown.

Shell ovate-transverse, turgid, inequilateral, anteriorly short, posteriorly broader, truncate, white, irregularly spotted with rufous, transversely multilamellate; lamellae thin at the umbones, thicker in the middle and at the edges, bent, with longitudinal furrows decussated and crenulated, anteriorly and posteriorly more prominent and toothed; with swollen, depressed ridges; lunule brownish, elongate-cordate; the valves inside the arch are cross-shaped; a very broad, deep pocket of the mantle; the edges very thinly and regularly crenate; embedded in a deep ligament.

Habitat: A shallow burrower in fine sand, most offshore.

Distribution: In the Persian-Arabian Gulf (Saudi Arabia, Kuwait and **Iraq**).

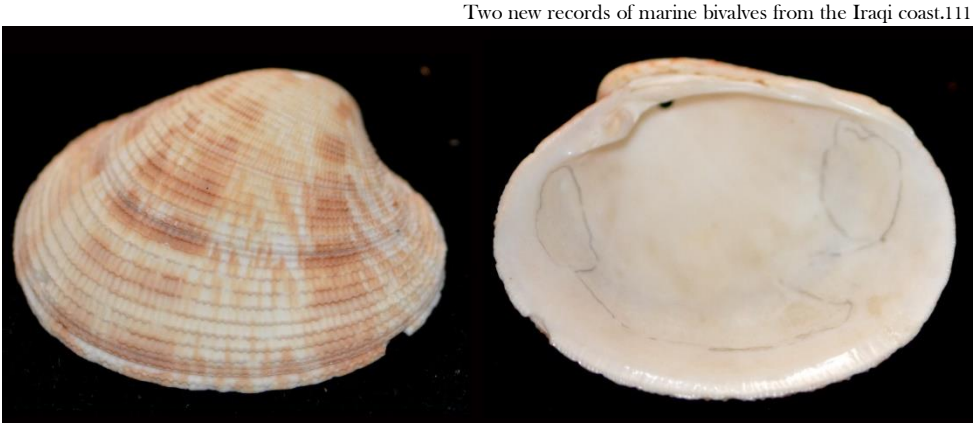

Figure 3. Dorsal view and Internal view of right valve of *Periglypta crispata* (Deshayes, 1854) 40mm, Iraqi coast.

4. Discussion

The most recent study on Iraq's marine molluscs includes a thorough inventory of marine bivalves that records 43 different species (Yasser et al., 2022b; Yasser et al., 2023, and Yasser & Naser, 2023, Naser et al., 2024). However, by listing the species that are currently known to exist along the Iraqi coast, the total number of species that have been reported rises to 45.

The only species belonging to the genus *Sheldonella* Maury, 1917 is *S. lateralis* known from the Persian-Arabian Gulf. *Sheldonella lateralis* is widely distributed in three continents, Australia, Asia (Philippines , Sri Lanka, India, Oman, Thailand) and Africa (South Africa, Mozambique, Mayotte Island) (GBIF, 2023).

The genus *Periglypta* Jukes-Browne, 1914 consists of three species in the Persian-Arabian Gulf and Gulf of Oman namely: *Periglypta reticulata* (Linnaeus, 1758) restricted in the Gulf of Oman, *Periglypta puerpera* (Linnaeus, 1771) found in the Gulf of Oman, south-east of the Persian-Arabian Gulf and most recent record of *Periglypta crispata* from Kuwait (Oliver et al., 2023) and in the present study, Iraq.

Periglypta reticulata is widely distributed in the world, the species is found in Australia, Asia (Thailand, Indonesia, Philippines, Sri Lanka, Vietnam and Cambodia), Africa (South Africa, Egypt, Kenya, Madagascar, Djibouti) and in the United States of America and Bahamas (GBIF, 2023).

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Conflict of interests

The authors declare that they have no competing interests.

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