

Quagga mussel

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Species Description

Scientific name: *Dreissena bugensis*

AKA: *Dreissena rostriformis bugensis*, Asiatic Clam, Golden Clam, Pygmy Clam

Native to: Ponto-Caspian region, Black, Caspian and Aral Sea

Habitat: Fresh and weakly brackish waters

The quagga mussel is a small bivalve mollusc similar to the invasive non-native zebra mussel.

Adults have a triangular shell and up to 50 mm in length. In new populations, most individuals are young and therefore very small (less than 8mm).

They survive in both muddy and hard substrates, and tolerates a range of water conditions, from shallow and warm to deep and cold. They attached to anything solid underwater, e.g. stones, shells, wooden posts, hulls, concrete.

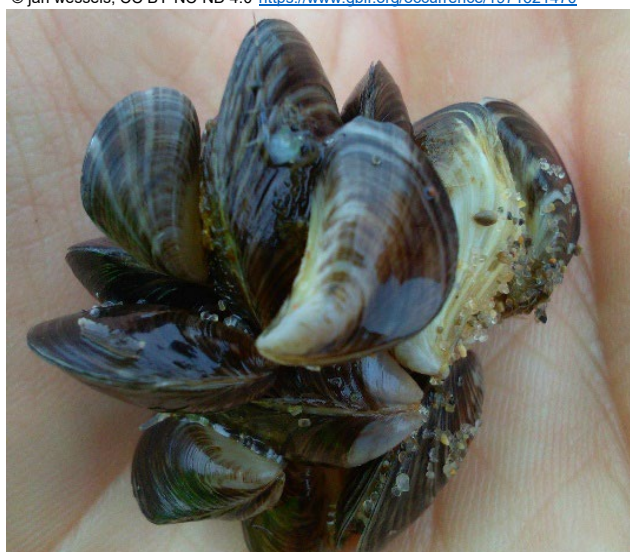
Due to its filtering capacity and ability to produce dense populations, it can alter whole freshwater ecosystems. It can outcompete and significantly reduce native biodiversity. It feeds on the varieties of algae that compete with blue-green algae, often resulting in toxic algal blooms. It is also a nuisance and economic problem when growing in pipes of water treatment plants or commercial ships.

It is not yet present in Northern Ireland. However in July 2021 Quagga mussel was discovered in the Shannon River, providing a direct route for spread into Northern Ireland. Following 'Check, Clean, Dry' guidance is the most effective way to prevent its introduction here.

Likely pathways of introduction to Northern Ireland include; fouling of boats and other machinery, hitch hiking on equipment associated with angling or recreational activities and ballast water. Once established there is no effective eradication method for quagga mussel.



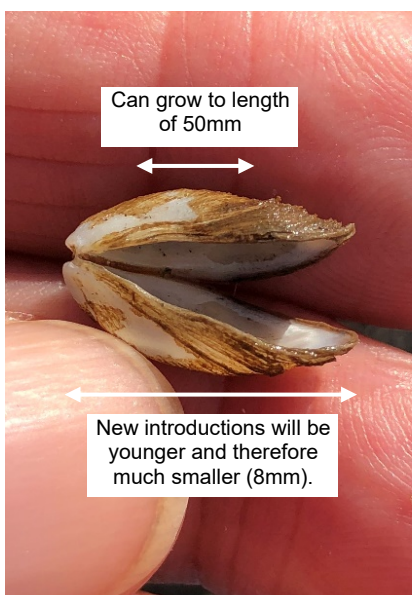
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Key ID Features

Rounded in cross section, when placed on its front (hinge edge) it tends to roll onto its side



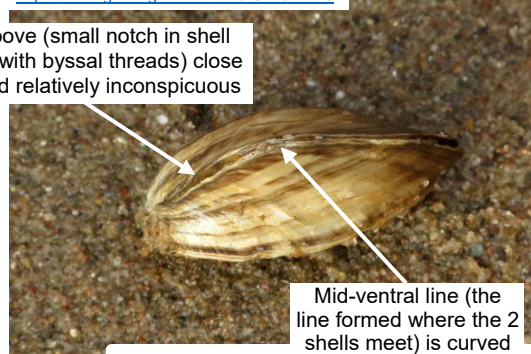
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Once established quagga mussel can reach high densities

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Byssal groove (small notch in shell associated with byssal threads) close to hinge and relatively inconspicuous

Mid-ventral line (the line formed where the 2 shells meet) is curved



Usually alternating light and dark brown stripes, but can also be solid light or dark brown

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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>

Field signs

When established quagga mussel can occur in high densities; coupled with a thin shell and a high break-up rate within beds, can result in large quantities of dead shell washing up on the edge of an affected water body.



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Distribution

Records in the UK are focused in London.



Source: NBN atlas

<https://species.nbnatlas.org/search/?q=Dreissena+rostriformis+bugensis>
Check website for current distribution

Similar Species

Zebra mussel

Invasive non-native
(*Dreissena polymorpha*)

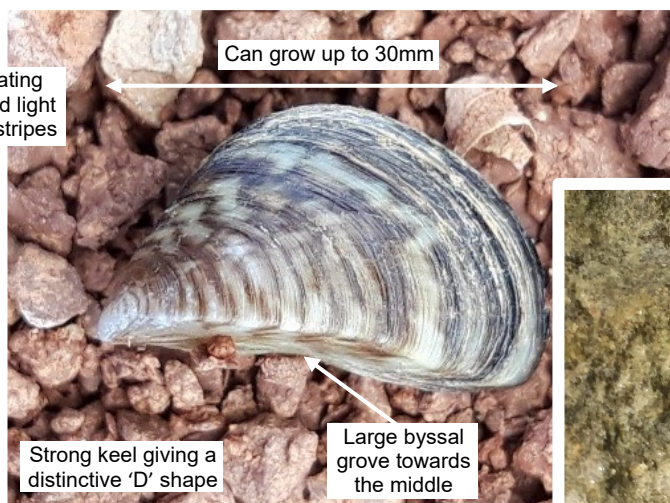


Similar size and pattern
to quagga mussel

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Alternating
dark and light
zigzag stripes

Can grow up to 30mm

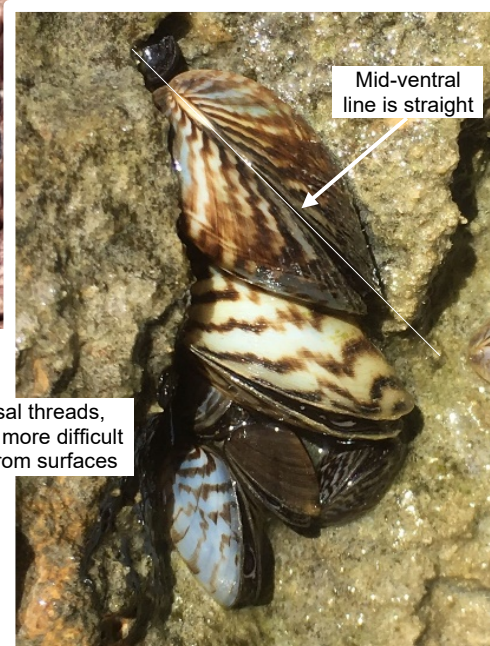


Strong keel giving a
distinctive 'D' shape

Large byssal
grove towards
the middle

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When placed on its front (hinge
edge), zebra mussel usually
remains upright, whereas quagga
mussel tends to roll on its side



Mid-ventral
line is straight

More byssal threads,
therefore is more difficult
to detach from surfaces

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<https://www.gbif.org/occurrence/1880474563>

Blue mussel

Native
(*Mytilus edulis*)



Larger than
quagga mussel
(5 – 10 cm in
length)

Found only in
marine and
estuarine habitats

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References and further reading:

- Aldridge, D. 2011. GB Non-Native Organism Risk Assessment Scheme of Quagga mussel (*Dreissena rostriformis bugensis*). Available <https://secure.fera.defra.gov.uk/nonnativespecies/downloadDocument.cfm?id=1372>
- Booy, O., Wade, M. and Roy, H. 2015. Field Guide to Invasive Plants and Animals in Britain. Bloomsbury. London.
- CABI *Dreissena rostriformis bugensis* (quagga mussel) data sheet. Available <https://www.cabi.org/isc/datasheet/107770>

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