LIVING THINGS AND HABITATS

Chichester Harbour is a special place for wildlife, with a wide variety of living things, plants and animals.

Some are very easy to spot, whereas others may be hidden in the low tide mud or in the water, making them less obvious.

The Harbour has many different habitats: places and environments where plants or animals naturally live and grow.

Habitats must provide everything essential for survival. For living things to survive they need **food, sunlight, water, shelter** and **safety** and **somewhere to reproduce.**

On the coastline: shoreline, mudflats and sand dunes.

On the land: grasslands, woodland and streams.

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HARBOUR HABITATS

LET'S LOOK IN MORE DETAIL AT THREE HARBOUR HABITATS

HABITAT 1

Fishbourne stream: A freshwater habitat

Fishbourne stream flows through beautiful and tranquil wildflower meadows. The stream runs into the sea water habitat of Chichester Harbour.

What living things are in Fishbourne stream?

This stream has very clean water so a wide variety of freshwater animals and plants can live here. The stream flows over a stony streambed. At the sides are plants that are adapted to grow in freshwater, such as watercress and yellow flag iris.


(Joost.J.Bakker Wikimedia)

Yellow flag iris plants are adapted to live in damp conditions on the stream bank.

Southern marsh orchids grow in damp meadows. Many different grasses and flowering plants grow in Fishbourne Meadow.

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HABITAT 1

WHAT ANIMALS LIVE IN THE STREAM AND MEADOW?

The stream has several species of fish, the common minnow and the young of fish from the sea, like flounders and eels. These young fish can then grow in the sheltered stream instead of the more challenging seawater habitat. Young flounders are transparent and can hide themselves among the stones on the bottom of the stream. The young eels, called elvers, will eventually swim all the way to the Sargasso Sea in the middle of the Atlantic.

Minnow

Minnows are small fish that feed on insects, water snails, freshwater shrimps and fish eggs. Predators of the minnow include the brown trout and birds like herons.

Flounder

A juvenile transparent flounder.

The most common freshwater creatures are freshwater shrimps that feed on dead animal and plant matter. Water snails, leeches and water boatman find shelter among the plants and stones of the stream. Insects like caddisfly, dragonfly and mosquito spend the first stages of their lifecycle underwater as eggs and nymphs (larva). After metamorphosis they emerge from the stream to live as flying insects in the meadow.

Elvers

Fresh water shrimp

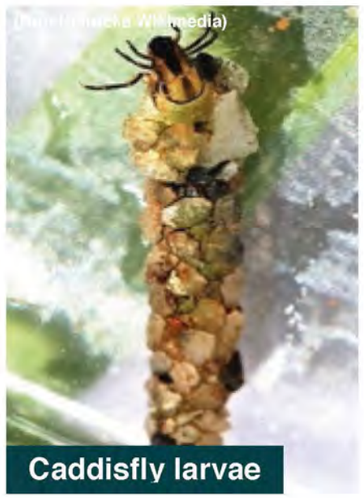
(Tony Hisgett Wikimedia)

Common Hawker

This dragonfly is called a Common Hawker. During the first stages of their lives these insects spend a year or more in the stream. As adults they only live for a few weeks. in this short time, they eat, mate and the females lay eggs in the freshwater of the stream or nearby ponds.

Water vole

Water voles make burrows in the stream bank. They are herbivores and like to sit and eat in the same place, making piles of nibbled grass and stems on the bank. Sadly, they are under threat because freshwater habitats are disappearing from the countryside.



Caddisfly larvae

Caddisfly larvae make cases by spinning together stones, sand, leaves and twigs. Caddisfly adults are small moth-like insects. Underwater their larvae are ferocious predators!

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HABITAT 2

Harbour shorelines

The shoreline is where the sea meets the land and is a type of beach or seashore, with shingle and flint stones at the top and mud lower down. Chichester Harbour has 53 miles of shoreline along 4 sea channels.

The shoreline can be a challenging habitat to live in! It is constantly changing from wet to dry as the tide rises and falls. It is often windy, and at low tide it can be very hot or very cold. There are also many bird predators such as gulls and crows. The animals of this habitat have evolved to cope with these challenges – for instance, the shoreline crabs and shrimps have strong outer shells for protection and bodies that can squeeze into small spaces under stones to hide.

Pipistrelle bat

The pipistrelle bat hunts just after sunset for insects along the shoreline. During the day it roosts (sleeps and rests) in tree hollows or house roof spaces.

Turnstones

Turnstones on the strandline hunting for a tasty invertebrate meal.

At the top of the shoreline is the strandline: a mark left by the high tide of seaweed and litter washed onto the beach. Sand hoppers and seaweed flies live among the debris here, feeding on dead and decaying matter. Many of the creature that live on the shoreline are invertebrates: animals that do not have a backbone. Predatory insects like spiders and beetles feed on the sand flies and hoppers in the strandline. Many bird species like turnstones and mammals like pygmy shrews and bats also hunt along the shoreline looking for a ‘tasty’ invertebrate meal.

Sand hoppers

Sand hoppers have excellent jumping skills – they do this by tucking their body under their tail and then quickly flicking it out, sending them rocketing into the air!

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HABITAT 2

WHAT LIVES ON THE SHORE?

Growing below the strandline are brown and green seaweeds and a type of grass called cord grass. Seaweeds are a type of algae and technically are not plants because they do not have roots, stems and leaves. Among these plants live shore crabs and two types of sea snail: periwinkles and spire shells.

Bladderwrack is a brown seaweed that attaches itself to stones on the shoreline.

Shore crabs are decapods (10 legged) and move in a sideways motion. They aren't exactly picky eaters and will feast on anything and everything they come across, including seaweed, periwinkles and even smaller crabs.

Oystercatchers are a type of bird called a 'wader'. They feed on shellfish and worms, using their long orange beaks to probe into the mud.

Periwinkles are shellfish and feed on seaweed using their grating tongue, called a radula.

A green seaweed called sea lettuce.

HARBOUR MUDFLATS

Below the shoreline are the large banks of mud called mudflats. Only a few species of creatures can be found living here, but they are there in very large numbers. One square metre of mud might contain thousands of tiny spire shells. Spire shells live on the surface, but many creatures such as the mud shrimp and cockles burrow into the mud and are hidden. Ragworms tunnel down deeply, while lugworms build their tunnels nearer to the surface. Sometimes mats of green seaweed can be seen covering the mud and shoreline, particularly during the summer.

Ragworm

Spire shells

Cockle

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HABITAT 3

The seawater

Chichester Harbour is part of the UK's coast and is connected to the ocean. Every single day millions of tons of seawater flood into Chichester Harbour from the Solent through the narrow entrance between East Head and Hayling Island.

Lobster

Sea orange sponge

Seals

It takes seven hours for the sea to fill the channels of the Harbour. Then the tide turns and for five hours the water pours out again leaving only a trickle of water and exposing vast areas of mud, saltmarsh and shoreline. This process happens twice a day and every day of the year!

The sea is a particularly important habitat for fish, shellfish and other invertebrates such a sea anemones and crabs. At high tide when the Harbour is full, the great expanse of water teems with life. Many species of fish can be found such as bass, flounder, mackerel, mullet, and tope. Swimming alongside the fish you may be lucky to catch a glimpse of the harbour seals.

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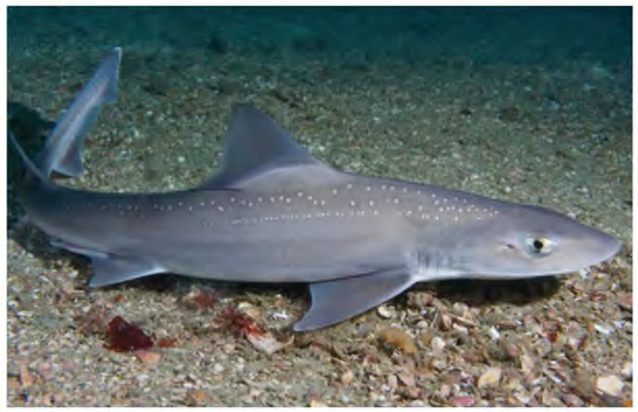
HABITAT 3
WHO LIVES IN THE SEAWATER (MARINE) HABITAT?

Snakelock anemones are flower-like animals that attach themselves to rocks and other hard surfaces. They wave their stinging tentacles in the sea currents to catch shrimps, sea snails and even small fish.

Cuttlefish are carnivores that hunt fish, crabs and prawns. These amazing animals are common in the Harbour and after marine mammals are thought to be one of the most intelligent sea creatures.

Sea Bass live in the Harbour and start life here as tiny balls that float on the surface of the water, feeding on the nutrients in the seawater. As they grow, they feed on small fish and worms and on each other! Adults can grow to 100 cm long. Only the lucky ones survive to swim out to sea where they might spend several years growing before returning to the Harbour to spawn (reproduce).



Smooth-hound sharks are grey to grey-brown, often with white spots. They like to eat crustaceans such as crabs and lobsters, prawns and shellfish. Adults can grow to 164cm. Don't worry they don't hurt or like to eat humans!!!

Seals are marine mammals and cunning predators, that hunt fish and crabs. They can spend long periods under water searching for food but need to come to the surface for air. They mate under water and the female gives birth to a single pup. The pup can swim within a few hours of being born.

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