

Mediterranean mussel

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Species Description

Scientific name: *Mytilus galloprovincialis*

AKA: Mediterranean mussel, Black Sea mussel, European mussel

Native to: the Mediterranean and eastern Atlantic

Habitat: Found along coasts, rocky shores, harbours and estuaries. Lives on hard substrates in the intertidal zone to depths of 40m.

The Mediterranean mussel is a filter-feeding bivalve. Its shell varies in colour from black with blue/purplish hues to dark brown and sometimes light brown. It has a smooth, thin but robust shell with a sculpturing of concentric growth lines. It can reach 150mm in length, but typically grows between 50-100mm. The shell halves are equal in size and wedge shaped, with the beaks terminating on the anterior end. The anterior margin is straight and steep sloping, whereas the posterior margin is broadly rounded. Shell shape can vary by region.

M. galloprovincialis is part of the *Mytilus edulis* species complex, which also includes *Mytilus trossulus* and our native blue mussel, *Mytilus edulis*. These species exhibit high plasticity in relation to their morphology. This, along with their ability to hybridise with one another, makes them difficult to tell apart without using molecular genetic techniques. However, identification is often determined by looking at multiple morphological features in combination.

Larvae are initially free-swimming, drifting with water currents for a number of weeks before finding a suitable substratum on which to settle. They attach firmly to hard substrates using fibrous byssal threads.

M. galloprovincialis can outcompete and displace native species, becoming the dominant species and reducing biodiversity. In addition, its tendency to hybridise with other *Mytilus* species can lead to a reduction in genetic diversity.



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Key ID Features



Mantle edges are dark coloured (blue-purple)



Concentric growth lines



Length typically 50-100 (up to 150)

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Umboes turn down, making the basal line look concaved



Shell brown / blue / purple-black in colour



Photo credit © Adam Britton

Report any sightings via; CEDaR Online Recording - <https://www2.habitas.org.uk/records/ISI>, iRecord app or Invasive Species Northern Ireland website - <http://invasivespeciesni.co.uk/report-sighting>

Identification throughout the year

The Mediterranean mussel is present in the same location throughout the year.

Field signs

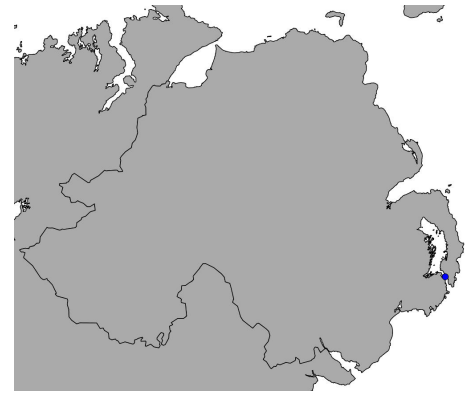
Most commonly seen in dense masses on hard surfaces along exposed coasts and intertidal rocky shores.



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Distribution

Likely under-recorded due to misidentification of native blue mussel (*Mytilus edulis*).



Source: NBN Atlas Northern Ireland – available: <https://northernireland-species.nbnatlas.org/species/NHMSYS0021055099>
Check website for current distribution

Similar Species

Blue mussel
Native
(*Mytilus edulis*)



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Straight umbones, not turned downward

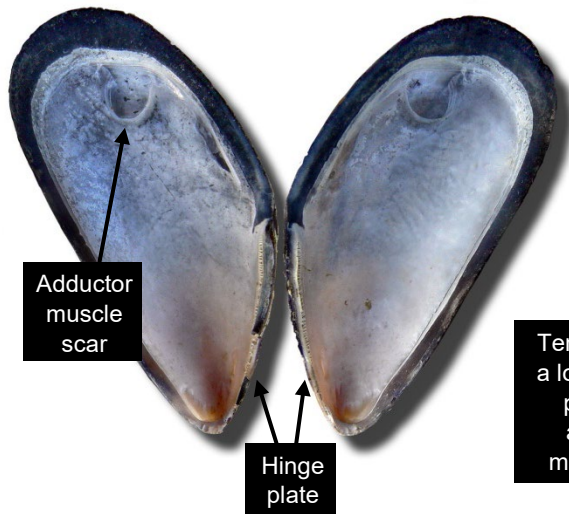
Tends to grow smaller than *M. galloprovincialis*

M. edulis and *M. galloprovincialis* cannot be separated by a single morphological characteristic alone – multiple features in combination must be analysed in order to distinguish between the two species. However, as the species can hybridise, sometimes DNA analysis is required for reliable identification.



Mantle edges are whitish, yellow or brown

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Adductor muscle scar

Hinge plate

Tends to have a longer hinge plate and adductor muscle scar

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References and further reading:

- CABI datasheet *Mytilus galloprovincialis* (Mediterranean mussel) available: <https://www.cabidigitallibrary.org/doi/full/10.1079/cabicompendium.73756#sec-1>
- The Conchological Society of Great Britain and Ireland – Species Account for *Mytilus galloprovincialis* (Mediterranean mussel) available: <https://conchsoc.org/spAccount/Mytilus-galloprovincialis>
- MarLIN (The Marine Life Information Network) Species list Common mussel (*Mytilus edulis*) available: <https://www.marlin.ac.uk/species/detail/1421>
- Smithsonian Environmental Research Center Species Summary *Mytilus galloprovincialis* (Mediterranean mussel) available: https://invasions.si.edu/nemesis/species_summary/-64

Sustainability at the heart of a living, working, active landscape valued by everyone.