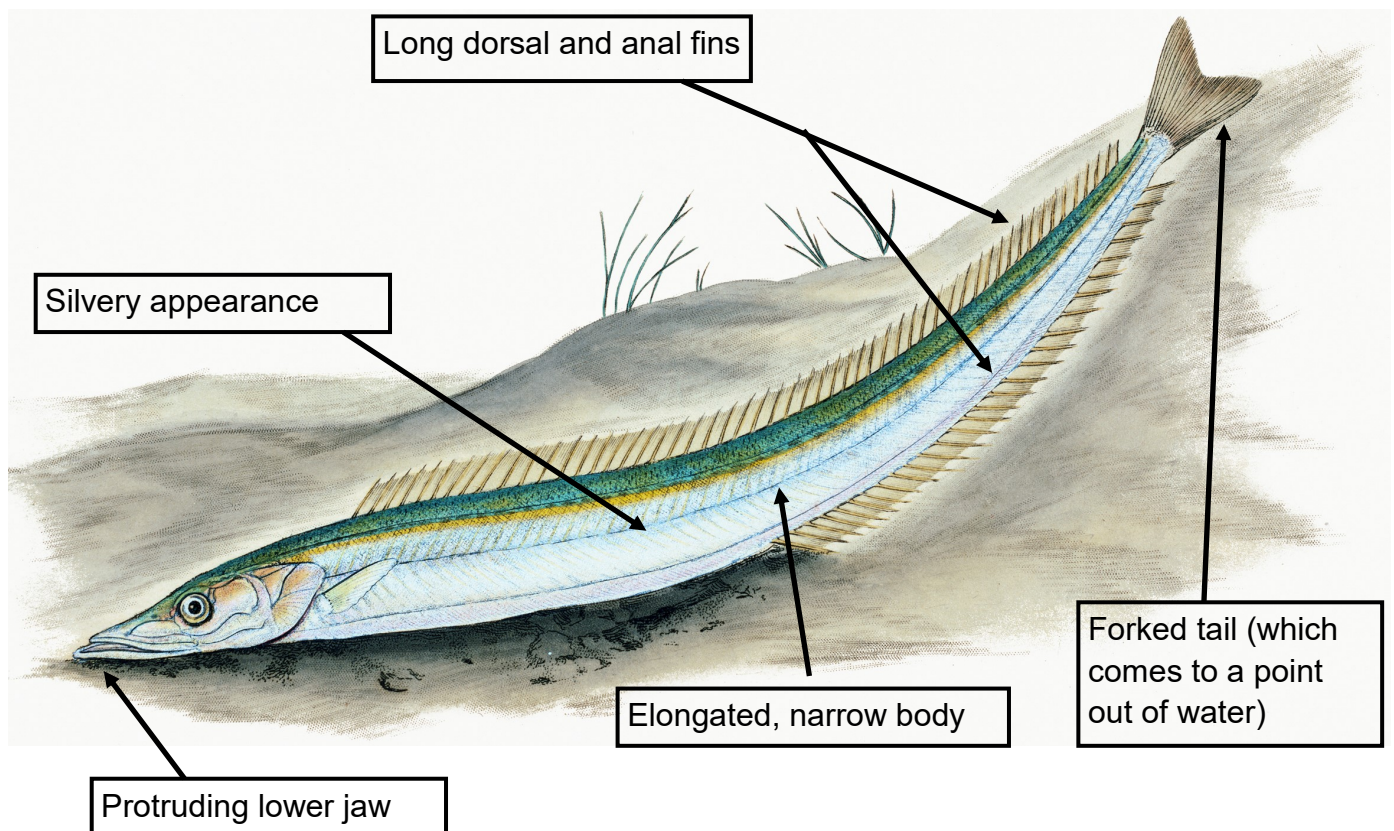




# Sandeels (Ammodytidae)

## Introduction

Sandeels are abundant in northern European waters with sand-, shell- and gravel bottomed habitats, in which they can burrow. Sandeels are a high-energy prey with a long, thin body shape, which makes them easy to ingest. They are an important food source not only to seabirds, but also marine mammals and piscivorous fish. Climate change and large-scale industrial fishing for sandeel risks reducing the food available to marine birds and large predatory fish.



## Diagnostic features

- ◆ A small **elongated**, silvery, slender bodied 'eel-like' fish with **long dorsal and anal fins**
- ◆ They have a **protruding jaw** with lesser & Raitt's sandeel having a tubular mouth compare to the more rigid mouth of the greater sandeel
- ◆ Their tails are forked but slightly rounded and tend to **come to a point when out of the water**.

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

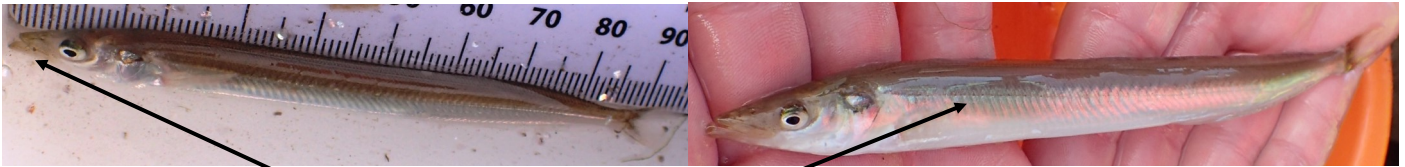
Photo Credits: Lesser sandeel by Edward Donovan

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

## Comparison of Sandeel Species

Of the five species that occur in British waters, the three main species that are mostly likely to be caught by terns would be: *Ammodytes marinus* (Raitt's sandeel\*), *Ammodytes tobianus* (Lesser sandeel) and *Hyperoplus lanceolatus* (Greater sandeel). The species can look very similar, but the main differences are:

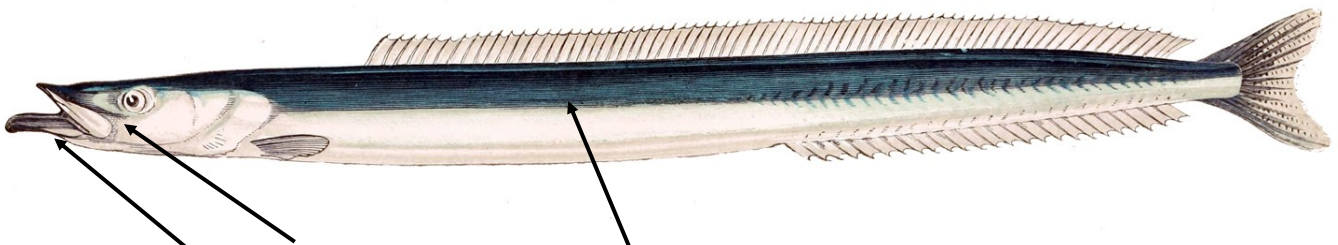
**Size:** Both *A. tobianus* and *A. marinus* grow to 20cm and 24cm respectively in length, while *H. lanceolatus* can grow up to 30cm.



Lesser or Raitt's sandeel (tube-like mouth and colouration)

**Colour:** Both the dorsals of *A. tobianus* and *A. marinus* are yellow/green on the back with an occasional blue tint, while *H. lanceolatus* have a dark blue-green dorsal. Lower sides and belly of all three sandeel species are silver, giving the fish a silvery appearance.

**Mouth:** *A. marinus* and *A. tobianus* have jaws that move forwards so that the mouth forms an extended tube with are no teeth in the roof of the mouth. *H. lanceolatus* cannot move their upper jaw forward to form a tube and instead swings forwards from a fixed hinge. The latter also has a bifid tooth in the roof of the mouth and a black patch on the snout is a key characteristic.



Greater Sandeel (fixed jaw, black patch on the snout and colouration)

\*Raitt's sandeel is hard to distinguish from lesser sandeel which has scales at the base of the tail fin lobes. Note the depth of water; if it is shallow and inshore, it is unlikely to be *A. marinus*. Confusingly *A. marinus* is sometimes also known as the lesser sandeel.

### Important Note

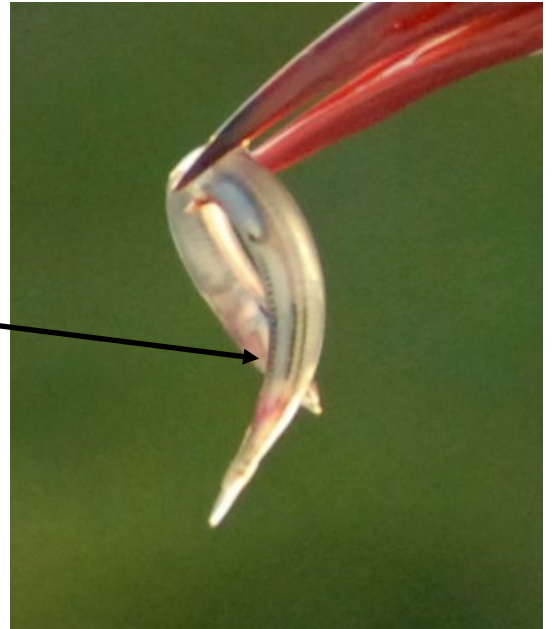
Due to the limited timeframe in observing the prey during provisioning studies, it is highly recommended that the observer ONLY identifies the fish as a sandeel and not distinguish between species. This is because it is extremely difficult to identify between species of sandeel from the scope due to their silvery eel-like appearance

## Age classes: Larval sandeels

Terns will also bring prey species at larval stage. As such we can also age certain species into two categories (juvenile and older).

The main difference between the two categories is that the larvae are **transparent** with dark **lateral lines and dots along the body**. Like adult sandeels, they exhibit the elongated head with **tube-like** mouth and their **tails come to a point**.

Sandeels that are morphing into silver or blue/grey colour (therefore partly transparent) should be classed as larval sandeels as they will be juvenile fish.



	<p><b>Important Note: Clupeid Larvae</b></p> <p>Sandeel larvae can easily be confused with clupeid larvae.</p> <p>Clupeid larvae is also <b>transparent</b> but with a <b>blunter head</b> and a <b>black line along the body</b>.</p>	
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# Sandeels

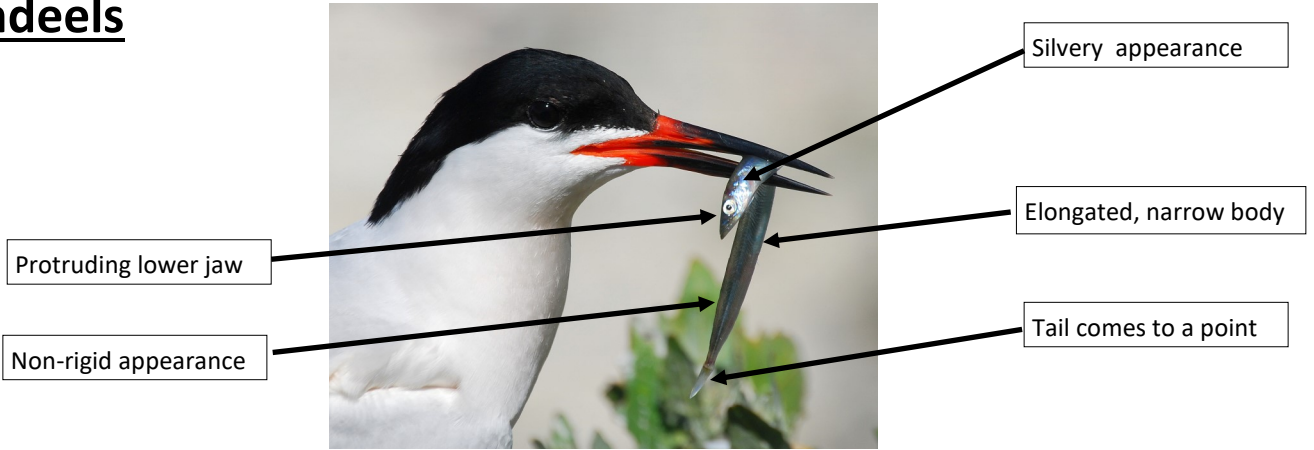


Photo Credits: Roseate & common tern by Brian Burke, Arctic Tern (top) by Haydn Harris, Arctic tern (middle) by Chantal Macleod-Nolan, Little terns by Kevin Simmonds

# Sandeels



Photo Credits: Sandwich tern by Nigel Voaden, Roseate tern by Chris Redfern, Roseate terns by Wesley Davies, Arctic tern by Chantal Macleod-Nolan, (bottom) Sandwich terns by Tom Hibbert

# Sandeels



Photo Credits: (Top row) Simon Elliot, Brian Burke, (middle row) Tony Blake, (bottom row) Brian Burke, Daphne Wong