

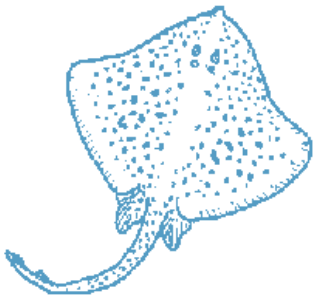
Rays



Worldwide there are about 500 different species of ray. In British coastal waters there are about 12 species of skates and rays, 1 species of stingray and 2 species of electric ray.

The earliest known ray fossils come from the Jurassic period, 150million years ago. As rays have a cartilaginous skeleton fossils are rare, but their teeth have an enamel coating which fossilises, which means all that is left of the species from this period are their teeth and spines.

About 36 species of ray spend at least part of their lifetime in freshwater. This includes the family Potamotrygonidae which contains 19 species that spend their entire lives in freshwater and have lost the ability to live in marine habitats.



One way of distinguishing between a skate and a ray is their mode of reproduction, skates lay eggs whilst rays give birth to live young.

Manta and Devil rays have forward extensions of their pectoral fins called cephalic fins, these help Manta and Devil rays concentrate plankton in the water and funnel it into their mouths. Once they have finished feeding Manta rays curl their cephalic fins towards their mouths to make themselves more streamlined when swimming.

Electric rays produce and store their electricity in two kidney shaped organs which weigh about one sixth of the rays total body weight, they are found behind the head. Different species of ray produce different levels of electric shock ranging from 8volts which will give a mild tingy sensation to 220volts which is capable of knocking a person off their feet.

The electric shock produced by rays was used by the ancient Greeks as a form of anaesthetic for operations and childbirth, the shock temperately numbs the area.

Southern Stingrays feed by hydraulic mining, they force water out of their mouths into the sediment or flap their pectoral fins vigorously to uncover their prey.



Manta rays can jump completely out of the water, they have three types of jump, forward jumps landing head first, forward jumps landing tail first and somersaulting.

Manta rays have 18 rows of teeth on their lower jaw