

## Rapid Communication

# First record of the invasive non-native Asian date mussel *Arcuatula senhousia*

(Benson 1842) (Mollusca: Bivalvia: Mytilidae) from Shatt Al-Basrah Canal,

Basrah, Iraq

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## Abstract

The invasive Asian date mussel *Arcuatula senhousia* has now been recorded from the Shatt Al-Basrah Canal in the south of Iraq. High densities of up to 102 ind.m<sup>-2</sup> were found on rocky substrates in the intertidal zone during March 2020. The species was confirmed based on morphological characters of the shell. We hypothesize that the initial introduction was associated with shipping, with secondary dispersion into the Shatt Al-Basrah canal. It is possible that the species could extend its distribution into the Shatt Al-Arab and northern Arabian Gulf naturally or by additional anthropogenic means.

**Key words:** bivalve, mytilid, Middle East, Persian-Arabian Gulf, aquatic invasions, pathways

## Introduction

The Asian date mussel *Arcuatula senhousia* (Benson, 1842) is a small mytilid bivalve with a maximum shell length of 34 mm and a fast growth rate, which allows it to reach 20–25 mm after the first year of life (Crooks 1996; Bachelet et al. 2009). The native range of *A. senhousia* extends from southern Siberia (Kuril Islands) to Singapore (Chuang 1961). It has been introduced into numerous locations around the world over many decades, including New Zealand and Australia (Willan 1985, 1987), the United States (Crooks 1996; Wasson et al. 2001), India (Kutty et al. 2016), West Africa (Lourenco et al. 2018) and Europe including the Mediterranean Sea (Mistri et al. 2004; Bachelet et al. 2009; Barfield et al. 2018; Zhulidov et al. 2021; Masse et al. 2022). *Arcuatula senhousia* is an opportunistic suspension feeder capable of establishing enormous population densities, which can alter sediment structures, habitat, communities, and transform other aspects of ecosystem functioning (Crooks 1996). In cases where the densities of *A. senhousia* are very large this bivalve creates dense mats or clusters over