



# Asian green mussel

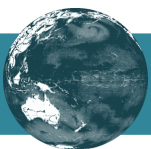
*Perna viridis* (Linnaeus, 1758)

REPUBLIC OF THE  
MARSHALL ISLANDS

## KEY FEATURES



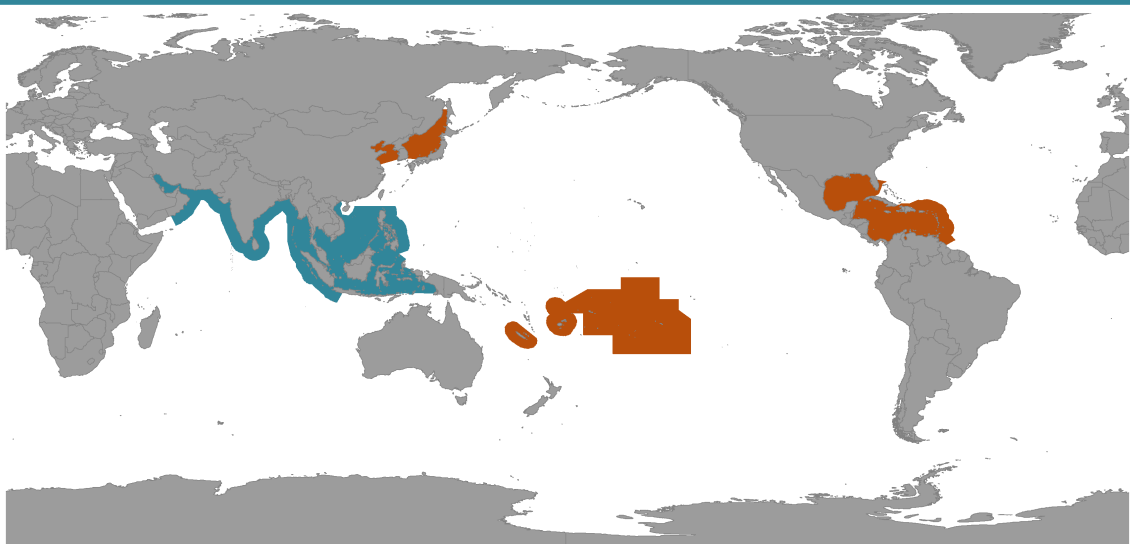
- Mussel with elongate valves, triangular-ovate outline, 20–30 mm total length, valves covered by thick, smooth periostracum
- Juveniles have a green and blue-green shell that develops brown patches as an adult, broadest margin remains vivid green
- Wide salinity tolerance of 19–58, can survive up to 11 days in freshwater with no feeding
- Prefers warm waters but can survive between approximately 12 –32.5°C; optimal spawning temperature 29°C
- Separate sexes, matures at one year of age, prolonged spawning season under right conditions
- Larval period 13–41 days thus easily transported via ballast water or as biofouling on vessels



## PATHWAY

✓ ballast water    ✓ biofouling    ✓ aquaculture transfer

Native  
Cryptogenic  
Non-indigenous





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## IMPACTS



### Environmental impacts

Invades a wide range of habitats including mangrove communities, muddy sea bottoms, oyster beds, rocky shores, piers, seawalls, canals, and seawater intakes, creating hard substrate and habitat for other species. Fouling by this species has caused high oyster mortalities in Florida. Can reach densities of 35 000 individuals per m<sup>2</sup>



### Human health impacts

Bioaccumulates pollutants causing human health problems by food poisoning



### Social & cultural impacts

Can alter local habitat used for food gathering



### Economic impacts

Despite a positive impact on the economy, having been introduced for local harvesting in many locations, it can also cause mortalities in other locally caught shellfish. It is a nuisance fouler that has significantly increased maintenance costs around intake pipes and power plants, jetties, buoys, and vessels

## ADDITIONAL DETAILS

- Could also be *Perna canaliculus* (Gmelin, 1791), *Perna perna* (Linnaeus, 1758), other *Mytilus* species

## DISTRIBUTION

**Not present in the Republic of the Marshall Islands**

### Native range

Indo-West Pacific, from Persian Gulf and Indian Ocean to Indonesia and South China Sea

### Non-indigenous range

Successfully introduced for culture in Tahiti and New Caledonia. Presence in Japan and Korea considered non-native. Also found in Tropical West Atlantic to Venezuela and Guyana in the Western Atlantic. Introductions to Samoa, Tonga, Fiji, and the Cape Verde Islands appear to have failed

## CREDITS AND REFERENCES (click reference for more information)

### Images

Top: Savio Calazans from [de Messano et al. \(2019\)](#) (CC BY-SA 4.0), bottom: H Zell ([CC BY-SA 3.0](#))

### References

[Messano et al. \(2019\)](#), [Benson et al. \(2001\)](#), [Firth et al. \(2011\)](#), [Sze and Lee \(2000\)](#), [Wang et al. \(2018\)](#)