Making a record and then Sending your record to where they will be useful for conservation etc.

Some of the recording groups use their own record sheets to assist recorders. A version is available from www.rECOrd-lrc.co.uk

The following information is required for every recording trip

- Your name
- Date of the observation
- Where it was found e.g. Crosby Beach.
- List of the species you saw

The following information is very useful, but not essential

- A note if any species was particularly common
- A note if any species were observed alive, or, recently dead, e.g. shells with body parts still inside.
- Map grid references

The records should be sent to your recording group Organiser, if you have one, or to the appropriate Local Record Centre — which is where all the recording groups send their collated records.

North Wales to Cofnod see www.cofnod.org.uk
Wirral to rECOrd info@record-lrc.co.uk
Liverpool to Southport to Merseyside Biobank see www.merseysidebiobank.org.uk
Fylde to LERN see http://www.lancspartners.org/lern/

LBMRP

Liverpool Bay Marine Recording Partnership

A guide to Life on Sandy Shores between Colwyn Bay and Fleetwood

written by Ian Wallace,
World Museum Liverpool

guide concept Kathryn Turner,
Fylde Coast Marine Life Project

Images mainly from World Museum Liverpool, and Kathryn Turner

NATIONAL MUSEUMS LIVERPOOL

ZOOLOGICAL GARDENS CHESTER

This booklet aims to enable the identification of the common larger marine life found on the beaches between Colwyn Bay in the south and Fleetwood in the north.

It is aimed at groups and individuals who are taking part in biological recording.

Additional notes to assist with the identification of difficult species and rarer species have been prepared and are available on-line from the Liverpool Bay Marine Recording Partnership pages, one of the hosted groups on the rECOrd web site.
www.record-lrc.co.uk

Limitations to use

This booklet does not include dead fish, birds or mammals
If used away from the area of coverage you are quite likely to encounter species that are not in this guide.

The booklet is for sandy shores it does not cover species found exclusively on hard rocks, breakwaters, sea walls, marine lakes and in rock pools.

Health and Safety

The greatest danger is being cut off by a rising tide so you are strongly recommended to only investigate on a falling tide. There are quick sands and also sand-covered soft mud, so if you start sinking in — retreat.

Three species of Jellyfish, (Lion's Mane, rare Blue Lion's Mane and internal parts of the Barrel), and the Weever Fish can give painful stings and they should not be handled. Piles of marine debris may conceal sharp man-made objects.

Dead and dying life is common and presents a food-poisoning risk so clean hands with soap and water or antiseptic wipes before touching the mouth or food. Before starting, cover cuts and abrasions with 'Elastoplast'.

All local sewage is treated so sewage-related items should be rare but note that dog droppings are present on many beaches.

Not in this guide?

If you think you have found something not illustrated in this guide, or you want you identifications checked then World Museum is keen to help you.

Send a photograph by email or (post) to
steve.cross@liverpoolmuseums.org.uk

If it is something that will not rot, such as a shell, we would encourage you to keep examples as voucher specimens and get them to the Natural History Centre, World Museum, William Brown Street, Liverpool, who will be able to check your identifications before returning your specimens, but phone first 0151 207 0001 to check someone who knows about shells will be on duty in the museum to receive your finds.

Ian Wallace
World Museum Liverpool
William Brown Street, LIVERPOOL
ian.wallace@liverpoolmuseums.org.uk

Equipment

Carrier bags, Garden trowel, Kitchen sieve, Seaside shrimping net or aquarium equivalent, Cat-litter tray. (Hand lens good to see more of your finds) Smaller bags are useful to build up a collection of durable finds.

Shells can be collected into any suitable water-proof bag e.g. Supermarket Carriers

Animals that are alive in the sand and in water

Animals that are buried can be revealed by digging up a trowel-full of sand placing it into the kitchen sieve then washing the sand through the sieve by placing it up to its rim, but not above, in water and moving it from side to side. Note that this does not usually work for stiff mud.

Any net will catch animals that cannot pass through its mesh. Fine nets clog, but coarse nets let too much escape. A mesh of about 2 mm is good.

To see your captures easily, place the contents of your net or sieve into a little water in the cat litter tray. The tray is also useful to lay out other beach finds for examination.

Best places to look for buried life

Life can be sparse in the dryer sands of the upper shore. Wet sand, for example at the edge of channels can be good but NB such areas can also be quick sands.

Keeping your animals alive

It can be interesting to watch the animals you have dug up re-bury. This can be done on the beach or by putting them into a bowl filed with sand and water. However, release them afterwards as sandy-shore life is very difficult to keep in aquaria.

..... and finally

You will encounter lots of black sand under the surface, and shells that are buried also go black. The black sand may smell of bad eggs or have a metallic tang. This is not pollution, but the result of natural decay processes in the sand.

A Guide to Common Shells

found cast up on beaches between Colwyn Bay and Fleetwood

Note - Colour may vary from that shown and they may be blackened
- The size given is the ***largest*** that species normally grows
* indicates there are rarer species that also look a bit like this
(These are covered by additional notes available from www.record-lrc.co.uk)

Centimetres

1 2 3 4 5 6 7 8 9 10

Common Whelk
Buccinum undatum
Up to 9 cms
(see also page 6)

Red Whelk
Neptunea antiqua
Up to 10 cms
(see also page 6)

Dog Whelk
Nucella lapillus
Up to 3.5 cms

Sting Winkle
Ocenebra erinacea
Up to 4 cms

Common Winkle *
Littorina littorea
Up to 2.5 cms

Flat Winkle
Littorina obtusata
Up to 1.5 cms

Tower Shell
Turritella communis
Up to 5 cms

Wentletrap
Epitonium clathrus
Up to 3.5 cms

Grey Top Shell (group)
Gibbula cineraria
Up to 1.5 cms

Necklace Shell *
Up to 3.5 cms

Common Pelican's Foot
Aporrhais pespelicani
Up to 5 cms

Laver Spire Shells (group) *
Hydrobia ulvae
Up to 0.5 cms

Centimetres

1 2 3 4 5 6 7 8 9 10

Common Limpet
Patella vulgata
Up to 4 cms

Barrel Shell
Acteon tornatilis
Up to 1.5 cms

Icelandic Cyprine
Arctica islandica
Up to 8 cms

Sand Gaper
Mya arenaria
Up to 8 cms
(see also page 6

Otter Shell
Lutraria lutraria
Up to 10 cms
(see also page 6)

Blunt Gaper
Mya truncata
Up to 6cms

Pod Razor *
Up to 15 cms

Curved Razor *
Up to 15 cms

Bean Razor *Pharus legumen* Up to 8 cms

Queen Scallop *
Aequipecten opercularis
Up to 6 cms
(see also page 6)

Variegated Scallop
Chlamys varia
Up to 5 cms
(see also page 6)

Oval Piddock
Zirfaea crispata
Up to 7 cms

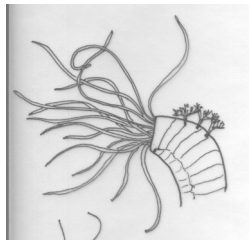
Common Oyster
Ostrea edulis
Up to 10 cms.

Foreign Oysters
Up to 10 cms

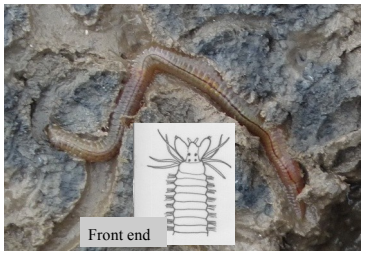
White Piddock *
Barnea candida
Up to 6 cms

Worms many kinds are found buried, most are small and difficult to identify these are some of the larger or more obvious

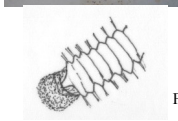
Lugworm
Arenicola marina
Up to 25 cms



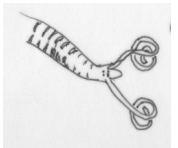
Sand Mason (front end)
Lanice conchilega
Up to 30 cms

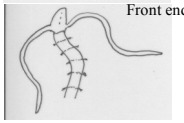


Estuary Ragworm
Hediste diversicolor
Up to 25 cms
Very common in mud and muddy sand

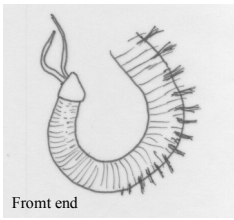


Cat Worms
Nephtys species
Up to 20 cms
Very common in clean sand

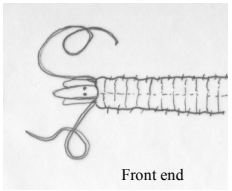




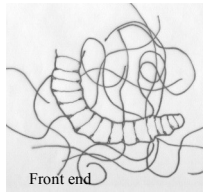
Spionid Worm (and similar)
several species
Small thin worms up to 5 cms with two waving tentacles



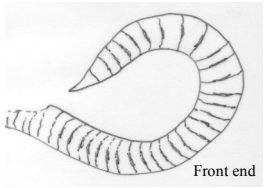
Scoloplos armiger
Up to 15 cms
Flesh-coloured worm with prominent bristly lobes on each segment, but no eyes



Scolelepis squamata
Up to 8 cms
Bluish green body and 2 waving tentacles



Red Threads Worm
Cirratulus cirratus
Up to 12 cms
Red threads writhe



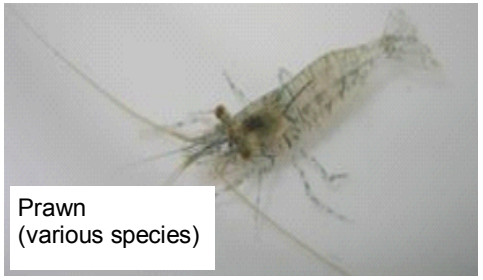
Capitella capitata
Up to 10 cms
Looks a bit like a small earthworm

Worm Tubes a few millimetres thick
Tubes made from sand grains are common in sieved sand samples.

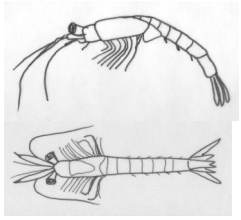
Tubes of coarse grains ,with a crown will be from young Sand Masons or a worm called *Owenia*.

Tubes of very fine grains will be from Spionid Worms or another worm called *Magelona*.

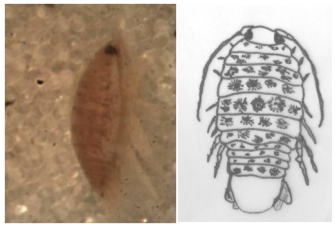
Brown Shrimp
Crangon crangon



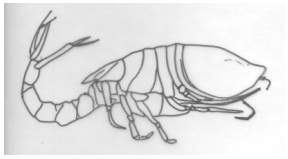
Prawn
(various species)



Mysid (various species)

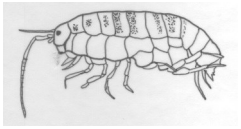


Eurydice pulchra
NB 8 mms maximum size
(fast swimmer and burrower)

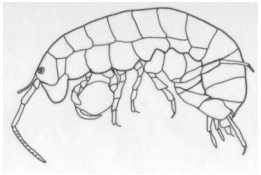


Cumacean
(various species)
1 cm maximum size

Idotea
Up to 2 cms
Lives on drifted seaweed

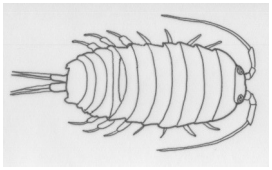


a Sand Hopper
Up to 1.5 cms
Talitrus saltator



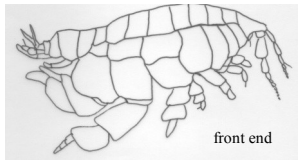
a Sand Hopper
Up to 2.5 cms
Orchestia gammarellus

Hoppers live under debris stranded at the top of the beach

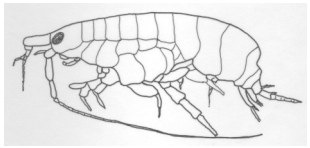


Sea Slater
Ligia oceanica
Up to 3 cms
Under debris near rocks and sea walls

Corophium
Up to 1 cm
Abundant in 'u'-shaped burrows in mud and muddy sand



Haustorius arenarius
Up to 1 cm
Eyelesss fast burrower in clean sand



Bathyporeia pelagica
Up to 5 mms
Fast burrower in sand

These and *Haustorius* and *Bathyporeia,* the Hoppers *and Corophium* are all members of a group of Crustacea called Ampipods

Amphipods

Centimetres

1
2
3
4
5
6
7
8
9
10

Common Mussel
Mytilus edulis
Up to 5 cms

Striped Venus
Chamelea gallina
Up to 3 cms

Faroe Sunset Shell *
Gari fervensis
Up to 4 cms

Pullet Carpet Shell *
Venerupis senengalensis
Up to 5.5 cms

Common Cockle
Cerastoderma edule
Up to 4 cms

Prickly Cockle
Acanthocardia echinata
Up to 6 cms

Banded Wedge Shell
Donax vittatus
Up to 3 cms

Artemis Shell
Dosinia species
Up to 5 cms

Peppery Furrow Shell
Scrobicularia plana
Up to 4.5 cms

Rayed Trough Shell *
Mactra stultorum
Up to 5 cms
(less common white form on right)
(*see also page 6*)

Thick Trough Shell *
Spisula solida
Up to 4 cms

Cut Trough Shell *
Spisula subtruncata
Up to 2.5 cms

Baltic Tellin
Macoma balthica
Up to 2 cms

Thin Tellin *
Tellina tenuis
Up to 2 cms

White Furrow Shell *
(group) *Abra alba*
Up to 1.5 cms

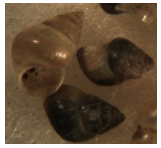
Extra Notes

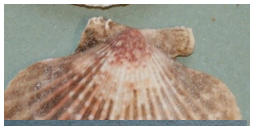
Common Whelk (LEFT) has widely separated transverse ridges and longitudinal ridges at top of shell.
Red Whelk (RIGHT) has fine transverse ridges and no regular longitudinal ridge-

Common Winkles smaller than 1.5 cms might be **Rough Winkles**

Common Necklace Shells smaller than 3 cms might be **Alder's Necklace Shell**

At the edge of salt marshes dumpy **Laver Spire Shells** might be **Dun Sentinels** ***Assiminaea grayana***





Queen Scallop has square shoulders and two'ears'

Variegated Scallop has sloping shoulders and one ear
(NB beware ears can get knocked off)

The **Great Scallop (*Pecten maximus)*** has two ears and very wide ridges. (Usually on our beaches from a discarded sea-food meal)

Beach-worn **Otters** look like **Sand Gapers**

Otter
Front and back equally round
Bottom flattened

Sand Gaper
One end more pointy than other
Bottom rounded

Young **Otter** Shells are very thin-shelled and fragile

The radiating grooves and serrated shell edge of the **Wedge Shell** are unmistakeable

Baltic Tellin
(LEFT) has a much fatter shell than the
Thin Tellin
(RIGHT)

RayedTrough Shells (white form) are similar to **Thick Trough Shells**.

Rayed Trough Shell(TOP) is shiny and quite fragile with a sharp edge
Thick Trough Shell (BOTTOM) is dull, and strong with a rounded, often chipped, edge

BEWARE Whitish bivalves smaller than 1 cm are usually difficult to identify

A Guide to Animals living in pools and channels on beaches, and buried in the sand and mud between Colwyn Bay and Fleetwood

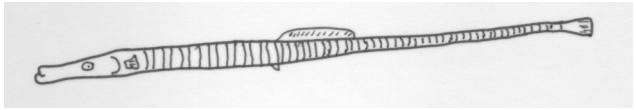
Note - All the species shown on previous pages may become stranded in pools and channels. These pages show species which live there naturally

Goby (Sand & Common)
Pomatoschistus species

Lesser Weever
Echiicthys vipera
WARNING STINGS BADLY

Shanny
Lipophrys pholis

Young Flatfish



Pipefish

Most shells come from animals living off-shore, or at very low tide.

Living buried higher up the beach are
1. Baltic and **Thin Tellins**,
2. Common Cockles ,
3. Peppery Furrow Shells
4. Laver Spire Shells

Sea Gooseberry
Pleurobrachia pileus
(These beautiful animals can be very common)

Shore Crab
Carcinus maenas
Larger crabs are green but younger crabs may be pale brown to dark brown and marbled

Bladder Wrack*
Fucus vesiculosus

Note that Hybrids are very common

Spiral Wrack*
Fucus spiralis

Channelled Wrack
Pelvetia canaliculata

Knotted Wrack
Ascophyllum nodosum

Toothed Wrack
Fucus serratus

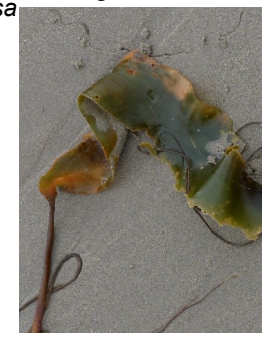
Sea Oak
Halidrys siliquosa

Sargassum Weed
Sargassum muticum

Purple Laver
Porphyra umbiicalis

Mermaid's Tresses
Chorda filum

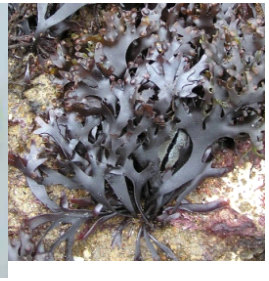
Polysiphonia
Growing on Sea Oak (also grows on Knotted Wrack)



Kelp
Laminaria species

Sea Lettuce
Ulva lactuca

Gutweed
Ulva intestinalis



Irish Moss
Chondrus crispus

Masses of single celled **Diatoms** stain the sand surface brown

A Guide to Animals (other than shells) and Seaweeds, found cast up on beaches between Colwyn Bay and Fleetwood

Note - Colour may vary from that shown
- This guide does not cover dead fish, birds, or mammals
* indicates there are rarer species that also look a bit like this
(These are covered by additional sheets available from www.record-lrc.co.uk)

Masked Crab * (female)
Corystes cassivelaunus
Long claws of male shown to right

Hermit Crab (in a shell)
Pagurus bernhardus

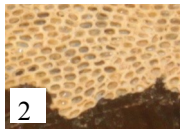
Edible Crab
Cancer pagurus

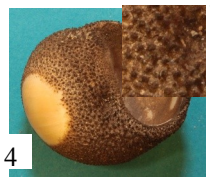
Smooth Swimming Crab *
Macropipus holsatus
(colour always pinky-white)

paddle-shaped back leg of Swimming Crabs (left)
pointy back leg of Shore Crab (right)

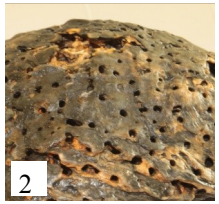
Shore Crab
Carcinus maenas
(NB colour very variable)

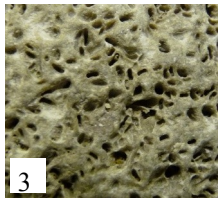
Velvet Fidlder
Liocarcinus puber
(many patches of very short fine bristles)





Things on shells and rocks (1) Barnacles (2) Sea Mat (highly magnified) (3) Worm tubes
(4) Hermit Crab Hydroid *Hydractinia echinata* (inset highly magnified)
(5) Bivalve shell bored by predatory Necklace Shell





More things on rocks and shells (1) Piddock borings
(2) Holes made by Boring Sponge *Cliona celata* (magnified)
(3) Slots made by Boring Worm *Polydora* (magnified)

Cuttle Bone
Sepia officinalis
(pecked by birds)

Lugworm (cast and feeding hole)
Arenicola marina

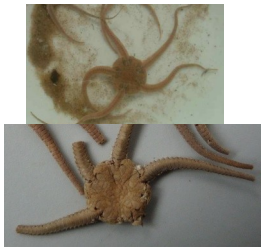
Cone Worm tubes
Pectinaria species

Sand Mason (Tubes) *Lanice conchilega*
(RIGHT on beach when worm is alive)

Sea Mouse (RIGHT is underside)
Aphrodita aculeata

Common Starfish
Asterias rubens
(inset detail of arm)

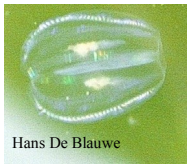
Sand Star
Astropecten irregularis
(inset detail of arm)



Sand Brittle Star *
(*Ophiura* species
(dried specimen below)

Heart Urchin (de-spined test)
Echinocardium cordatum *
(right picture with spines)

Purple-tipped Urchin
(test with a few spines)
Psammechinus miliaris



Sea Goose-berry (about 2cms)
Pleurobrachia pileus

Lion's Mane Jelly
Cyanea capillata
WARNING STINGS

Compass Jelly
Chrysaora hyoscella

Moon Jelly
Aurelia aurita

Barrel Jelly
Rhizostoma pulmo

Thornback Ray egg-case
Raja clavata

Cuckoo Ray egg case *
Leucoraja naevus

Dogfish egg-case (2 species) *

Common Whelk Egg Cases *
Buccinum undatum

Scoloplos armiger worm egg cocoons
(worms live buried in the sand)

Necklace Shell
egg ribbon

Horn Wrack *
Flustra foliacea

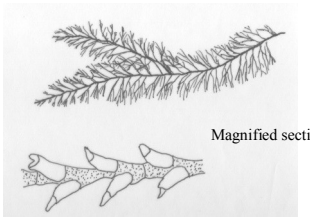
Tree Sponge
Haliclona

Dead-man's Fingers
Alcyonium digitatum

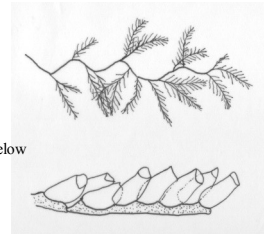
Mud Fingers
Alcyonidium parasiticum

Hydroid Roll (three common and distinctive constituents below)

Herring-bone Hydroid
Abietinaria abietina



Sea Fir *
Sertularia argentea



Spiral Hydroid
Hydrallmania falcata

Breadcrumb Sponge
Halichondria

Honeycomb Worm
Sabellaria alveolata

Detached pieces and intact reef on right and close-up