Chapter 11

The cod fish - Gadiformes

The order Gadiformes (Anacanthini) holds 9 families and 75 genera of fish, including many important food fish, such as cod, haddock, hake and pollack. They have soft-rayed fins and no spines. They are mostly cold water fish, and the Macrouridae, commonly called grenadiers or rat-tails, are deep water species. Many cod species are found in shallow waters, particularly as juveniles, and rocklings are commonly found in British rockpools.

**Key to species**

1. With a long tapering tail.................................................. Rat-tails - deep water species not included here
   or Possessing a normal caudal fin........................................... 2

2. Possessing 3 dorsal & 2 anal fins........................................ 3
   or Possessing 1 or 2 dorsal fins & 1 anal fin.......................... 11

3. Anal fin long beginning in front of or under the 1st dorsal fin....... 5
   or Anal fin short, beginning behind the 1st dorsal fin............... 17

5. Anal fin begins in front of 1st dorsal fin origin .................. Blue whiting, Micromesistius poutassou, (p. 105)
   or Anal fin begins under or behind dorsal fin origin.................. 6

6. Dark spot at base of pectoral fin........................................ 7
   or No dark spot ...................................................................... 10

7. Barbel missing or minute................................................... Whiting, Merlangius merlangus, (p. 106)
   or Barbel conspicuous................................................................ 8

8. Body deeper than head length, anal fin begins near middle of 1st dorsal fin base
   ............................................................ Pout, Trisopterus luscus, (p. 108)
   or Body depth less than head length, anal fin begins in space between 1st & 2nd dorsal fins............ 9

9. Lower jaw projects beyond upper jaw.............................. Norway pout, Trisopterus esmarkii, (p. 112)
   or Upper jaw projects beyond lower jaw ................................. Poor cod, Trisopterus minutus, (p. 110)

10. Lower jaw projects strongly beyond upper jaw, lateral line curved and dark
    ............................................................ Pollack, Pollachius pollachius, (p. 114)
   or Jaws equal, lateral line straight and white............................. Coley, Pollachius virens, (p. 113)

11. 1st dorsal fin well-developed............................................... 18
   or 1st dorsal fin reduced to 1 long ray or minute........................ 12

12. At least 3 barbels, 1st dorsal fin reduced to 1 ray and a row of hair-like rays............................... 13
   or No barbels, 1st dorsal fin minute, head large and body tadpole-shaped
    ............................................................ Tadpole-fish, Raniceps raninus, (p. 94)

13. 3 barbels, 1 on chin, 1 on each anterior nostril........................ 14
   or 4 or 5 barbels.................................................................... 15

14. Dark uniform colouration, pectoral fin 15 - 17 rays
    .................................................................................. Shore rockling, Gaidropsarus mediterraneus, (p. 96)
   or Brown blobs on a pink background, pectoral fin 20 - 21 rays
    .................................................................................. Three-bearded rockling, Gaidropsarus vulgaris, (p. 97)

15. 4 barbels.............................................................................. Four-bearded rockling, Enchelyopus cimbrius, (p. 98)
   or 5 barbels............................................................................. 16

16. Fringe of papillae along upper lip, body colour pink-brown
    .................................................................................. Northern rockling, Ciliata septentrionalis, (p. 95)
   or No fringe of papillae, body colour golden-brown.................... Five-bearded rockling, Ciliata mustela, (p. 95)

17. Barbel long, no black blotch on sides.................................. Cod, Gadus morhua, (p. 102)
   or Barbel minute, black blotch on sides................................... Haddock, Melanogrammus aeglefinus, (p. 104)

18. Lower jaw without barbel..................................................... Hake, Merlucius merlucius, (p. 90)
   or Lower jaw with large barbel................................................ Ling, Molva molva, (p. 92)

© Pisces Conservation Ltd 2014
Rowena Henderson with a large cod caught at Sizewell on the Suffolk coast.

Photo: Robin Somes

© Pisces Conservation Ltd 2014
Hake, *Merluccius merluccius*

*Auth.:* L., 1758


![Typical immature hake caught inshore in the Bristol Channel.](image)

**Diagnostic features**
A slender and round-bodied fish with large mouth and sharp, long teeth. There are 2 dorsal fins, the first triangular, the second long-based. One long-based anal fin. No chin barbel present.

**Size**
To about 140 cm in length. In shallow inshore waters they are often 15 to 30 cm in length. A weight in excess of 5 kg is rare.

**Colour**
The back is grey or blue-grey, shading to silver along the sides and silver-white on the ventral.

**Otolith characteristics**
Elongate or lanceolate in outline; dorsal and posterior edge lobed or denticulate.

**Similar species**
Not readily confused with any other inshore species. Look for the elongate and rounded body form, a large mouth with long, needle-sharp teeth, and the characteristic arrangement of fins.

**Food and bait**
Active open water predator of fish (including their own species, other gadoids, herrings sprats and pilchards) and squid. Young feed on krill and other crustaceans.

**Distribution and seasonality**
Essentially an offshore fish, favouring depths of 165 to 550 m. Distributed mainly in deeper British waters, so rarely encountered in the southern North Sea. Occasionally caught in shallow waters around the southern and western coasts of the British Isles. It is caught in the Bristol Channel and was quite common in the 1980s during spring and autumn, but was rarely caught during the 1990s and 2000s. May come further inshore during cool climatic conditions.

**Life history**
Hake spawn off the south west and west coasts of the British Isles in waters with depths of around 200 m. The eggs are pelagic. Males are mature in their 3rd or 4th year, while females mature at a larger size in their 8th year. The larger females can reach a length of 1 m and a weight of 5 kg.
Commercial fishing and human consumption
Hake is an important commercial species which has been heavily exploited, so that the size of fish landed has greatly declined. It is caught with trawls, gill nets and longlines.

Recreational fishing
Only occasionally caught by shore anglers. Boat fishing in midwater at night in waters 200 m or more deep is required to catch large specimens. Hake move from the seabed to midwater at night to feed.

Fishing records
Shore-caught record: 1.590 kg, 1984, W.S. Parry, Morfa Beach, Port Talbot, Wales.

The hake's mouth, showing its sharp teeth.  
Photo: Peter Henderson

Hake, Aquarium Finisterrae, Corunna, Spain.  
Photo: Drow Male (CC)
Ling, *Molva molva*

*Auth:* (L., 1758)


Mature ling caught offshore on the north east English coast. Photo: Peter Henderson

1st dorsal 14-15
2nd dorsal 62-65
anal 56-61

Large barbel on chin

**Diagnostic features**
A large, elongate, cod-like fish with a single large barbel on the chin. Two dorsal fins, the first with a short base, the second long-based. One long-based anal fin.

**Size**
Up to 2 m in length and a weight of 40 kg.

**Colour**
Dorsal surface a mottled grey-green-brown, gradually shading to a dorsal surface which is creamy-light grey.

**Similar species**
Young specimens might be confused with rocklings; no rockling approaches the size of an adult ling. A notably elongate fish with a large thick barbel on the lower jaw.

**Distribution and seasonality**
Ling favour waters between 100 and 400 m deep. They occur in shallower waters with particularly favourable habitat such as wrecks. While immature ling are found inshore at depths of only 20 m, adults are deeper-water fish living on the seabed at depths of 300 to 400 m.

**Food and bait**
A piscivore, eating other members of the cod family such as Norway pout, pout and blue whiting.

**Life history**
They spawn to the north of Britain between March and July. They grow rapidly and may be 50 cm long at the end of their 3rd year. Males rarely live longer than 10 years, females are mature at 6 to 8 years old and can live for 14 years. The eggs are pelagic and float close to the surface.

**Commercial fishing and human consumption**
An important commercial species in northern Europe, caught using longlines.

**Recreational fishing**
Regularly targeted by boat anglers fishing well offshore in deeper waters.

**Fishing methods**
Boat fishing, otter trawling, longlining.

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Gadiformes

**Fishing records**
Boat record: 30.533 kg, 2013, J. Isbister, Muckle Flugga, Shetland Isles.

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An 18-pound (8.2 kg) ling, caught in November 2013 off the Isle of Wight, from Les Jones's boat White Maiden.

© Pisces Conservation Ltd 2014
Tadpole fish, *Raniceps raninus*

*Auth.: (L., 1758)*


**Diagnostic features**

A relatively large and broad head. The 1st dorsal fin is tiny and the second has a notably long base. The anal fin is also long-based. There is a small chin barbel.

**Size**

Up to 30 cm in length, but rarely above 15 cm.

**Colour**

A uniform red-brown with darker brown or black fins. Young individuals can be a uniform almost black colour. The mouth and lips are lighter than the body.

**Similar species**

Superficially similar to the sea snails (p. 164). The mouth of the tadpole fish is very large. Note the colour, and the size of head and mouth. Look for the small barbel.

**Distribution and seasonality**

A bottom-living fish of shallow inshore waters, ranging in depth from just subtidal to about 100 m. Widely-distributed, and recorded from all British coastal waters. Probably avoids warm shallow waters of the south coast, where it tends to occur in deeper waters.

**Food**

Benthic invertebrates.

**Life history**

It spawns pelagic eggs in late summer and autumn.

**Commercial fishing and human consumption**

Not consumed by man; occasionally taken for aquaria.

**Recreational fishing**

Not targeted by anglers, although it is occasionally caught by accident.

**Fishing records**

Shore-caught record: 0.630 kg, 2003, A. Gray, mouth of River Tyne.

Boat record: 0.793 kg, 2005, D. McCormick, Bangor Harbour, Co. Down, N. Ireland.

Photo: Biopix (CC)
Northern rockling, *Ciliata septentrionalis*

*Auth.: (Coll., 1875)*


**Diagnostic features**
A small rockling with 2 dorsal fins, the first a low fringe of fine fin rays, the second a long, well-developed, fin. The head has 5 barbels. The skin above the upper lip has a frill of papillae.

**Size**
To about 18 cm in length.

**Colour**
Brown on the upper surface of the body with a lighter ventral surface. When alive this species has a coppery-pink hue.

**Similar species**
The five-bearded rockling, which does not have the frill of papillae on the upper lip. In practice the species are easily distinguished by differences in colour, as the five-bearded rockling does not have a copper-pink hue.

**Distribution and seasonality**
Occasionally caught during the winter in Bridgwater Bay, Somerset which suggests it migrates inshore during the winter. This is considered a rare fish in southern British waters. It is reported as occurring on rocky, sandy and muddy substrates, at depths from 10 down to 90 m.

**Food and bait**
A predator of small invertebrates such as crustaceans, mysids and polychaete worms.

**Life history**
This species is oviparous, and scatters its eggs in open water; it probably forms pairs during the breeding season, which in UK waters occurs in April - May. Both sexes are mature at one year.

**Commercial fishing and human consumption**
Of some limited commercial value elsewhere in Europe.

**Recreational fishing**
Not targeted by anglers; there are no known rod-caught records from the UK.

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Shore rockling, *Gaidropsarus mediterraneus*

*Auth*: (L., 1758)

**Colours**
A uniform brown dorsal surface grading to pale brown-white on the ventral. There is a series of pale spots along the sides.

**Similar species**
The three-bearded rockling also has 3 barbels, but has a characteristic colouration (photo opposite). It looks superficially similar to the five-bearded and northern rocklings, which both have five barbels. Note the combination of colour and 3 barbels.

**Distribution and seasonality**
Lives on rocky shores to a depth of about 30 m, and frequently found in intertidal rock-pools. Does not occur on sandy or muddy shores, which may explain its absence from much of the east coast of Britain.

**Food**
Intertidal invertebrates and small fish.

**Life history**
Shore rockling move offshore to spawn in June and July. The eggs and larvae are pelagic and the juveniles settle in shallow waters in September and October.

**Commercial fishing and human consumption**
Not commercially fished in the UK, although minor commercial fisheries for human consumption and fish meal do exist elsewhere in Europe, and it is taken as a bycatch.

**Recreational fishing**
Rarely targeted by anglers.

**Fishing records**
Shore-caught record: 0.730 kg, 1992, D. Lane, Chesil Cove, Dorset.
Boat record: 0.358 kg, 2000, J Simmonds, off Redcliff Point, Weymouth, Dorset.
Three-bearded rockling, *Gaidropsarus vulgaris*

*Auth.* (Cloquet, 1824)


**Diagnostic features**
An elongate fish with long second dorsal and anal fins. The 1st dorsal fin possesses 1 long ray followed by a low fringe. It has 3 barbels, one on the chin and one close to each anterior nostril (p. 100). The mouth extends well back behind the eye. The pink colouration with brown blotches is characteristic.

**Size**
Can reach about 60 cm; 25 cm is more usual.

**Colour**
A pink ground colouration with brown blotches on the back and sides.

**Similar species**
The shore rockling which also has 3 barbels; the colouration is different, and this species is also the largest of the British rocklings.

**Distribution and seasonality**
Bottom-living, present in all subtidal British waters to a depth of about 120 m.

**Food**
A general predator taking small fish and crustaceans, molluscs and polychaete worms.

**Life history**
They spawn in mid winter. The eggs and larvae are pelagic, and the juveniles become benthic when about 6 cm long.

**Recreational and commercial fishing and human consumption**
Minor commercial fisheries exist elsewhere in Europe. It is rarely targeted by anglers.

**Fishing records**
Boat record: 1.481 kg, 1992, C. Hurst, south of the Isle of Wight.
Four-bearded rockling, *Enchelyopus cimbrius*

*Auth.: (L., 1766)*


**Four-bearded rockling caught inshore on the Suffolk coast.**

*Photo: Peter Henderson*

**Diagnostic features**
Slender-bodied. 1st dorsal fin has 1 long ray followed by a low fin which fits in a groove. 2nd dorsal and anal fins are uniform in height and notably long-based. Head has 4 barbels (p. 101), one on the chin, a pair next to the nostrils, and one on the lower jaw.

**Size**
Maximum length is about 40 cm, but usually attains 25 - 30 cm.

**Colour**
Dark brown dorsal shading via yellow-gold to grey-cream on the ventral. There is a dark blotch towards the tail on both the anal and second dorsal fins.

**Similar species**
Other rocklings such as the big-eyed rockling, *Gaidropsarus macrophthalmus*, a deep-water species which has 3 barbels. Note the number of barbels and the black blotches on the posterior of the 2nd dorsal and anal fins.

**Distribution and seasonality**
A widely-distributed, but seemingly never abundant, benthic fish associated with soft sediments and recorded from British coastal waters at depths of between 20 and 250 m, although known to occur as deep as 550 m. It is a cold-water species and is found far north of the British Isles; it lives at greater depth in southern Britain, close to the southern limit of its geographical range.

**Food**
Benthic invertebrates, including polychaetes and pelagic crustaceans.

**Life history**
It spawns in summer and has pelagic eggs and larvae.

**Commercial fishing and human consumption**
Minor commercial fisheries exist elsewhere in Europe.

**Recreational fishing**
Not targeted by anglers.

**Fishing records**
Rod-caught record, 0.04 kg, 1981, S W Hodgson, off Cloch Point, Gourock, Scotland.
Five-bearded rockling, *Ciliata mustela*

A small rockling with 2 dorsal fins, the first a low fringe of fine fin rays hidden in a groove, the second a long, well-developed, fin. The head has 5 barbels (p. 101). Skin over the upper lip has no frill of papillae.

**Size**
To 25 cm in length.

**Diagnostic features**

**Colour**
Golden to sepia-brown on the upper surface of the body with a lighter ventral surface. There is often a reddish tinge to the body and fins.

**Similar species**
The northern rockling, which has a frill of papillae on the upper lip. In practice the species are easily distinguished by differences in colour, as the five-bearded rockling does not have a copper-pink hue.

**Food and bait**
A predator favouring small crustaceans, but also polychaetes, gastropods and sometimes small fish. Observations in aquaria suggest it seeks food much more by touch, using its barbels, than by sight.

**Distribution and seasonality**
Common in intertidal and inshore British waters, and common in rock pools. It favours softer substrates, including mud, sand and shelly gravel. Abundance in subtidal waters is greatest during the autumn and winter.

**Life history**
Breeding takes place during winter when rockling move to subtidal waters. The eggs and larvae are pelagic.

**Commercial fishing and human consumption**
Not in the UK, but fished on a small scale elsewhere for human consumption.

**Recreational fishing**
Not normally targeted by anglers.

**Fishing records**
Rod-caught record: 0.454 kg, 1995, A Boswell, Aberystwyth, Dyfed, Wales.
Head of a shore rockling.  

Photo: Peter Henderson

Head of three-bearded rockling.  

Photo: Peter Henderson
Gadiformes

Mouth of four-bearded rockling.

Head of five-bearded rockling.

Four barbels, one on the chin, one on the lower jaw and a pair on the rim of the nostrils.

Photo: Peter Henderson

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Cod, *Gadus morhua*

*Auth.: (L., 1758)*


A young cod caught inshore on the Suffolk coast. **Photo: Peter Henderson**

**Diagnostic features**

A heavy-bodied fish with 3 dorsal and 2 anal fins. There is a large barbel on the chin. The upper jaw extends beyond the lower jaw.

**Size**

Usually to about 70 cm in length. They can get considerably larger, but the larger fish are rarely caught inshore and have become much less common.

**Colour**

A pale olive brown background colour, which shades to silver cream on the lower surface of the belly. The upper surface has a characteristic mottled brown-yellow camouflage.

**Similar species**

Young fish might be confused with other gadoids with a chin barbel. Note the mottled colouration, heavy build, white lateral line and the presence of a large chin barbel.

**Otolith characteristics**

Large, oval, shiny white with the anterior wider than the posterior. Both the dorsal and ventral edges are lobed. The outline becomes more triangular in large individuals.

**Food and bait**

A general predator eating a wide range of invertebrates, becoming more piscivorous with increasing size.

**Distribution and seasonality**

A widely-distributed fish recorded from all British coastal waters, from shallow upper estuarine waters used by juveniles, to depths of 600 m. In southern British waters it is found inshore during the winter. The juveniles enter estuaries in June and may remain within the estuary over the following winter.

**Life history**

Cod are migratory fish moving between nursery, feeding and spawning grounds. Spawning occurs on the European continental shelf to a depth of 200 m between February and April. The eggs are pelagic and widely dispersed. The larvae initially feed on copepods, and gradually switch to larger crustaceans as they grow. Cod in British waters grow rapidly. In the Bristol
Head of cod. Photo: Peter Henderson

Channel cod first enter the estuary in June when about 4 months old, at a length of 60 mm. By their first winter they have reached 160 mm or longer. By their 3rd year they may be 55 cm in length. There are numerous cod sub-populations present in British waters. For example, in the North Sea there is sub-population in the Southern Bight, and another which lives in deeper water north of the Flamborough front. In recent years there are indications that the centre of distribution has moved northwards.

**Commercial fishing and human consumption**
Cod are one of the most important commercial fishes in the world, and have been an important food resource to Europeans for thousands of years. They are mostly caught in trawls, although longlining for larger fish is also practiced. There has been a great reduction in cod abundance over the last 30 years, almost entirely due to over-fishing and incompetent fisheries management.

**Recreational fishing**
Regularly targeted by both shore and boat anglers.

**Fishing methods**
Beach & boat fishing, bottom trawling, gill netting, seine netting, longlining.

**Fishing records**

A 19 lb (8.6 kg) cod caught by Ben Whitlock in the Solent. Photo: Noble’s Fishing, Blackfield, Hampshire

© Pisces Conservation Ltd 2014
Haddock, Melanogrammus aeglefinus

Auth: (L., 1758)

Diagnostic features
A codfish with 3 dorsal and 2 anal fins. First dorsal fin triangular with notably long fin rays. Short but clear visible chin barbel. Lower jaw clearly shorter than the upper jaw. Lateral line clearly visible and black.

Size
Can reach about 75 cm in length.

Colour
Dark green-brown dorsal and cream belly. Dark blotch on each side above the pectoral fins.

Similar species
The young can be confused with other gadoids such as whiting and cod, but the haddock's dark blotches, and dark lateral line, are distinctive. The lateral line of the cod is white.

Food and bait
Benthic invertebrates. It will take a wide range of baits, including mussels, ragworm, lugworm and fish strips.

Distribution and seasonality
Found primarily in northern British waters, from 40 to 300 m. They reach the southern limit of their geographical range in southern British waters, where they occur inshore only in winter. Rarely caught in the English Channel or inshore on south-western Atlantic coasts. Haddock live close to the seabed where they feed. In the north they enter shallow coastal waters in summer and retreat deeper during the winter.

Life history
In British waters they spawn principally in March and April. The eggs float; the larvae are pelagic, and have been found in association with jellyfish. Haddock may live for 14 years and reach sexual maturity during year 4 or 5, at a length of about 41 cm for males, and 46 cm for females. A one-year-old haddock in the North Sea is 16 - 18 cm long. At 2 years old, haddock reach 25 - 30 cm, so that the youngest fish appearing in commercial landings are usually 2 - 3 years old. The main spawning grounds are in the northern North Sea, off Rockall, around Faroe, and south and west of Iceland.

Commercial fishing and human consumption
An important commercial species particularly favoured in the north of Britain. Haddock are often sold smoked. It is captured by trawling and also longlining.

Recreational fishing
Targeted by boat anglers in the north of Britain.

Fishing records
Blue whiting, *Micromesistius poutassou*

*Auth:* (Risso, 1826)


**Diagnostic features**
A codfish with 3 dorsal and 2 anal fins, there is a large gap between the second and third dorsal fins. The head is pointed and the lower jaw is slightly longer than the upper. No chin barbel present. The tail fin is markedly V-shaped, unlike that of the whiting.

**Size**
Can reach about 45 cm in length.

**Colours**
The back is blue or blue-grey, sides and belly silver-white. There is a blue sheen to the sides when alive.

**Similar species**
The young can be confused with other gadoids such as Norway pout, poor cod and particularly the whiting. Note the blue tinge, the lack of barbel, the gap between the 2nd and 3rd dorsal fins and the distinctly V-shaped tail fin (photo, p. 107).

**Distribution and seasonality**
An offshore species, forming large shoals at depths of 300 - 400 m along the continental shelf, sometimes as deep as 1000 m. They undertake vertical migration, at night ascending to surface waters, and returning to the bottom by day. Young fish are occasionally caught inshore, occurring in low numbers in the Bristol Channel and Severn Estuary in May.

**Food and bait**
Euphausiids, amphipods and other crustaceans; larger specimens also take small fish and cephalopods.

**Life history**
Spawning occurs in March - April off the western coasts of the British Isles; eggs are pelagic. May live up to 20 years. Blue whiting are prey for larger gadoids such as cod, ling and hake.

**Commercial fishing and human consumption**
Supports an industrial fishery for oil and fish meal, and also caught for human consumption in Europe and elsewhere. Not used as a food fish in Britain. There are indications that populations are now in decline.

**Recreational fishing**
Not targeted by anglers, though occasionally caught.

**Fishing methods**
Trawling.

**Fishing records**
Boat-caught record: 0.793 kg, 1977, J H Anderson, Loch Fyne, Scotland.
Whiting, *Merlangius merlangus*

*Auth.: (L., 1758)*


![Mature whiting caught inshore on the Suffolk coast.](image)

**Diagnostic features**
3 dorsal and 2 anal fins and a slender head. Only small fish possess a chin barbel, even in these it is minute. The upper jaw extends beyond the lower.

**Size**
Length to 70 cm; usually smaller, especially males.

**Colour**
A pale olive brown-yellow back and cream belly. The bright colouration of live fish quickly fades.

**Similar species**
The young can be confused with other gadoids such as Norway pout, blue whiting and poor cod. Note the dark spot at the base of the pectoral fin, the lack of chin barbel, and the 3 dorsal fins with little or no gap between their bases. Adults can look similar to pollack; the jaw alignment easily distinguishes the two (p. 107).

**Food and bait**
A general predator on shrimps, crabs, mollusks, small fish, polychaetes and cephalopods. The young feed on crustaceans, moving on to fish such as sprats and sand eel as they grow. They will take a range of baits including lugworm, ragworm, mackerel strip and squid.

**Distribution and seasonality**
Widely-distributed in all British coastal waters; the commonest member of the cod family in many inshore waters. Adults most commonly found from 30 to 100 m over mud or gravel bottoms, occasionally sand and rock; most abundant inshore during winter. Juveniles first arrive in the Bristol Channel in late summer and travel up the estuary to feed. Juveniles penetrate far up estuaries, migrating to the open sea only after the first year of life.

**Life history**
Larvae and juveniles are known to associate with jellyfish, using the tentacles as protection from predators, apparently unharmed by their sting. Spawning begins in the south in January and in the north may occur as late as July. The main spawning period is April/May; spawning takes place in open water and the eggs are pelagic. Females may live for 7 or 8 years.
Gadiformes

Commercial fishing and human consumption
An important food fish, though not widely favoured because it lacks the firm flesh of cod or haddock. Caught by bottom trawling and longlining.

Recreational fishing
Caught by both shore and boat anglers.

Fishing records
Boat record: 3.345 kg, 2012, Mark Curtis, off Plymouth, Devon.
Pout, bib, *Trisopterus luscus*

*Auth.: (L., 1758)*


**Pout caught in the Solent.**

**Otolith characteristics**

Elongate otolith, pointed posterior, wider, more rounded anterior. Margins lobed.

**Diagnostic features**

A deep-bodied codfish with 3 dorsal and 2 anal fins. The upper jaw extends beyond the lower, and there is a long barbel on the chin. The pelvic fins reach back to the vent.

**Size**

Can reach 40 cm in length and 2.5 kg; usually smaller.

**Colour**

Coppery-brown dorsal, shading to yellow-green sides and creamy-silver-white along the ventral. There is a conspicuous black spot at the base of the pectoral. The anal fin is fringed with a white line. When alive, there are dark vertical bars down the sides (photo opposite). This natural colouration is rapidly lost upon death, and can also disappear when the fish is under stress.

**Similar species**

Adults are generally unmistakeable due to the depth of the body, long barbel and vertical stripes when alive. Young pout appear similar to cod, poor cod and Norway pout. The first and second anal fins are just connected at their base, so pulling gently on the 1st anal fin will move the 2nd anal fin. This distinguishes the pout from the poor cod, whose anal fins are not connected. See the image opposite comparing juvenile cod and pout.

**Distribution and seasonality**

It is common and widely distributed in British waters, favouring reefs and other underwater structures such as wrecks. Juvenile pout move inshore and up estuaries in early summer and remain in high abundance until winter.

**Food and bait**

A predator feeding heavily on shrimps, crabs and other...
crustaceans. Larger pout will take small fish.

**Life history**
It spawns principally in March and April at depths of 50 to 70 m. It is a short-lived codfish reaching sexual maturity at 1 year at a length of around 20 cm and can reach 30 cm at 4 years of age.

**Commercial fishing and human consumption**
Sometimes taken, but little favoured as a commercial species as it does not keep well; used for fishmeal, and in cheap fish products.

**Recreational fishing**
Very frequently caught, occasionally targeted by anglers where the larger individuals are found.

**Fishing methods**
Beach fishing, boat fishing, trawling.

**Fishing records**
Boat record, 2.494 kg, 1969, R. Armstrong, off Berry Head, Devon.

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*Comparison of juvenile cod and pout.*
*Photo: Peter Henderson*

*Pout showing full colouration.*
*Photo: Bernard Picton, National Museums Northern Ireland (CC)*

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Poor cod, *Trisopterus minutus*

**Auth:** (L., 1758)


**Diagnostic features**
A small member of the cod family with 3 dorsal and 2 anal fins which almost touch at their bases. There is a gap between the anal fins which serves to distinguish small poor cod from pout - pulling forward on the 1st anal fin will not significantly move the 2nd. The eye is large, about equal in diameter to the snout length. The upper jaw extends beyond the lower, and there is a long barbel on the chin.

**Size**
Usually to a maximum of 15 to 20 cm in length.

**Colour**
Dorsal muddy golden yellow to reddish tinge, grading to silvery white below.

**Similar species**
Can be confused with pout or Norway pout when young. See the comparison with the Norway pout opposite. Adults much more streamlined than pout. Look for the stout chin barbel (unlike Norway pout), and unconnected anal fins, unlike pout. No black spot at the base of the pectoral fin, or vertical bars on the body, again unlike pout. When very small, the two species are more difficult to distinguish, but in adulthood the body shape alone should be sufficient.

**Distribution and seasonality**
A moderately common fish in British waters, the eastern Atlantic and Mediterranean, occurring in small shoals over muddy or sandy ground between 10 and 300 metres depth. They are inshore fish favouring reefs and other underwater structures such as wrecks. Most abundant inshore and in estuaries in the autumn.

**Food and bait**
A predator on crustaceans, but will also take small fish and polychaete worms such as lug or rag.

**Life history**
Spawns in late winter, scattering its eggs in open water. Its lifespan is 5 - 6 years, reaching sexual maturity at 1 - 2 years.
Commercial fishing and human consumption
Caught commercially for fish meal, and in southern Europe for human consumption.

Recreational fishing
Rarely targeted specifically by anglers, but quite often caught as they will take most baits.

Fishing methods
Beach fishing, boat fishing, beam and otter trawling.

Fishing records
Rod-caught record, 0.358 kg, 2003, Adam Slack, Berry Head, Torquay, Devon.
Norway pout, *Trisopterus esmarkii*

*Auth: (Nilsson, 1855)*


**Norway pout caught in Bridgewater Bay, Somerset.**

**Photo: Peter Henderson**

**Diagnostic features**

A small member of the cod family that has an unusually large eye and 3 dorsal and 2 anal fins. There is a small, very thin barbel on the lower jaw that is difficult to see in small individuals. The lower jaw extends slightly beyond the upper jaw.

**Size**

Inshore specimens are typically from 8 to 15 cm long, maximum length 25 cm.

**Colour**

Silvery-grey-white.

**Similar species**

Other members of the cod family including saithe, whiting, blue whiting and poor cod. See comparison with poor cod on p. 111. Look for the thin elongated body, lower jaw extending beyond the upper, with a very thin thread-like barbel, and very large eye.

**Distribution and seasonality**

A common gadoid occasionally caught inshore in many localities in winter; most abundant in northern British waters. It is common at depths of 100 - 200 m, over muddy substrates. Its major spawning grounds are off north-western Scotland, Norway, the Faroe Islands and Iceland; it spawns between January and June, dependent on latitude.

**Food and bait**

A generalist predator on small fish, crustaceans and other planktonic organisms.

**Life history**

Peak spawning is between January and June on the continental slope; eggs are scattered in open water and are pelagic. Mature at 1 year, rarely exceeds 3 years old.

**Commercial fishing and human consumption**

Not fished for food, but it is heavily targeted throughout northern Europe by industrial fisheries for fish meal.

**Recreational fishing**

Not targeted by anglers; there is no known UK rod-caught record.
Gadiformes

Saithe, coley, coalfish, *Pollachius virens*

*Auth.: (L., 1758)*

**Saithe caught off the north-east English coast.**

**Diagnostic features**
A typical codfish, with 3 dorsal and 2 anal fins. The lower jaw extends slightly beyond the upper in adult fish and there is no barbel on the chin. The lateral line is smoothly curved, but without a clear bend from the gill to the tail (see pollack for comparison).

**Size**
To 130 cm in length and 22 kg in weight.

**Colour**
Dark green, almost black dorsal and upper sides, creamy white/silver ventral. The lateral line is almost white and clearly visible against the darker background.

**Similar species**
Other members of the cod family such as pollack or whiting. Note the slightly-protruding lower jaw and the lack of any bend of the lateral line over the pectoral fin. Pollack has a distinct bend in the lateral line. In whiting, the upper jaw extends beyond the lower.

**Distribution and seasonality**
Distributed widely in British waters, but preferring the colder regions, so rarely caught inshore in the southern North Sea, along the English Channel or along southern Atlantic coasts. Favours rocky and weedy habitat.

**Food and bait**
Adults are piscivores, feeding heavily on clupeids such as herring and gadoids such as Norway pout. The juveniles live close inshore and feed on crustaceans.

**Life history**
Saithe spawn between January and April at depths of 100 - 200 m. The eggs and larvae are pelagic, and post-larvae are most abundant in April - May.

**Commercial fishing and human consumption**
An important commercial species targeted when undertaking spawning migrations by purse-seiners and trawlers.

**Recreational fishing**
A favoured target for boat anglers in northern British waters. They will take mackerel strip or lures.

**Fishing methods**
Boat & shore fishing, beam and otter trawling.

**Fishing records**
Pollack, lythe, *Pollachius pollachius*

*Auth.:* (L., 1758)


![Pollack caught in Southampton Water.](image)

**Photo: Peter Henderson**

**Diagnostic features**
A typical member of the cod family with 3 dorsal and 2 anal fins; there are short gaps between the fins. The lower jaw extends beyond the upper and there is no barbel on the chin. The lateral line traces a notable downward curve behind the pectoral fin.

**Size**
To about 130 cm in length and 18 kg in weight.

**Colour**
Brown-green and steely-blue dorsal shading to green-gold blotches along the sides and creamy-silver-white along the ventral.

**Similar species**
Other members of the cod family such as saithe. The sharply-curved lateral line, lack of barbel, and protruding lower jaw are diagnostic.

**Food and bait**
An active predator, the adults are piscivorous and are known to take sprats, herring and reef-dwelling fish. The juveniles feed heavily on crustaceans.

**Distribution and seasonality**
Widely-distributed in British coastal waters, living close to the sea floor down to about 200 m; particularly abundant off the rocky shores of the west coast of Britain. Adults favour rocks, reefs and wrecks; juveniles enter estuaries to feed during autumn and winter, and may form schools with saithe.

**Life history**
In southern England spawning occurs between February and March at depths of 100 - 200 m; in northern waters it occurs later. The eggs and larvae are pelagic. Off Plymouth, post-larvae are most abundant between April and May. The young occur close inshore and may live among weed or enter estuaries. Maximum known age 15 years.

**Commercial fishing and human consumption**
A commercially-fished species also often landed as a bycatch.
Recreational fishing
Regularly caught by boat anglers fishing reefs and wrecks; it is also targeted on rocky shores. Typical baits are mackerel strip and sandeel. They will also take lures and spinners.

Fishing methods
Boat & beach fishing, beam and otter trawling, longlining and jigging.

Fishing records