

BEACHED!

An introductory strandline guide

Here you will find a brief introduction to some of the regularly washed up species you might find on North Wales beaches. Together with instructions on how to record your finds, you're set for a trip to the beach!





As part of our Beached! project you will be recording your finds from the strandline. Thank you. It all helps.

In order to do that, you might need an idea of how to identify the items you're likely to (or might) find washed up on shore. So, we've compiled a few handy tips to help.

Look out for hints of what you can picture to help with ID

Please use the contents list to find species according to type, use your shore trips to find these yourself, then use your COFNOD registration to document what you've found.

Don't forget, your records are useful even if you're visiting the same beach. The tide washes in and washes out lots of species which live just off shore. It will also wash those items which take time to break down repeatedly and will bring in items from further afield. Those records are still valuable.

On our North Wales Wildlife Trust Beached! page you can find more indepth ID guides (which will be added to) as well as introductory videos etc. Please use to help when recording your finds.

As always, letting people know about what you're finding/learning/recording helps more people learn and ultimately act to help our marine environment.

Ymddiriedolaeth Natur Gogledd Cymru North Wales Wildlife Trust



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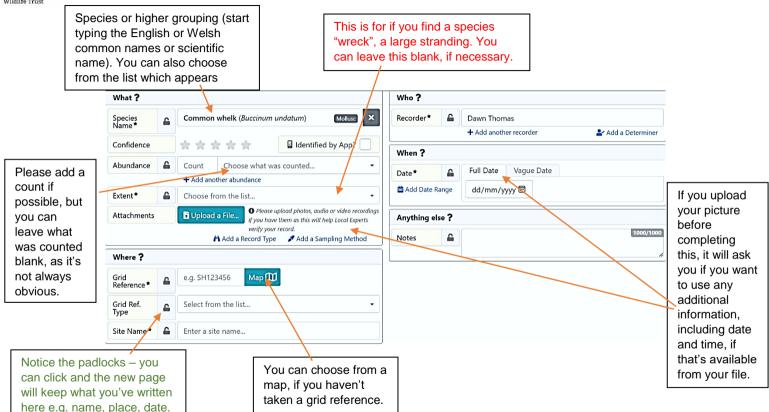


How to record:

After reading through this booklet you will have an idea of what you might find, how to ID or at least how to take your photo in a way which will help to ID later.

- When you're on shore take photos of your finds, take note of where you are on shore and the date and time. You will need these to document your find.
- <u>Log in/register with Cofnod</u>. Once logged in, look along the top ribbon and choose "enter records". You will then see a list of projects to choose from – choose "Beached!".
- You will see a page with boxes to complete (see next page). This is
 where you enter your records. Start by beginning to type the
 species or possibly higher grouping, if you don't know the species.
 You will see a list popping up, scroll down to see if your species is
 there.
- Upload your photo or photos, as you complete the rest of the form as much as you can. Essentials are species, count, date, grid reference.
- Go through to see if you've included everything you know, then press submit record (lower to the right on the same page).
- Keep submitting like this for each species found.
- NB you can "lock" in some information if it's going to be the same for a batch of records. This is information such as your name, the location, and date.



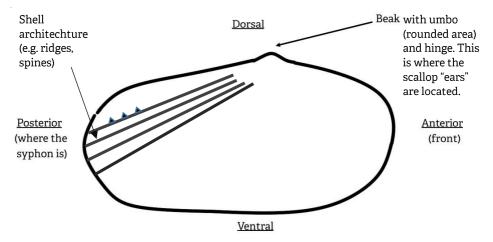




Shelled species (*regularly "wrecking" species)

Bivalves – <u>live within two shells, they have an in-syphon, which generally takes water/food in and an out-siphon, which lets it out once the animal has filtered out the good stuff. In life some attach to rocks, some swim, others burrow into rocks and most bury in sand.</u>

For more in-depth help with ID for bivalves see Amgueddfa Cymru pages.





common mussel/cragen las (*Mytilus* edulis) — smooth shell, purple/blue/black, roughly triangular, growing to 60mm, with beak at end. They are supreme filterers. Usually, living in large congregations in shallow water, sometimes within crevices further up the shore. They anchor themselves using a special thread, called the byssus. *NB you might also find a different*

species, which is bigger, brown and is more rounded at the beak (the horse mussel).

Take photo of shape from above and over beak.



* razor shells/cyllel fôr (e.g. *Ensis ensis*) – resemble old style razors, elongated and brittle shell, white-ish with red/brown vertical and horizontal

stripes. They live in sand vertically. There are several different species, including an American invader ranging from 120-200mm. They can move down into the sand by doing a wiggle/shiver, liquefying the sand around it, allowing ease of movement. Look for bending on shell, overall size and if empty, look



for the places the mussels were attached, to help with ID. NB there are "bean razor" species too, which have the hinge attachment more central along the shell.

Take photo of overall shell, placement of hinge and inside markings, if empty

<u>Cockles – several species not all are common and some are more apparent on some shores than others.</u>

Take photos showing overall shape, architecture of shell and colour.



*common cockle/cocosen (Cerastoderma edule)

 this edible cockle is common around some of our shores. The species likes sandy shores and estuaries, living on or just nuzzled into the sand. Growing to 45mm in a mostly rounded shape. <u>The ridges (called ribs)</u> sit closely together. Mostly creamy-grey/brown, but can be orange in colour.

*prickly cockle (Acanthocardia echinata) - has small spikey bits along the

ribbed areas of the shell. Often these are worn by the sea, but the bases can still be visible. Their ribs are set wider apart than the common cockle. Can be the most common found cockle on some shores. Grow larger than the common cockle, to 70mm NB the spiny cockle and rough cockles also have spines, but one is not as





clearly rounded in shape and both are rare in the UK, both can be larger than the prickly cockle (90mm).

Norway cockle/cocosen lefn

(Laevicardium crassum) - found on some South-Western beaches. Rounded-oval shell with feint ribs and orange coloured marking on the pale overall shell colour. Commonly found with its flaky, thin black outer covering (called the periostracum). Grows to 70mm long. NB the dog cockle (Glycymeris glycymeris) is a less commonly



seen rounded, patterned cockle found on some west coasts.

oysters/wystrysen (e.g. Ostrea edulis) – large, chunky, rounded, grey shell



with pearlescence and many overlapping layers. The native species is a lot less common than it used to be due to over fishing, pollution and invasive species. The lower shell is convex (cupped) and the top shell is flat. You might find this shell in parts, as it's a thickly-layered shell and the layers break up, but note there is a smaller, pearlescent, round oyster species group called saddle oysters, which could confuse.

NB look out for the more oval, deeper and frillier Pacific Oyster too, which is the farmed oyster, but can now be found breeding in the wild and is considered an Invasive species.



Tellins – two species. These are the small, shiny, pink or white, thin shells you often find in the wetter areas of a sandy beach. The animal has a muscular foot, which it uses to bury itself into the sand. It uses long syphons to keep contact with the sand surface collecting water and food. Small (20mm) angular-oval shells, rounded at the ventral edge, with the posterior edge more angular. The difference between the



two species - the thin tellin/cragen delyn denau (*Tellina tenuis*) and the Baltic tellin/cragen delyn yr aber (*Macoma balthica*) is most obviously seen when looking at the roundedness/how voluminous the Baltic is compared to the flatter thin tellin. Imagine a plumper animal inside the Baltic tellin.

Take photo of shape from above and, ideally, the side of beak showing depth

<u>Scallops</u> – <u>several species can be found with the king and queen being the biggest when found fully grown, to the variegated-type scallops of which there are several species</u>

Take photos showing overall shape, any frilling and depth.

King scallop/cragen fylchog (*Pecten maximus*) as well as being bigger when fully grown, has wider spaces between its ribs than the <u>queen scallop/cwin</u> (*Aequipecten opercularis*). Its convex shell is also deeper and at the hinge end the "ears" on this species are equal on both sides and square-ish. The ears on the queen scallop aren't quite as equal or square. Both can be orange to cream in colour, but



the queen scallop can also be many more colours (reds, purples) too. They can lose colour when older and worn. These animals swim by snapping their shells together and rock to nuzzle into sand to filter feed. They have many tiny ball-bearing-type eyes.

variegated scallop/gylfgragen amryliw (Mimachlamys varia) - a smaller



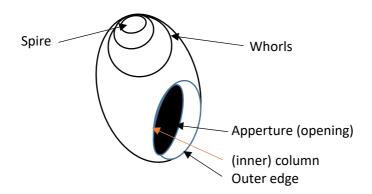
scallop (65mm) than both species, mentioned above, it looks longer in outline and has flattened spines along the ridges. It's often very colourful (reds, oranges and purples), and often has a speckled patterning. They have vastly unequal "ears". It uses byssus thread to attach to hard surfaces and within holdfasts. NB be aware there are other, smaller species, ridged with unequal ears and colourful etc.

A great additional resource for further help with shell ID is <u>Dr Ian Wallace's</u> resource for the Liverpool Bay Marine Recording Partnership.



Gastropods – look much more like snails (and slugs). The coiled gastropods tend to coil in a clockwise manner producing a right-handed opening.

Take photos showing overall shape, aperture and markings





common whelk/cragen foch fwyaf
(Buccinum undatum) — a big marine snail
(gastropod) at 100mm. Cream-brown usually
with ridges in line with the whorls. This is the

animal which lays the egg masses (right), most commonly found



washed up on shore in late winter.

red whelk/cragen foch goch (Neptuna antiqua) – very much similar to the



common whelk, but larger (150mm) and without the obviously ribbed shell. They can have an orange/red coloured shell, but sometimes are grey and only the inside (seen at the aperture) is tinged red. Their egg masses are made up of bigger, singular cases, and the mass as a whole, looks neater.



dog whelk/gwichiad y cŵn (*Nucella* lapillus) – These are creamy-white, grey

usually, but sometimes orange or yellow. Sturdy shells growing to about 40mm in length. They can look quite long, having a

pointed spire and a channel at the





aperture. Sometimes they are clearly ridged, but they can be found worn and smooth also. They can be very thickened at the aperture walls and the outer edge <a href="can have "teeth" (bumps). They have a clear channel at the end of the aperture.

necklace shell/cragen dorch (Euspira catena) - there are two species.



They can be tricky to tell apart but they are different in size. Pinky-brown, these are very rounded shells with a very large final whorl. They have brown dots

around the not particularly tall spire. These lay eggs in a mass they protect by creating a collar of sand in which to lay them. These empty



collars can sometimes be found in spring, sitting upright and relatively intact on sandy beaches.



edible periwinkle/gwichiad (*Littorina littorea*) — a rounded, lined (when small has some ribbing) mollusc, around 30mm in length. Mid to dark brown in colour, sometimes they'll be striped or rich red, but rarely. These generally only have lines or ridge but no coloured patterning. When smaller, the edge of their aperture and column differs in colour. *NB there are a few periwinkles, so note ridges, colour and spire height.*





top shells/top môr – there are a few different species, but they all have an iridescent part of their shell, visible at the spire/underneath, are striped or patterned and have a rounded spire area (most commonly). For ID help, note thickness of stripes or presence of zig zag patterning and size of shell.

Limpets – several types; all Gastropods, but not coiled like the above.

common limpet/llygad maharen (Patella vulgata) - shaped like a cone,

common limpets can be ridged, but also worn, they're usually cream-grey in colour but can been quite orange. Depending on where they've lived, they can be tall or flattened. *NB there are many other species of limpets, so look for size, spotted patterning, lined patterning.*



Cuttlefish "bones"/ "esgyrn" stifflog (e.g. Sepia officinalis) - different



species can be ID'd from the shape, but mostly it's common cuttlefish. These "bones" are actually their internal shell and indicates these animals, as well as squid and octopuses are molluscs!! The shells can be found all year round, but often midlate summer, once the adults have bred, they die. None of these large, intelligent molluscs live for very long.

Worms there are many worms living on and within the sediment and around rocky shores. Some might be found washed up (but

their ID features might not be on show) and for many more it's their built home that washes up.

*sand mason/saer y tywod (Lanice Conchilega) – this worm makes a flexible sheath to live inside and then decorates it with sand grains. It produces a multi-branched end, which sits out of the sand, the rest of the worm





within its sheath sits within the sand, when alive. Very often seen washed up and in groups, especially in the wetter sand areas.

<u>Pectinariidae worms (trumpet worms)</u> - look carefully and you could well find another tube which has been made by another worm, but this tube is a solid (if



fragile) structure. It's made from finder grains of sand and forms a smooth cone. NB note the end of the tube, as another worm (the ice cream cone worm lives in a similar smoothlooking tube which bends at the bottom, but this is often

broken off.

Acholoe squamosa There is one worm which can be identified to species if you find it in its habitat when that habitat has been washed up. This worm lives in the fissures on the ventral side of a sand star. The worm lives within the grooves, is the same colour as the sea star, but is possibly to find now you know it's there.

Take up-close photo of underside



<u>lug worm/abwydyn (e.g. Arenicola marina)</u> – these are actually still living rather than being washed up on shore. They make the squiggly poo mounds



on the shore (called casts). You can often find their burrow entrance marked by an indentation close to the coiled casts, which has just gone through its system and has been cleaned of bacteria. The worm lives in a U-shaped burrow, which links the indentation and the cast. NB the black lug is a different

species which can be identified by its neat coiled cast lower on the shore.



Animals that look like other things – plenty gets washed up that looks like it was a plant or piece of manmade fabric, plastic or foam.

Sponges of all sorts can look like other things. It's unlikely you will be



able to tell the majority sponges apart from each other (they can need microscopic inspection to ID), but knowing them from fabric, insulation foam etc can mean you don't overlook them altogether. The only way to tell is to keep picking things up for inspection – they feel spongey, unless considerably dried.

There are some fairly obvious ones which can be identified to a closer grouping:

A tree sponge species (*Haliclona*), is also called a Mermaid's glove. It has long, upward-reaching "branches" coming from an initial single "stem". It's beige in colour (sometimes greyish), nobbly with a few holes dotted along its length. It can be large and have many branches, but look out for smaller specimens, too.





*hornwrack/cornwyg (e.g. Flustra foliacea) is fairly easy to ID (there are



different species – but no need to know them). Hornwrack (a bryozoan) is a colony of animals and, if you look closely, you can see the individual spaces for each zooid (individual within the colony). They grow attached to the substrate first, then start making the leaf-like sections. They can live up to 12 years and grow only in the spring

and summer producing growth lines. These, when very newly stranded can smell like lemons.



Hydroids are also colonial animals. They begin with the initial individual, which becomes the stem and gives rise to the other zooids, each working in particular tasks (feeding, defending, breeding etc). They are much thinner in appearance and again, several species exist. On certain sandy shores, they replace seaweed for

attachment possibilities for other species and also when lying on the beach are covered by sand and can be dune-forming. NB hydroids and bryozoans can be really tricky to identify, even to choose between the two higher groupings.

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Take up-close photo of branching as well as overall colony

dead Man's fingers/Llaw farw (Alcyonium digitatum) - this is a soft coral

colony. Underwater, this looks like it's emerging, hand-like form coming from the substrate and when the tiny feeding tentacles are out it gives the colony a hazy margin, which looks like the fingers are dissolving in the water. On shore, it looks like a squidgy lump and will smell to high heaven. It's a cream-coloured squidgy, rounded, solid mass which can be well branched or not. When



seen close-up you can see the holes where the feeding tentacles emerge.



Jelly and jelly types















Images: NWWT; Charlotte Keen; NWWT; NWWT; marknthomasimages.co.uk; NWWT; NWWT

compass jelly/môr ddanhadlen (*Chrysaora hysoscella*) a medium sized jelly (300mm) with dark brown stripes coming from the centre of the "bell" (the rounded upper umbrella part) and lead to the edge, creating a compass-like array of lines pointing outwards. They don't always have these stripes, however, so look for brown edging at the outer edging of the bell.

moon Jelly (*Aurelia aurita*) a medium jelly (400mm) with pink circles at the centre of the bell area. Again, not always clearly visible or not as circles.

<u>lion's mane/slefren las (Cyanea capillata)</u> this jelly has a thick mass of orange-red tentacles, which give the jelly an overall orange hue, when the tentacles can be seen under the bell on shore. It can have an undulating out edge too, making it look frillier than rounded. This can grow to very large sizes both at the bell (500mm-over 1m) and in tentacle length (up to 32metres!).

<u>blue Jelly (Cyanea lamarckii)</u> related to the jelly above, this has similar features, but which are deep blue in colour. It's a smaller jelly too at (300mm).

<u>barrel jelly or football jelly (*Rhizostoma octopus*)</u> a thick, chunk-looking jelly. A hazy translucence it can have a hue of orange or blue colour overall. The tentacles are often clear of colour. This can grow to large sizes (800mm-1m) and can be called the football/bin lid jelly too.

mauve stinger (*Pelagica noctiluca*) a small jelly (100mm) this is a rarer find on shore. It has a pale purple-pink overall colour and is around the blue jelly size in general.

<u>crystal Jelly (Aequorea victoria)</u> a newcomer jelly. Over the past couple of years more of these have been seen. A translucent jelly, it has fine white lines coming from the centre of the bell and leading to the edge, forming a fine pattern similar to the compass in pattern. Can grow to 250mm.



by-the-wind-sailors/hwyl fôr (Velella velella) - arriving on warm currents

these are only seen occasionally, washed up on the shore. They are small (length up to 60mm) They are not actually jellies, but are a similar group, called a siphonophore. These, when just arrived or still wet are bright blue with a clear <u>upright membrane on its surface</u> which catches the wind and moves it, as do the currents. Once dried they can be mistaken for clear plastic sweet wrappers.



Portugese man-o-war/chwysigen fôr (Physalia physalis) - a

siphonophore, like the above, they sit on the water's surface being moved by



both the currents and the wind. Not as common a visitor to our shores, they arrive on warmer waters. They are striking when newly stranded with pink and blue colouration on their inflated surface. Very venomous and local councils keep an eye on numbers arriving to prepare to close beaches. Like

many jellies (this is not a jelly) the sting can continue to harm when the colony is dead.

sea gooseberry/cwsberen (Phylum

<u>Ctenophora</u>) – seen on the wet sand these can be very difficult to spot unless in numbers. In the water they have iridescent hairs in rings around its body, which create colourful waves as it moves. Called comb jellies they're actually not jellies, but form their own Phylum called *Ctenophores*.



A great additional resource for further help with ID is the <u>Marine Conservation</u> <u>Society's Jelly ID page</u> and <u>for the rarer species</u>.





Tentacles €olumn

Related to jellies and corals, anemones can be found stranded, but generally only after a storm.

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Take up-close of column and tentacles, if seen.



beadlet anemone/buwch goch (*Actinia equina*) – rarely seen stranded. They can be different colours (red, orange, brown, green) but have one block colour (with occasionally small green dots in line). They could be showing blue beads around the base of their tentacles.

snakelocks anemone/anemoni nadreddog (Anemonia viridis) – doesn't fully retract its tentacles, so might be more likely to be caught out in a storm. As well as the bright green tentacles on the upside down, washed-up specimen on the right, they can be grey-pink in colour too. The column is orangey-brown.





<u>Sagartia-type anemones</u> – some of the anemones in this group have now had name changes, but point to the type of anemones which might help with ID. They can be common in sandy places and can be loosened in stormy weather and washed in. Look for a translucent, but pale orange column with faint vertical stripes.

Take up-close of column and tentacles, if seen.



Crustaceans (crabs, prawns, barnacles, sandhoppers etc)



Crab moults – all crustaceans moult to grow. Crabs split open at the bottom near the tail, move out, pump themselves up with water to become bigger then spend time (hours) hardening their new carapace. You can find dead crabs on the shore (not nice smell), but most often it'll be a moult (smells

of the sea). Also see crab moult video on the North Wales Wildlife Trust Beached! webpage

shore crab/cranc gwyrdd (Carcinas Maenas) - a common crab on



majority of shores. Most commonly green (but can be blue or orange) and yellow dots over the carapace and when it's been sat in sun it can cook to turn red all over or even bleach white. The carapace (width to 100mm) is broad at the front then tapering, slightly, towards the tail end, with 5 spikes either side of the eye.

edible crab/cranc goch (Cancer pagurus) — a red-coloured crab unchanging if left in the sunshine. this crab is described as having a pie crust shape carapace. Their claws have a black tip and are very chunky. They can grow into very large crabs (up to 200mm carapace width).



hermit crab/cranc meudwy (e.g. Pagurus

<u>bernhardus</u>) – these aren't actually crabs, but more closely related to lobsters. There are plenty of species, which are difficult to ID. They start in shells as small as flat periwinkle shells and some species can move up to shells as large as common whelk shells. Moults consist



of claws and legs, but no carapace. Often, they are orange in colour and bobbly.





spider crab/cranc heglog (Macropodia rostrata) — coming in to breed in the summer months, these large, leggy crabs can be found washed up in the surf; the male amorously waiting for the female to moult, which is the only time crabs can mate. Their carapace is oval-round, orange in colour and quite spikey. NB there are a lot of species of spider crabs which can be tricky to ID. Some are a lot smaller, others can be coated in a lot of algae or sponges.

Take overhead photo of carapace and up-close of front eye area

velvet swimming crab/cranc

<u>llygatgoch (Macropipus puber)</u> —
they have special <u>paddle-shaped tips</u>
<u>on their back legs</u> (as do all swimming crabs). They have a blue/purple hue to their legs and claws and bright red eyes (if you're not looking at a moult). The velvet in the name points to the brown fur-like coating on the carapace.



prawns/corgimwch (e.g. Palaemon serratus) - there are plenty of different



species of prawns and shrimps. They're generally translucent or camouflage-coloured (nb if seen washed up they're likely to be away from what they will be have been camouflaged against). Some have stripes on their back and legs. Being crustaceans, they also need to moult to grow and you can sometimes find the back or front end (separately) on the lower strandlines.



goose barnacles/gwyran (e.g. Lepas anatifera) – found attached to floating wood, but commonly, these days, to marine plastic. There are several species of goose barnacles with different layout of shell plates on the end of long brown "necks". They float



with currents and can harbour other animals which are only found within their colonies. They ARE crustaceans, despite looking mollusc-like.

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Take up-close pictures of each side of one individual

Starfish – not actually fish, they're related to urchins - several types.

Can have more than 5 arms, but 5 is common – they can grow another if lost. Also see video and PDF on the North Wales Wildlife Trust Beached! webpage



common starfish/seren fôr (Asterias rubens) — quite large and orange with 5 arms. The starfish most people think of when thinking about starfish. Their 5 arms have eyes on the tips of them. Hundreds-thousands of feet on their central side. Their dorsal side is covered with white spines, making them look bobbly. They can grow new arms, a new stomach if left behind in the mussel shell they

were feeding on.

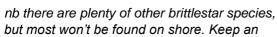
* sand star/seren y tywod (Astropecten irregularis) these are pinky-

orange sea stars with a smoother dorsal surface than the common star. They have a distinctive edging to their 5 arms which looks like the stitching on a blanket. This is the species which can harbour a particular worm species in the grooves on its underside.





sand brittle star/seren frau sp. (*Ophiura* ophiura) – has a clear central disc on the underside of which lies its mouth. It has 5 arms radiating out from this which look a bit stiffened. There are no long spines on the arms of this species and it is sand-coloured with no coloured patterning.







eye out for one you might see the <u>common brittle</u> <u>star/seren frau (Ophiothrix fragilis)</u> – similar to overall body form as the sand star, but this species has serrated spines on its arms and disc with coloured bands on the arms. They can form dense aggregations, but in the intertidal zone often be seen alone.



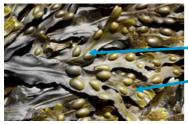
Sea squirts – lots of different species. They're difficult to ID and then when found on shore the features you would use to ID can be totally reduced. They're one of the things that blob of jelly that you found on shore could be. Individual squirts can often looking see-through and jelly-like. They often have a coloured area within them and are small and rounded, generally. Some,

however might not look translucent at all, and can be wrinkled and "warty". Others will have a clear "stalk", but some might just be a patterning on a shell, as the moisture has gone from the animals and only the patterning remains (right).





Sea weeds and algae – several different species. Good to know that there is zonation in seaweeds with the wracks usually higher up the shore then the kelps in deeper water.



bladder wrack/gwymon codog mân (Fucus vesticulosus) — this seaweed has "bladders" (rounded air sacks) in pairs at some point along the frond and either side of a clear midrib. They can be a bit battered when washed up on shore, so inspect the specimen for these ID features. Usually olive-brown, but

can turn orangey.

egg wrack/gwymon codog bras

(Ascophyllum nodosum) – this also has bladders and more often than not they're bigger than the ones on the species above. They're certainly big enough to extend wider than the thin strap-like fronds.



serrated wrack/gwymon danheddog (*Fucus* serratus) — also called toothed wrack, this seaweed has flat fronds with a jagged edge and a faint midrib. It can also turn orange with age but is general a yellowy-brown colour anyway.



kelps/môr-wiail (e.g. Laminaria digitata) -

various species, found growing below the intertidal area, usually, but can be seen washed up on beaches all over, especially at certain times of year.

These are the large rich brown seaweeds which can be habitat for many

(shelter or substrate) and plenty will eat off them. Look for the shape of the holdfast (the bit it uses to attach to the rocks), structure of the frond (leafy bit) and whether the stipe (stem type structure) is rough or smooth to help to ID.



When you're a seasoned surveyor you can investigate the holdfast for many other species to record too!

Take overhead photo of overall shape and holdfast, if attached and the stipe.



Eggcases on shore – including the whelk and necklace shell eggcases (see Gastropod species), you'll find shark and skate eggcases, also called mermaid's purses. Our resources on the Project SIARC web page can help you to ID each species and direct you to how to record these separately, as part of the Shark Trust's Great Eggcase hunt.





<u>Look for whether they have "tendrils" or "horns", look for an additional fringing</u> and take note of the size when they're soaked.