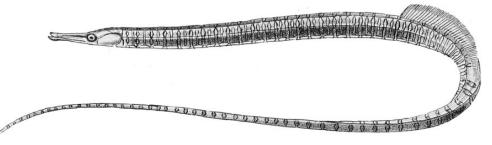


Pipefish

Syngnathiformes is the order comprising the pipefishes and seahorses. These are **elongate or S-shaped** with the body enclosed in an outer skeleton of armoured rings. Their fins are reduced, and their **snout elongated**, with a **small mouth** at the tip. The term Syngnathiformes means conjoined-jaws. Due to their hard exoskeleton, they have a **rigid appearance** which makes it very difficult for terns to ingest and there have been records of chicks dying from choking.



Diagnostic features:

Snake Pipefish (Entelurus aequoreus)

- Long, slender-bodied pipefish with smooth body rings and a rounded body
- Pectoral and anal fins are absent
- Tiny tail fin
- Characteristic red-brown line that runs diagonally across the side of the head and through the eye
- Back is usually coloured straw brown; a pale blue band with dark brown edges delineates each body ring. Juveniles are more uniformly brown
- Size up to 60cm in length



References: Henderson, P. A., Somes, J.R. 2015. *Identification Guide to the Inshore Fish of the British Isles*. Pisces Conservation. RSPB. 2017. RSPB Project Puffin Diet Photo ID Guide

Photo Credits: Snake Pipefish by Schlegel, Arctic terns by Chantal Macleod-Nolan

Tern Prey ID guide compiled by Chantal Macleod-Nolan, RSPB on behalf of the Roseate Tern LIFE Recovery Project



Sticklebacks

The sticklebacks belong to the Gasterosteiformes, meaning bone-bellies. The sticklebacks have two dorsal fins, the first comprising a series of spines. They are found in both fresh and marine waters. Marine sticklebacks undergo seasonal migrations into freshwater, estuarine or tidal rock-pool habitats to spawn.

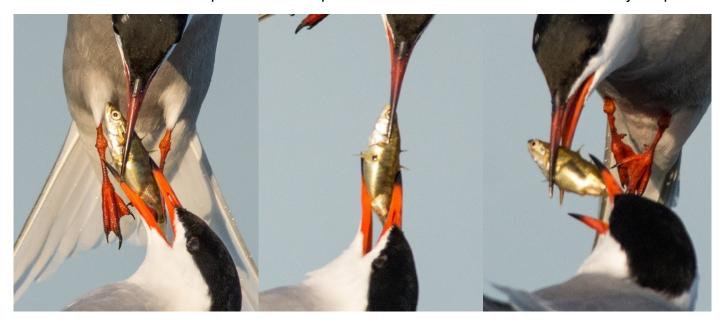


Diagnostic features:

<u>Three-spined stickleback</u> (*Gasterosteus aculeatus*)

- Small fish with three separate spines along the back
- Dark brown and golden green dorsal shading with silver sides. Male in breeding condition has a bright red throat and blue eyes.
- Maximum length approx. 11cm but usually 4-8cm at most

<u>Similar species</u>: The 9-spined stickleback is similar in shape but restricted to fresh and brackish waters. Count the dorsal spines. The 15-spined stickleback has an unmistakable body shape.



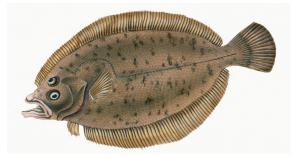
References: Henderson, P. A., Somes, J.R. 2015. Identification Guide to the Inshore Fish of the British Isles. Pisces Conservation.

Photo Credits: Three-spined stickleback by RSPB, Common terns with stickleback by Matthew Barfield



Flatfish (Pleuronectiformes)

The flatfish are in the order of Pleuronectiformes, also termed the Heterosomoata. All flatfish undergo a remarkable metamorphosis at the end of the larval stage when one eye migrates so that they are both on the same side. While appearing ungainly, they are remarkable successful and are a major feature of the inshore benthic fauna.

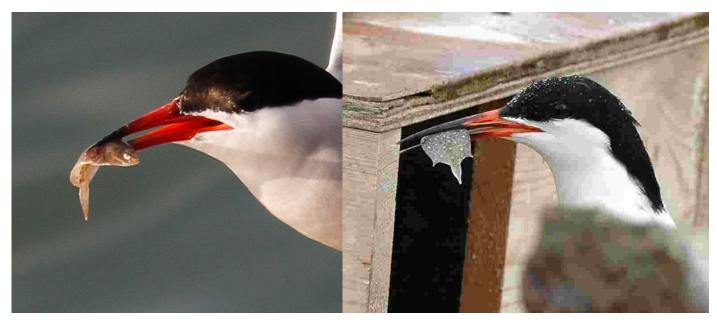


Diagnostic features:

Dab (Limanda limanda)

- Common right-eyed flatfish
- The D-shaped lateral line above the pectoral fins is characteristic D for dab
- Usually sandy-brown, though varying with the colour of substrate
- Size to about 60cm in length, although most adults appear around 20-25cm.
 Larger individuals rarely caught inshore

<u>Similar species</u>: Some right-eyed fish are superficially similar and occur in the same habitat; flounder and plaice do not have the D in the lateral line. Both flounder and plaice have red/ orange spots on the upper surface though when present on flounder, they are not so bright. The spots are pale in young plaice. Juveniles of all three species can be hard to distinguish.



References: Henderson, P. A., Somes, J.R. 2015. *Identification Guide to the Inshore Fish of the British Isles*. Pisces Conservation. Photo Credits: Common Dab by Edward Donovan, Common tern by Joe Hoover, Roseate tern with plaice by Tony Murray



Cephalopods

Cephalopods are marine mollusks that move by expelling water from a tubular siphon under the head and that have a group of muscular usually sucker-bearing arms around the front of the head. They are bilaterally symmetric with a distinctive head and two highly developed eyes. Cephalopods usually have a sac containing ink which is ejected for defense or concealment.

Octopuses are a soft-bodied, eight-limbed mollusc of the order Octopoda, whereas squids belong in the superorder Decapodiformes. Squid have elongated bodies, eight arms and two tentacles. They are mainly soft-bodied, like octopuses, but have a small internal skeleton in the form of a rod-like gladius or pen, made of chitin.

Diagnostic features:

European common squid (Alloteuthis subulate)

- Long, narrow mantle with a long tail, which is pointed in adult females and even longer and spike-like in adult males.
- Fins are rhomboid-shaped with pointed sides, their posterior borders concave and extending along tail.
- Tentacles are short, delicate with small, narrow clubs.
- Colour pale grey with brown purple spots.

Common octopus (Octopus vulgaris)

- Arms stout of about equal length and thickness with two longitudinal rows of suckers, dorsal pair of arms slightly shorter.
- Colour variable, grey-yellow-brown-green according to situation.



References: The Marine Biological Association of the UK (2019). The Marine Life Information Network (MarLIN) - European common squid (Alloteuthis subulate): https://www.marlin.ac.uk/species/detail/1113 The Marine Biological Association of the UK (2019). The Marine Life Information Network (MarLIN) - Common octopus (Octopus vulgaris): https://www.marlin.ac.uk/species/detail/1113

Photo Credits: Arctic tern with squid (left) by Ben Dymond, Arctic terns with possible octopus (middle and right) by Genevieve Thompkins



Crustaceans:

Decapoda (literally "ten-footed") are an order of crustaceans within the class Malacostraca, including many familiar groups, such as crayfish, crabs, lobsters, prawns, and shrimp.

Brown shrimp can be found over sandy and muddy bottoms in shallow coastal waters from the intertidal down to 150m. It has very high productivity and is an important food source for many birds, fish and crustaceans. Brown shrimp is commercially exploited for human consumption in northern Europe.



Diagnostic features:

Brown shrimp (Crangon crangon)

- Mottled brown in colour though they can change colour using chromatophores depending on the colour of the sea bed.
- Long and thin body, narrowing from a wide anterior end to a fanned tail
- Size up to 8.5 cm in length
- Identifiable from other shrimps by the short blunt-ended rostrum between the eyes.
- Main antennae are almost as long as the body.



References: The Marine Biological Association of the UK (2019). The Marine Life Information Network (MarLIN) - Brown shrimp (Crangon crangon). https://www.marlin.ac.uk/species/detail/2031 IFCA (2019). North Western Inshore Fisheries and Conservation Authority— Shrimp: https://www.nw-ifca.gov.uk/managing-sustainable-fisheries/shrimp/