

# Pomfrets (Bramidae) in Irish and Northern European Waters

By Declan T. Quigley

POMFRETS belong to a relatively small family (Bramidae) comprising 7 genera and c22 species of highly migratory, oceanodromous, pelagic, bathypelagic and bathypelagic marine fishes found in tropical and warm temperate waters of the Atlantic, Indian and Pacific Oceans. Only 6 species (representing 5 genera) are known from the North-eastern Atlantic and only 4 of these (representing 4 genera) have been recorded from Northern European and Irish waters.

## Ray's Bream or Atlantic Pomfret (*Brama brama*)

The Ray's Bream is a cosmopolitan and highly migratory oceanic and epipelagic species occurring throughout the North & South Atlantic, Indian and South Pacific Oceans. In the Eastern Atlantic, it ranges from Norway southwards to South Africa. Although it occasionally occurs in inshore waters, it is generally found on the conti-



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nental slope (at depths down to 1000m), and appears to undertake daily vertical feeding migrations and temperature-related seasonal migrations to and from temperate waters. The species is known to breed in the Mediterranean during August and September at water temperatures >20°C while the young have been found in the mid-Atlantic but nowhere near

the European coast. Adults appear to be opportunistic feeders with a wide and varied diet, although mainly composed of small mid-water fishes and squids.

In the NE Atlantic, Ray's Bream supports a seasonally important fisheries resource, including a directed long-line fishery for the species off Galicia (NW Spain). Off the SW coast of Portugal, it is the second-most abundant commercial species in the semi-pelagic hake long-line fishery. It is also taken, albeit intermittently, but sometimes in significant quantities, by Spanish long-liners targeting hake at depths of 200-600m off the west coast of Ireland.

Despite its commercial importance, relatively little is known about the species' population dynamics. For example, it is unclear why the occurrence and abundance of Ray's Bream appears to fluctuate widely from year to year throughout its range. Although the species was first recorded from Irish waters in 1843, it was still regarded as scarce up until the late 1950s. During the 1960s and 1970s, relatively large numbers were recorded but rarely during the following two decades. Nevertheless, the species would appear to have made a comeback over the last five years (2003-07), with increasingly significant quantities landed by commercial long-liners off the west coast (Figure 1).

The monthly frequency occurrence of Ray's Bream in Irish waters appears to be strongly seasonal with the vast majority (91.6%) of specimens recorded between July and October. It is thought that the species migrates northwards from the Iberian Peninsula during early summer, reaching the Irish coast

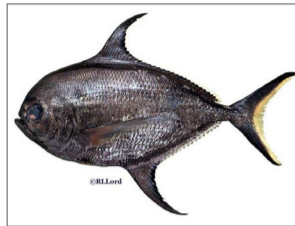
by mid-summer and NW Scotland and Norway by autumn. During the winter months of some years, significant numbers have been found stranded on North Sea coasts, possibly due to disorientation caused by decreasing water temperatures (<13°C).

Although the vast majority (>80%) of Ray's Bream recorded in Irish waters have been taken by commercial trawlers, the species has occasionally (between 1965 and 1979) been captured by anglers off the S, SW & W coasts, from both inshore (e.g. Tramore, 2; Kinsale, 1; Courtmacsherry, 4; Caherciveen, 2; Valentia, 2; Dingle, 1; Kilkee, 1; Galway, 1; and Clifden, 2) and offshore waters (e.g. Porcupine Bank, 3). It is interesting to note that the latter specimens were taken near the surface with feather/mackerel /jigs during the hours of darkness. Although the largest specimen captured on rod & line in Irish waters to date weighed 2.842kg (Valentia, 26.08.1978), an even larger fish, weighing 3.6kg, was taken by a commercial trawler in Dingle Bay during September 1966. The Irish Specimen Fish Committee (ISFC) specifies a minimum qualifying weight of 2.268kg for the species. The weight frequency distribution of all specimens taken in Irish waters is shown in Figure 2. The UK Rod & Line (Shore) Record, weighing 3.621kg, was captured during October 1967 off Crimdon Beach, Hartlepool, Durham, while an even larger fish, weighing 4.5kg, was taken by a commercial trawler off Norfolk during November 1974. The species is thought to achieve a maximum weight of c6.0kg, total length of 70.5cm and age 12 years.

## Long-finned Bream or Bigscale Pomfret (*Taractichthys longipinnus*)

The Long-finned Bream is primarily an oceanic pelagic species found in sub-tropical and warm-temperate waters of the N & S Atlantic Ocean but absent from the Mediterranean. Although it is a

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highly-migratory species, it appears to be nowhere common and there are only 4 known records from Northern European waters: the first, from Valentia Island, Co Kerry (May, 1914); the second from Sandvoe, Shetland (October 1961); the third from SW Biscay (March, 1969) and the fourth from NW Biscay (June, 1977). Very little is known about its biology.

## Rough Pomfret (*Taractes asper*)

The Rough Pomfret is considered to be a relatively uncommon oceanic bramid which appears to be distributed world-wide in the middle layers of warm and temperate waters. Larvae and young forms have been found in tropical and sub-tropical waters.



Photo: © Declan Quigley

In the NE Atlantic, the species has been found, albeit rarely, from Madeira (both young and adults) northwards (adults only) to N Norway. A total of 27 specimens have been recorded from Northern European waters to date: France, 6; Ireland, 7 (all from

western offshore waters); Faroe Islands, 1; Norway, 10 and Iceland, 3. In Iberian waters, the species is caught occasionally on lines set for Ray's Bream at depths of about 80m, whereas in Northern European waters, specimens have been taken from both inshore (<200m depth) and offshore waters, from near the surface (<5m) down to meso-pelagic and benthic depths of 500-600m. Some recent Irish specimens were taken as a by-catch in mid-water pelagic trawls targeting Blue Whiting (*Micromesistius poutassou*) in offshore waters. However, very little is known about its biology.

## Silver Pomfret or Atlantic Fanfish (*Pterycombus brama*)

The Silver Pomfret is an oceanic pelagic species of Bramid which appears to be confined to both sides of the N Atlantic Ocean but absent from the Mediterranean. In the NE Atlantic, the species



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extends from N Norway southwards to the Gulf of Guinea, while in the W Atlantic it extends from Newfoundland southwards to the Caribbean and Gulf of Mexico.

Spawning apparently takes place year round near the edge of the continental shelf off E Florida, but young are most abundant in the Gulf Stream during February. Although juveniles have also been found off the coast of Guinea (NE Atlantic), all of the specimens found in Northern European waters have been immature adults: France, 2, UK, 1; Ireland, 19; Scotland, 3; Faroe Islands, 1; Iceland, 5

and Norway, 35. It is not known whether or not the latter adults are derived from juveniles carried across the Atlantic in the Gulf Stream & North Atlantic Drift or from stocks in the southern NE Atlantic (e.g. Guinea).

Although the species is occasionally caught by line fishermen off Spain and Portugal at depths of around 128m, most of the specimens recently captured for the first time in Irish waters were taken by mid-water pelagic trawlers targeting Blue Whiting at depths of 500-600m. However, the majority of the specimens recorded from Norwegian waters were found stranded, possibly due to the disorientating effects of decreasing water temperatures.

## Conclusions

Until recently, relatively little was known about the biology, distribution and abundance of Bramids in Irish waters. However, in recent years there has been a significant increase in the quantity of Ray's Bream landed by mainly Spanish long-liners. Furthermore, due to increasing quota restrictions on Mackerel during the same period, many large Irish pelagic trawlers have started to specifically target Blue Whiting for human consumption rather than the traditional production of fish meal. This scenario has provided scientists with a valuable opportunity to examine the by-catch associated with this meso-pelagic fish, including Bramids (and other species) previously considered to be rare in Irish waters.

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Figure 1. Annual numbers of Ray's Bream (*Brama brama*) recorded from Irish inshore waters (1950-2007)

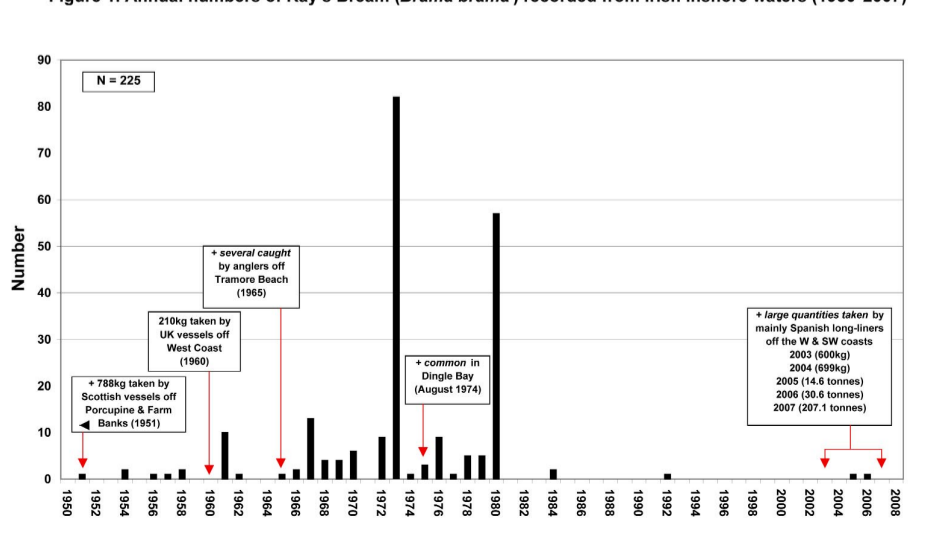


Figure 2. Weight (g) frequency distribution of Ray's Bream (*Brama brama*) from Irish inshore waters (N=64)

