Fish

Photo: Department of Fisheries WA

What is a fish?

Fishes are a large and varied group of cold blooded, aquatic animals that live under water. They come in a range of shapes, sizes and colours. Whilst fishes vary in these areas they have the following features in common:

- They live in water
- Have a backbone
- Most breathe using gills
- Most have scales
- Most move using fins

There are some exceptions to these generalisations, for example, some species of eels have no fins.

There are 3 main classes of fishes:

Bony fish – Have a skeleton made of bone, scales on the outer of their body and a single pair of gill openings. The majority of fishes are categorised as bony fish with over 20,000 species in total. Herring and Tailor are an example of bony fish.

Cartilaginous fish – Have a skeleton made of cartilage, skin covered with teeth-like denticles which makes their skin extremely tough and abrasive (they don't have typical fish scales) and have between five and seven gill slits. Sharks and rays are an example of cartilaginous fish.

Jawless fish – Have a skeleton made of cartilage, long bodies that look like eels, no scales and instead of jaws they have a sucking disc – they usually feed on dead fish and other bottom-living animals. Lampreys and hagfishes are an example of jawless fish.

Body Shape

Fish have adapted to live in a large range of aquatic habitats. The shape, size and even colour of a fish's body tells us a lot about where it lives, how it eats, how it moves through the water and more.

- Bottom dwelling fish such as flounder have flat bodies and sucker-style mouths ideal for resisting strong currents, moving along rocks and feeding on algae. They don't swim continuously and so don't need to be streamlined.
- Long slender fish such as eels are able to hide under rocks and amongst coral.
- Fish with more elongated bodies such as Western Australian salmon are able to swim very fast for a long time and so have no need for any special body protection.
- Fish with more rounded bodies such as blowfish lack in manoeuvrability and speed and so are often protected by spines, armour plating and/or poisonous flesh.

Fins & Tails

Most fish have fins to assist movement in the water. They are used to manoeuvre the fish up, down, sideways and to act as brakes. Most bony fish have the following fins: pectoral, pelvic, first dorsal, second dorsal, ventral (anal) and caudal (tail) fin. They all have different roles in the fish's manoeuvrability.

Scales

Most fish have scales. The primary purpose of scales is to give the fish external protection. Scales vary greatly in size, shape, structure, and extent. They are embedded in the fish's skin over a mucous layer and overlap like tiles on a roof.

Gills

Fish have a respiratory organ know as gills which allows the fish to absorb oxygen from the water. They suck water into their mouths and then push it out through these gills which are located on either side of their mouth. As the water flows out their gills pick up the oxygen in water so they can breathe.

Ears, Eyes, Nose & Mouth

Fish have ears but they are not visible as only the inner ear is present which is used for balance as well as hearing.

Most bony fish have excellent colour vision. They require this as different fishes skin colouration can be used to communicate aggression or fear, attract the opposite sex, sign their territory and more. Sharks and rays cannot see colour.

Most fish have a pair of nostrils and a great sense of smell; they can detect the smallest changes in water chemistry.

The shape of a fish's mouth tells us a lot about what they eat. For example, the larger their mouth, the larger the prey it eats. The position of their mouth also tells us a lot about where a fish catches it's prey.

Fish, depending on their species, eat smaller fish, crustaceans and insects, algae, other vegetation and plankton.

Threats

Fish are an important resource for humans worldwide, especially as food. Overfishing by humans eventually causes population collapse because the survivors cannot produce enough young to replace those removed. Other actions by humans that threaten fish are habitat destruction, pollution , removal of water and the introduction of exotic species. Fish are also a popular source of food for many marine animals (including other fish) and birds.

MANDURAH
CRUISES
and Gift Shop

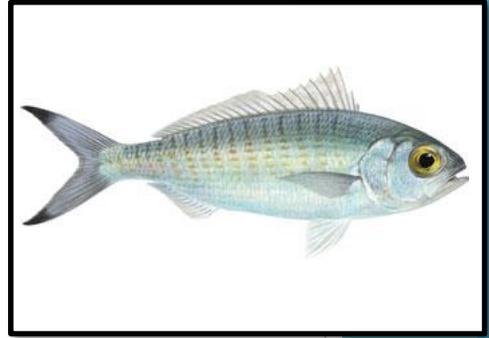# Some popular species of fish throughout Mandurah's waterways...

Australian Herring

Scientific name: *Arripis Georgianus*
Habitat: Open coast, estuaries and inshore reefs
Life Span: Around 10 years
Distinctive Features: Rough scales, golden spots on the upper half of its body and black tips on its tail.
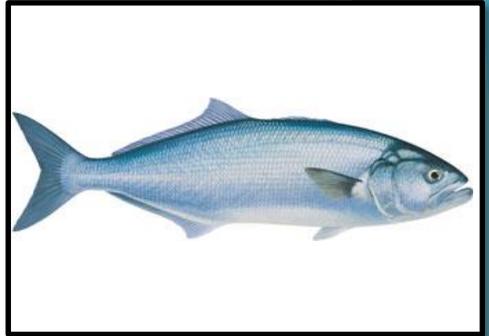
Tailor

Scientific name: *Pomatomus Saltatrix*
Habitat: Beaches, inshore reefs and estuaries
Life Span: Around 9 years
**Distinctive Features:** Prominent lower jaw, silver in colour, elongated and compressed body.

Common Blowfish

Scientific name: *Torquigena Pleurogramma*
Habitat: Coastal waters and estuaries
Life Span: Around 6 years
Distinctive Features: Torpedo in shape, dark brown line along its side and a white belly, its flesh is poisonous. Blowfish get their name as they are able to inflate their bodies (puff / blow up). They do this as a defence mechanism - to look bigger and warn off potential predators when feeling threatened. The 'blowie' as it is also known is native to WA and keeps our waterways clean by eating up waste scrap, bait and berley.
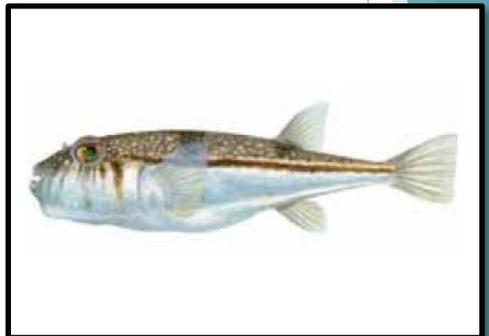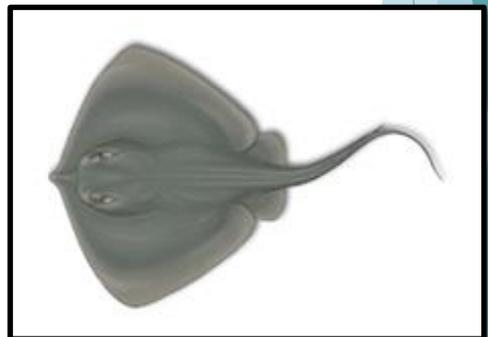
Stingray

Scientific name: *Dasyatidae*
Habitat: Coastal warmer waters
Diet: Crustaceans, molluscs, worms and fish
Distinctive Features: Flat and round in shape, most stingrays have one or more razor sharp barbed stingers on their tail, which are used in self-defence. They conceal themselves in their environment by agitating the sand and hiding beneath it.

Photos: Department of Fisheries WA

Did you know?

Fish are usually scaleless when they hatch and develop scales during their first year.

MANDURAH
CRUISES
and Gift Shop