Musculista senhousia

SYSTEM
Marine

COMMON NAMES
English: Asian mussel, green mussel, cuckoo mussel, senhouse mussel, hototogisu, Senhouse's mussel, Asian date mussel, Japanese mussel, green bagmussel, date mussel

DESCRIPTION
Musculista senhousia is a small mussel with a maximum length of around 30mm, but most commonly 10-25mm in length and up to 12mm in width. It has a smooth, thin shell which is an olive green to brown in colour, with dark radial lines or zigzag markings. A well developed byssus is used to construct a cocoon which protects the shell. This cocoon is made up of byssal threads and sediment. M. senhousia burrows vertically down into the sand/mud leaving only its posterior end protruding, allowing its siphons access to the water to enable feeding (NIMPIS, 2002; CIESM, 2005).

NATIVE RANGE
ASEAN: Singapore
World: Japan, Democratic People's Republic of Korea, Republic of Korea, Russian Federation

KNOWN INTRODUCED RANGE
ASEAN:
WORLD: Australia, China, France, Italy, Mediterranean and Black Sea, New Zealand, Tanzania United Republic Of, Canada, Egypt, Israel, Madagascar, Mexico, Slovenia, United States

PATHWAY
Transport – Ship/boat ballast water
Aquaculture
Trading

REASON FOR INTRODUCTION
Musculista senhousia may have been introduced to Australia as an accidental importation with Pacific oysters (CSIRO, 2000). In the Mediterranean, invasion of M. senhousia has been strictly linked with shellfish farming and trading.The initial invasion of the Pacific coast of the USA is attributed to transport with oysters imported from Japan (Mistri et al. 2004).

IMPACTS

Musculista senhousia can dominate benthic communities and potentially exclude native species. It settles in aggregations and is therefore able to reach high densities. Unlike most mussels, M.senhousia lives entirely within the sediments, surrounded by a bag of byssal threads. At mussel densities of greater than 1500 m2, individual byssal bags coalesce to form a continuous mat or carpet on the sediment surface. The presence of these mats dramatically alters the natural benthic habitat, changing both the local physical environment and the resident macroinvertebrate assemblage. M. senhousia deposits large amounts of organic matter in the sediment, which possibly results in the accumulation of toxic metabolites such as sulfide, which can have adverse effects on seagrass growth (Morton, 1974; Ito and Kajihara, 1981; in Reusch and Williams, 1998).

Source: Global Invasive Species Database (GISD) 2015. Species profile Musculista senhousia. Available from: http://www.iucngisd.org/gisd/species.php?sc=1031 [Accessed 09 September 2019]

Photo by Anthony Fisher accessed at https://www.exoticsguide.org/sites/default/files/species_images/m_senhousia_lg_b.jpg on 12 September 2019.