

Mugil cephalus (Flathead Mullet or Black Mullet)

Family: Mugilidae (Mulletts)

Order: Mugiliformes (Mulletts)

Class: Actinopterygii (Ray-finned Fish)

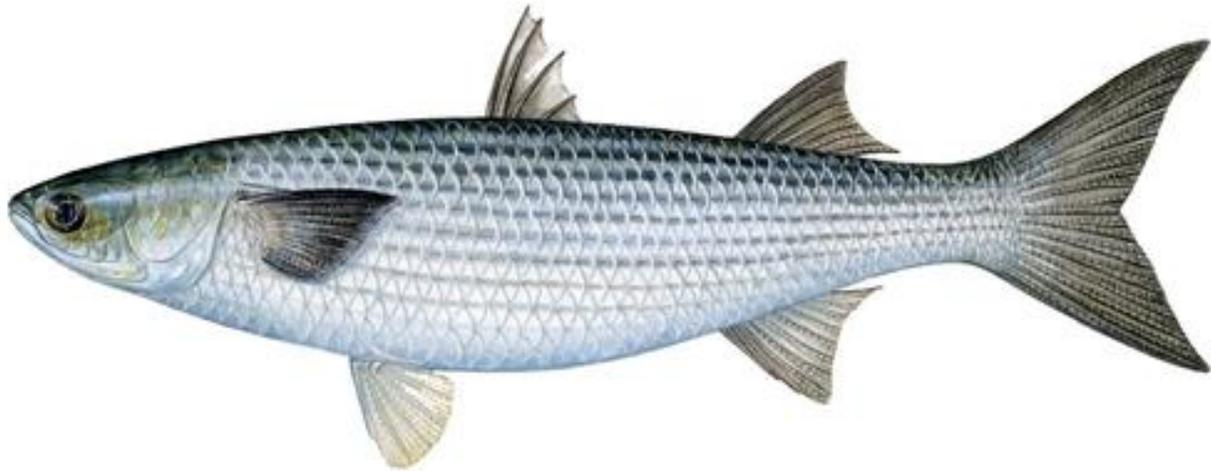


Fig. 1. Flathead Mullet, *Mugil cephalus*.

[<http://www.ifish4life.com/striped-mullet.html>, downloaded 15 November 2016]

TRAITS. The flathead mullet is greyish brown or olive brown in colour along the back with the colours lightening along the sides reaching a silver-white belly (Thompson, 1951) (Fig. 1). The body of the flathead mullet is elongated and rounded to the front and slightly thinner to the posterior (back end). They have no observable lateral line, and short pectoral fins. Their mouth has a triangular shape with thin lips and small closely-set teeth lining the jaw, and a blunt snout (Hill, 2004). The flathead mullet can grow up 119cm, weighing 8kg maximum, but its common length is approximately 45cm (Wikipedia, 2016). They can live up to 16 years, reaching maturity at the age of 3-4 years; the females mature larger than the males (Bester, 2004).

DISTRIBUTION. *Mugil cephalus* is widely spread throughout tropical and temperate coastal waters. The major range in which they inhabit are in the western Atlantic Ocean, eastern Atlantic Ocean and eastern Pacific Ocean (Thomson, 1951) (Fig. 2).

HABITAT AND ECOLOGY. Found in salty or freshwater at a temperature of 8-24°C. The adults are often found in large schools near the bottom of sandy or muddy zones near the shore. They usually move into deeper waters to release their eggs. The larvae then move inshore where the water is shallow, as cover from predators and appropriate feeding ground. After they grew to approximately 5cm they move to deeper waters. Their growth occurs slowly in July and August, reaching its peak in November and December (Bester, 2004). The flathead mullet diet is of mainly zooplankton, dead plant matter and detritus. They occasionally consume insects at the water surface, fish eggs and plankton.

REPRODUCTION. Female flathead mullet reach maturity at 4 years and a size of 41-43cm, compared to 3 years and 30-33cm in males. Their general reproduction pattern is that they migrate in large schools to deep waters to spawn. Spawning occurs during mid-October to late January; the peak season is November to December (Hill, 2004). The fertility of the female ranges from 2700000 to 1.6 million eggs per female each season, depending on body size. The eggs are transparent pale yellow, spherical and very small, and contain an oil globule allowing buoyancy. Within 48 hours after fertilization hatching occurs releasing the larva which is about 2.4mm long. After five days the jaw becomes defined and fins start developing on the larva. When they reach an approximate size of 16-20mm they move inshore (Bester, 2004).

BEHAVIOUR. For protection from predators they move around in large schools in the daylight however they do feed throughout the entire day. One usual behaviour is jumping out of the water and skipping across the water. Scientist have not been able to explain this but they believe it is for them to be exposed to a higher concentration of oxygen (Bester, 2004).

APPLIED BIOLOGY. *Mugil cephalus* is an important commercial species as they are a food source for humans. It is listed as Least Concern in the IUCN red list hence it is not considered to be endangered (IUCN, 2012).

REFERENCES

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- Hill, K. 2004. Smithsonian Marine Station at Fort Pierce. http://www.sms.si.edu/irlspec/Mugil_cephal.htm, downloaded on 16 October 2016.
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- Thomson, J. 1951. Growth and habits of the sea mullet, *Mugil dobula* Gunther, in Western Australia. Australia: 194-216.
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Author: Hannah Sugrim

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Fig. 2. Flathead mullet geographic distribution.

[<https://www.flmnh.ufl.edu/fish/discover/species-profiles/mugil-cephalus/>, downloaded 17 October 2016]

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