Beached!

Thick-armed starfish

Beached!

What's stranding in your area?

A study of the strandlines of our local beaches.

Beached! is a project which aims to map the *mass accumulations* of dead or dying sea life on our beach strandlines. These are a common and, mostly, natural occurrence as part of the cycle of life in our seas but we know very little about where or why these 'wrecks' occur.

This project would especially suit people who regularly walk a length of beach and want to know more about the sea offshore.

You can help us learn much more just by taking photos on your mobile phone!

Sign up to our mailing list to receive our news-letter and further information about the project.

For more information see www.northwaleswildlifetrust.org.uk/what-we-do-landing-pagewildlife-conservationour-projects/beached

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World Museum

Thick-armed starfish

If you see starfish in a wreck with long, rounded arms, to ID or help us ID you will need to take note/photo of certain features. The various areas of a starfish which will help with ID:

Dorsal (Aboral)—ventral (oral): The aboral area can have surface spines. Sometimes the number and arrangement of the papulae (pores for respiration and excretion) and pedicellariae (pincer-shaped cleaning organs) which lie in between/at the base of the spines, can point to ID. The oral side is where you'll find the tube feet.

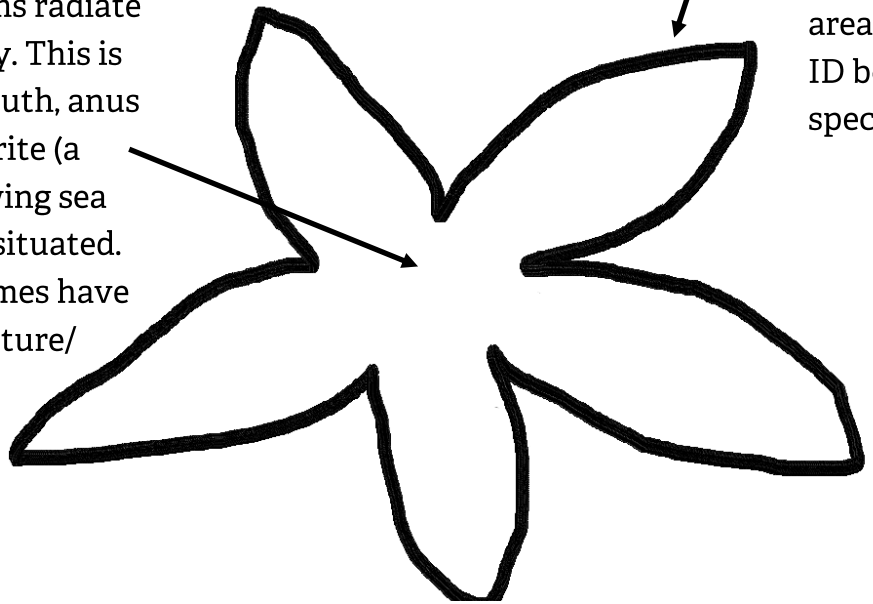
Colour: Many can vary in colour, but some are only certain colours or patternings, which can therefore be helpful for ID.

Surface spines etc.: spines/ tubercles can be pronounced or non-apparent on the surface. Some may lie in rows or have large bases, important for ID

Arms: also called rays, can be counted to help with ID , but beware of lost arms. Some starfish from this collection have arm numbers which lie within a range., rather than a precise number. The flexibility of movement of the arms can also be of help with ID.

On the oral (under) side there are channels (called ambulacral grooves) present. Along these grooves the tube feet lie in rows. The positioning along with spines in this area, can help to ID between some species.

Central disc : is the central area from which the arms radiate symmetrically. This is where the mouth, anus and madreporite (a channel allowing sea water in) are situated. It can sometimes have obvious sculpture/ patterning.

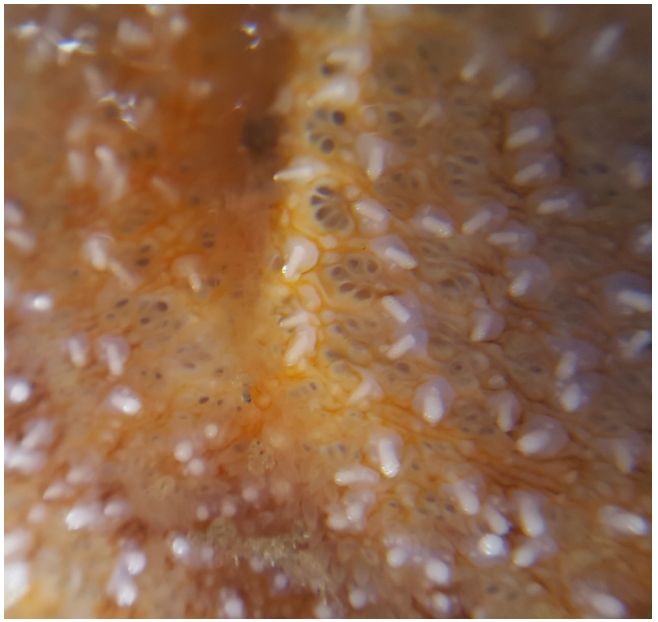


Common star/Seren fôr (*Asterias reubens*).

This is the starfish seen most commonly and against which we'll compare the other similar looking animals. This starfish is common around coastal areas on rocks and sandy areas and has been known to be the main species in "wrecks" across the sandy north coast of North Wales in recent years.

Size and shape: these can be seen in various sizes, commonly grow to 10-30cm in diameter (but can be bigger).

Colour: most commonly orange in colour (can be brown or even violet). With a paler underside



Arms 5 arms (very rarely this differs) radiating from a central area which is not obvious as an area. These are flexible and able to bend in several directions and taper towards the tip.

Surface spines Spines lie all over the upper surface, but often there is one clear, central row of larger spines apparent, along each arm.

Sand star/Seren y tywod (*Astropecten irregularis*).

This is another commonly seen starfish, when it comes to wrecks. Living burrowed within the sand, they can be found all around the North Wales coast.

Size and shape: these can grow to 20cm, but are usually about 10cm and so, fully grown, are smaller than the common star.

Colour: most commonly sandy colour (can also be brown, pink, orange or yellow). It can have purple colouration in the centre area and on the tips of the arms sometimes.

NB The Sand star can be confused with the other sand star *Luidia sarsi* which has 5 arms, but they're longer and less tapered than the more common *Astropecten irregularis*..

Arms 5 arms are relatively shorter than common star making the central disc area look bigger. The arms are kept in a stiffened position.

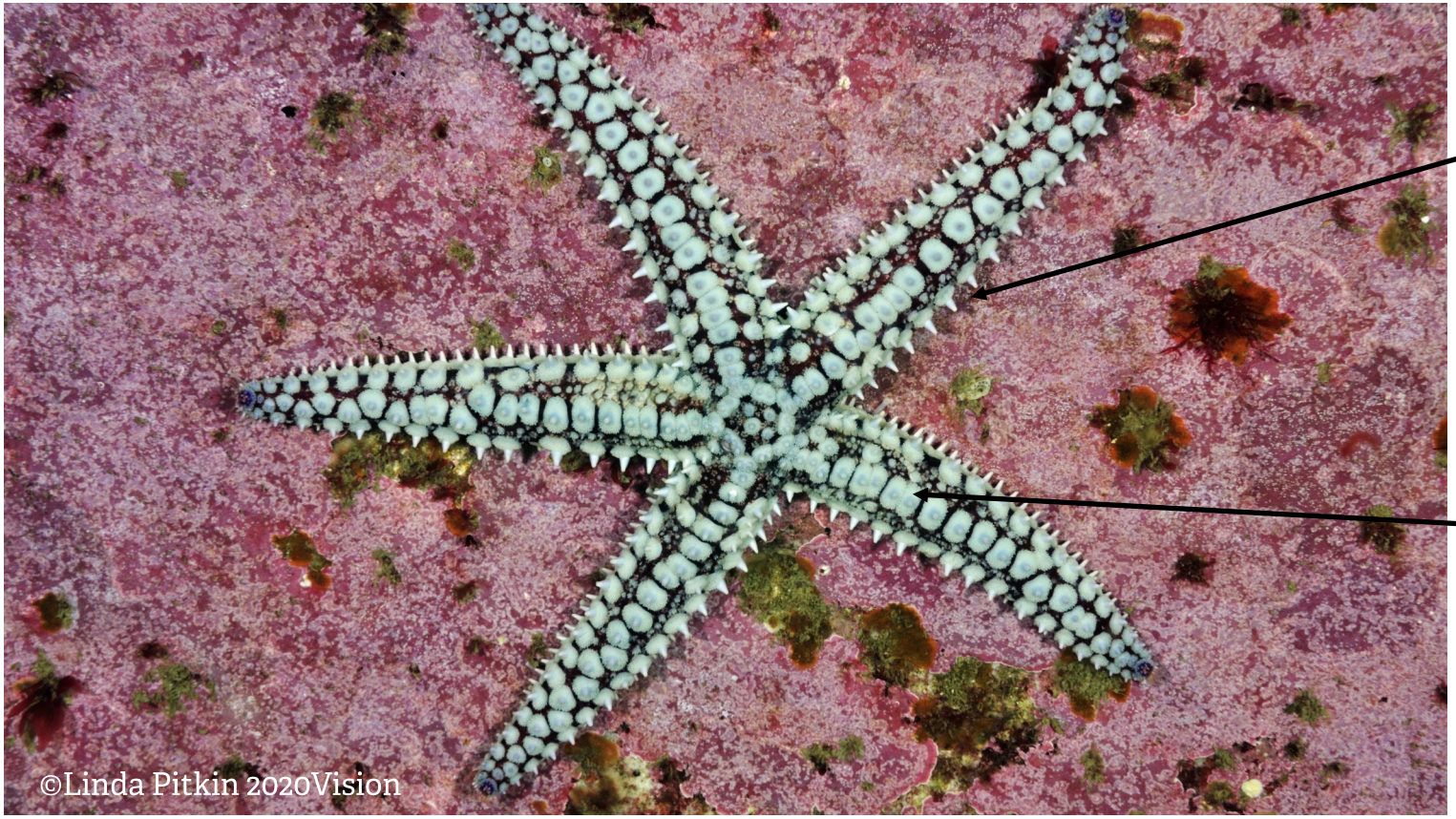
Surface spines Spines are not obvious across the dorsal surface, leaving the animal with a smooth-looking surface. Clear plates can be seen along the edges making the animal look stitched in appearance.

Spiny starfish/Seren bigog (*Marthasterias glacialis*).

This starfish is not commonly seen wrecking, but can form a small part of a wreck in some areas.

Size and shape: adults of this species are larger than the common star. They commonly grow to 25-30cm, but can reach up to 70cm in diameter.

Colour: colour is varied and can be brown to pale blue, grey or greenish, with purple on the arm- and spine-tips, occasionally. As specimens dry, this purple colouration may disappear.



Arms 5 long arms radiating from a central disc, which tends to have a clear raised circular marking within it. The arms, themselves, seem longer than

Surface spines this animal has spines which are large and white in colour and line up in 3 rows along the dorsal region. The spine base is cushion-like and is where prominent pedicellariae are grouped..

Bloody henry/Seren waetgoch (*Henricia oculata*) or northern henricia (*H. sanguinolenta*).

Another less commonly seen set of species, but can be seen within a larger wreck in certain areas. The species can be difficult to ID, but a clear close-up of individual spines, might help to decipher.

Size and shape: these can be seen commonly at 10cm, but can grow 20cm in diameter .

Colour: these two species can be found in several striking colours, most commonly reds and purples and can often be spotted with differing colours.

NB The Rosy starfish (*Stichastrella rosea*) a very rare find, can be confused with a red Blood Henry, but doesn't have the smooth surface of bloody Henry and where the arm meets the central disc there's a constriction.

Arms 5 arms which look velvety in texture and are kept in a stiffened manner. They are relatively long and slender, radiating from a central area which is not an obvious disc-shaped area.

Surface spines *Henricia oculata* is thought to be the most common and it's upper surface spines are blunted, opaque and covered with skin. In *H. sanguinolenta* the spines have glassy points.

Watch out for other starfish, which are less common finds, but for which it may be worth keeping an eye.

Some have numerous arms, such as the Common sunstar/ heulseren (*Crossaster papposus*) and Purple sunstar/ heulseren borffor (*Solaster endeca*). Both animals have 10 or more arms—number lies within a range, so can be found with more. The common sunstar is the more common of the two and has red and white stripes (pictured right), the purple sunstar has a smoother, less spiny dorsal surface, which is helpful to decipher between the two.

Another starfish with more than the usual 5 arms is (pictured on the left) the 7-armed starfish (*Luidia ciliaris*) is also a larger animal (normally around 40cm, but up to 60cm). Often a similar orangey colour to the Common starfish, the arms are relatively slim-looking in comparison and have a fringe of white spines along the sides. This starfish lives in deeper water and is reported as not likely to survive storm dumping on the shore—as it may break up readily.

Rarer starfish.

Rarer species to see on shore include the Northern starfish (*Leptasterias (Leptasterias) muelleri*), below. This species also has 5 arms, but usually is smaller. Those found living near shore have algae within their skin, making them green, but you may find pink or violet ones. Even though they're less likely finds, they look very similar to the common star, so to distinguish them, look closely at the spines. In the common starfish the spine is a single point, in the Northern starfish there are several points to each spine giving a flowery look. To ensure it's not a small spiny starfish, look for spines in a more disorganised pattern, not in rows and there are not quite as many.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A strange-looking flattened star is worth a mention here the Goose foot starfish/Seren wydd-droed (*Anseropoda placenta*). It lives over sand in deeper waters and has a pentagonal shape with webbing between the arms. It's aboral surface is white with red spots making it look pink in colour and the spines are clustered, fine and small.


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Finally, get to know the cushion stars, (below) just in case, although, they're not known for turning up in a wreck, as they tend to stick (literally) to rocky shores.

For more information on our Beached! project please get in touch:

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Thank you to our project partners and funders

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