

Beached!

Large, long bivalves



Large, long shells

If you see large, long bivalves in a wreck—to ID or help us ID you will need to take note/ideally a photo of certain features: a clear photo of overall shell shape, ensuring you can see where the beak is in relation to front (anterior) and back (posterior) edges; size with a coin/ruler; and shell sculpture.

Beak: is the area the animal begins growing its shell as a juvenile. It is often visible on the dorsal margin. Where the beak is, in relation to the rest of the shell, can help ID.

This area also hosts the ligament, which forces the two shells apart (muscles within close the shell). It can be external or internal (often

Dorsal

Posterior
(where the
syphon is)

Size and shape: some of these bivalves are oval or rounded and some have squarer and rounded areas to keep an eye out for. Maximum sizes, as adults, range from 80-150mm in length.

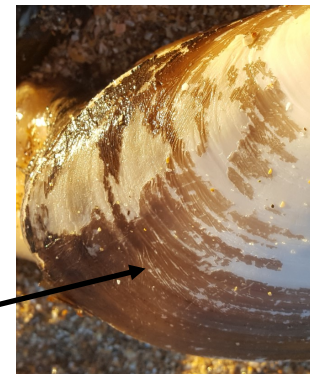
Anterior
(front)

Dorsal, Ventral, Posterior and Anterior can be divided further into areas (e.g. anterior-dorsal/posterior-ventral).

Ventral

Shell thickness, margins and surface sculpture some differences exist in the overall thickness of the shell, the lines, ridges and patterning on the outer surface and the shell edge, all of which can be indicative of ID.

Shell colour and Periostracum (the thin outer organic covering of the shell)



Otter shell/cragen y dyfrgi (*Lutraria lutraria*).

This is the shell perhaps seen most commonly and against which we'll compare the other similar looking shells (**more obvious differences in bold on next pages**) This is a deep burrower in shallow coastal areas and was the main species in the “wash-out” at Llanddona (seen in the training information).

Colour and periostracum coating: white shell with thin, flakey green-brown periostracum coating.

Shell thickness, sculpture and margins: Thin, brittle shell, with concentric lines, fine ridges and a smooth margin.

Ligament: small part seen on the outside of the shell. Dark brown and deeply situated.

The fused syphons will be visible, as the two valves (shells) gape at the front and the back.



Beak: at the front end, just less than 1/3 way along, the dorsal margin.

Both the anterior and posterior margins are curved and dip close to the beak.

Size and shape: max. 125mm in length. Broad oval shape.

Lutraria angustior

This can also burrow deeply, but is described as sitting vertically in the substrate with the syphon at the surface. Habitat— shallow coastal areas, but tending to be further out than *L. lutraria* and therefore a less likely find in a wreck.

Colour and periostracum coating: white shell with thin, **pale brown** periostracum coating.

Shell thickness, sculpture and margins: **Thick, solid shell**, with

concentric lines and fine ridges and a smooth margin.

Ligament: small part seen on the outside of the shell. Dark brown and deeply situated

The fused syphons will be visible, as the two valves (shells) gape at the front and the back. Front gape is narrower.



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Beak: at front end approx. 1/3 way along the dorsal margin. Both the anterior and posterior margins are curved and dorsal margin is straight at the beak.

The ventral margin curves slightly 1/3 of the way along and looks like it's mimicking the beak.

Size and shape: max. 115mm. Not as broadly oval across the shell, as Otter shell (narrower at posterior end). The ventral margin is less rounded.

Sand gaper/cragen blacen (*Mya arenaria*).

This is a deep burrower, close to shore in estuaries and sheltered areas, also lives in shallow areas to 50m. This shells can differ considerably in outline and thickness.

Colour and periostracum coating: off-white/fawn coloured shell with thin, straw-coloured periostracum coating.

Shell thickness, sculpture and margins: Solid, strong shell, with obvious concentric lines and ridges and a smooth margin.

Ligament: small part of ligament is external, but concealed.

The fused syphons will be visible, as the valves (shells) gape at the posterior. The syphons, when animal is still alive, are covered by leathery extensions of the periostracum (see *M. truncata*, next).



Beak: at or just in front of the midline of the shell. Both the anterior and posterior margins are broadly rounded, but the posterior tapers to a narrower point. The ventral margin is straight.

Size and shape: 150mm in length. Broad oval and the valves are not identical in shape (the RV is more convex).

Blunt gaper/clust eliffant (*Mya truncata*).

This is a deep burrower in shallow coastal areas.

Colour and periostracum coating: white-off white shell with a periostracum coating which is reported as variable in colour with each specimen straw-dark brown.

Shell thickness, sculpture and margins: Solid shell, with obvious concentric lines and ridges and a smooth margin.

Ligament: small part seen on the outside of the shell. Dark

brown and deeply situated.

The fused syphons will be visible, as the two valves (shells) gape widely at the back. The syphons, when animal is still alive, are covered by leathery extensions of the periostracum.



Beak: at or just behind the mid-line of the shell. Both beaks are directed inwards and touch.

Anterior margin is broadly rounded, but the posterior margin is cut short. The ventral margin is straight.

Size and shape: up to 80mm in length. Oblong, elongate and the valves are not identical in shape (the RV is more convex).

For additional, internal differences for empty shells (for those interested in exploring more):

For all these shells the pallial sinus extends to below the beak area and the differences are related to how the bottom edge of the sinus contacts the pallial line (see white arrows provided by Ivor Rees).

In *Lutraria angustior* (right) the pallial line blends with the lower edge of the pallial sinus, whereas in *L. lutraria* (below) the lines remain separate until the end point .



Pallial sinus is the area where the syphon can retract and is a space inside the shell surrounded by attached tissue. Its extent into the shell area can be an ID feature.

Pallial line is where the body of the animal sits attached to the shell close to the edge. Its shape, how long it is, where it stops in relation to other features can all help to ID

For additional, internal differences for empty shells:

For *Mya truncata* (right) the pallial line blends irregularly with the lower edge of the pallial sinus whereas in *Mya arenaria* (below) the lines remain separate until the end.

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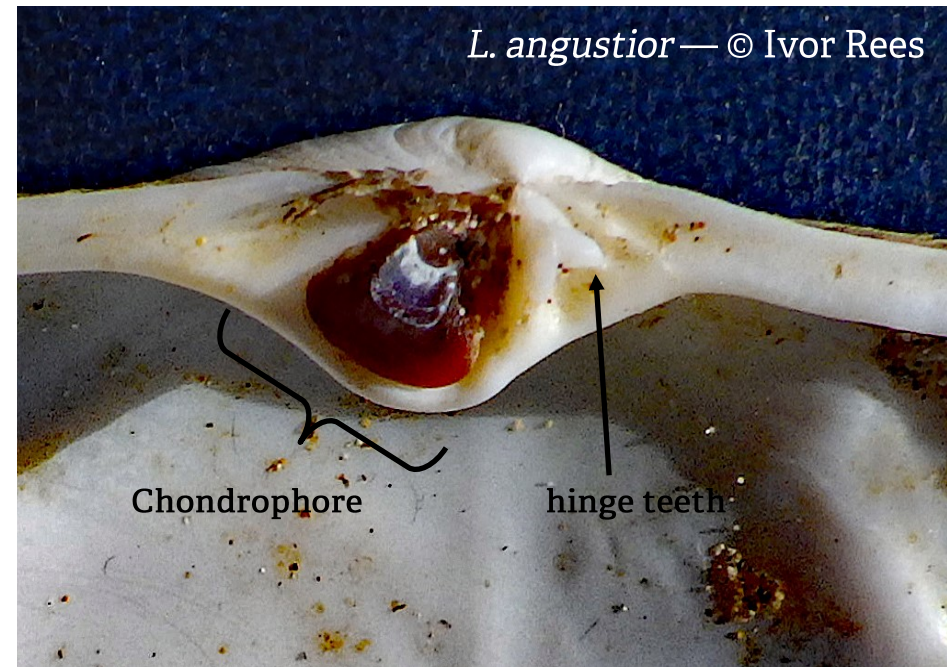
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So, for further help to separate the similarities between *L. lutraria* and *M. arenaria*, which have similar non-congruent pallial lines and between *L. angustior* and *M. truncata*, which have congruent lines you can look to the beak area.

All these species have a spoon-shaped shelf called the Chondrophore, where their ligament attaches. For *Lutraria* species there are also raised areas in front of this called hinge teeth. The *Mya* species have no teeth at their hinge area.

L. angustior — © Ivor Rees



Finally, other, similar shells in terms of size and or shape are two species less likely to be seen for various reasons, but which are worth knowing about, in case you come across them.

Lutraria oblonga—previously *L. magna*

Depending on source: distribution=South UK coast only/ dotted sightings, including north Cardigan Bay. A deep burrower in shallow-mid-depth areas.

Major differences for ID: Oval, boat-shaped outline as posterior part of shell stretches and curves in a concave manner on posterior dorsal margin. Ventral margin is curved with lowest point about midway.



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Solecurtus scopula

A smaller shell, but widely spread in distribution in the west of the UK.

Recorded as an active burrower in shallow coastal areas.

Major differences for ID: Max size 45mm, Beak just in front of midline.

Posterior margin is narrower than anterior. Sculpture is diagonal ribs running from beak to edge.

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Lancashire,
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