

Megalops atlanticus (Tarpon or Atlantic Tarpon)

Family: Megalopidae (Tarpons)

Order: Elopiformes (Tarpons and Ladyfish)

Class: Actinopterygii (Ray-finned Fish)



Fig. 1. Tarpon, *Megalops atlanticus*

[http://en.wikipedia.org/wiki/Atlantic_tarpon, downloaded 28 March 2015]

TRAITS. *Megalops atlanticus*, well-known as the tarpon or Atlantic tarpon, thrives best in tropical and subtropical regions, where they can weigh up to 161kg and can have a length of 2.5m with a life span of 55 years (Dawes and Campbell, 2009). Tarpon have large individual scales (that may measure more than 7cm in diameter) and are bluish in colour on top while the sides appear to be silver (Fig. 1). They possess a large mouth which is turned upwards together with a lower jaw comprising an extended bony plate as well as very large eyes (Snyderman and Wiseman, 1996). Midway on their body is the dorsal fin while at the posterior end the anal fin can be found (Marinebio, 2013). Attached to the oesophagus is a swim bladder that allows the tarpon to survive in oxygen depleted waters. Female tarpons are usually larger than males (Burnham, 2005).

DISTRIBUTION. Atlantic tarpons are found generally in shallow warm coastal regions, along both the western and eastern sides of the Atlantic Ocean. On the western side they are present from coastal regions of the U.S., throughout the West Indies and along the coast of South America (Fig. 2). On the eastern side of the Atlantic they inhabit the west coast of Africa from Senegal to the Congo (Burnham, 2005). Atlantic tarpons have also been located in the eastern Pacific Ocean close to Panama, due to migration through the Panama Canal (Burnham, 2005). There is a different species, the Indo-Pacific tarpon *Megalops cyprinoides*, native to the Pacific Ocean.

HABITAT AND ACTIVITY. Tarpons have the capability of thriving in both salt and fresh water system that has a temperature between 22-28°C and is shallow (Synderman and Wiseman, 1996). Tarpons inhabit regions near coral reefs once in a salt water system (Fig. 3). They can also be found in brackish water system such as mangroves, lagoons, bays and estuaries with older tarpons inhabiting rivers (Dawes and Campbell, 2009). Tarpons pursue their prey at night making them nocturnal. However they may feed during the day at times of heavy feeding.

FOOD AND FEEDING. The diet of the Atlantic tarpon depends on its stage of development. Juveniles mainly consume zooplankton but may feed on insects and small fish from time to time (Burnham, 2005). The diet of adult tarpon differs from juveniles as the adults are carnivorous as they feed on fish, squid, octopus, shrimp and crabs (Dawes and Campbell, 2009). At night the tarpon hunt and consume mid water prey such as mullet or pinfish which they swallow whole as the result of their small teeth. At the larval stage tarpons fall prey to zooplankton and small fish. As they mature they become a food source for sharks, alligators and porpoises as well as humans (Burnham, 2005).

POPULATION ECOLOGY. Normally observed gathering in schools ranging from 20-200 fish, the tarpon can be described as being non-solitary creatures (Synderman and Wiseman, 1996). Schools of tarpons frequently patrol in a back and forth motion in caves and crevices. The life span the tarpon is relatively long and based on its sex. It is estimated that in its natural habitat a female tarpon can survive for 55 years while male tarpon survived up to 43 years (Burnham, 2005).

REPRODUCTION. In the summer from May to August, schools of 25-200 tarpon migrate offshore to spawn after which the eggs are carried to inshore nurseries via ocean currents. Spawning is usually indicated by a circular swinging motion (Burnham, 2005). A single female can yield as much as twelve million eggs in a single spawning (Synderman and Wiseman, 1996). The eggs hatch within 2-3 days into planktonic leptocephalus larvae, similar to those of eels (to which the tarpons are related) (Burnham, 2005). The leptocephalus larvae further develop, growing to 6-25mm over a 2-3 month period (Fig. 4). Growth of the larva may then halt and its size be reduced to about 14mm, this stage may last 20-25 days. They then develop once more and are considered juveniles at about 40mm (Burnham, 2005).

BEHAVIOUR. In order to escape from danger tarpons can leap to about 3m vertically or approximately 20m horizontally in the air (Dawes and Campbell, 2009). Tarpons utilise the technique of countershading to merge with their surrounding environment to prevent falling victim to their predators. Tarpons communicate with each other through a thumping noise that is created by vibration in their swim bladder (Burnham, 2005). They sometimes use this thumping noise to warn off approaching predators.

APPLIED ECOLOGY. According to the IUCN red list, tarpons are listed as vulnerable with a decreasing population (IUCN, 2014). *Megalops atlanticus* are one of the most desirable fish when it comes to game fishing. Fisher folks pursue the tarpon because of the challenge they give when being caught. In the U.S permits are required for the catching and killing of tarpons. With the permit only two tarpons can be caught and killed per day. Also its location of capture as well as its size must be reported to the Florida Marine Research Institute (Burnham, 2005). In Trinidad and Tobago Tarpon fishing usually occurs from October to May just off the Bocas islands (Cameron, 2014). Being very bony fish, tarpons are undesirable for consumption, and

they can also result in ciguatera poisoning when consumed. They are sometimes released back into the sea if when caught, while on other occasions they are kept as they can be used in the manufacturing of jewellery and ornaments (Dawes and Campbell, 2009).

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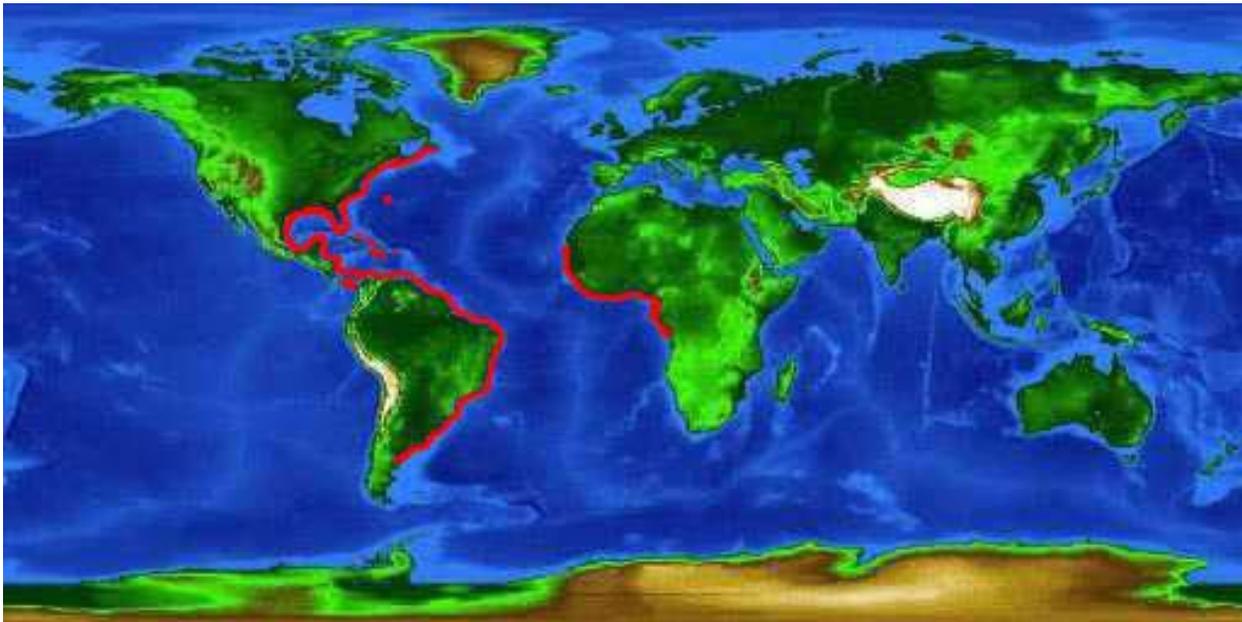


Fig. 2. Distribution of the Atlantic tarpon.

[<http://www.flmnh.ufl.edu/fish/gallery/descript/tarpon/tarpon.html>, downloaded 21 May 2015]



Fig. 2. Tarpon swimming on coral reef.

[http://seestjohn.com/st_john_life/life-on-st-john/tarpon-megalops-atlanticus/, downloaded 21 May 2015]

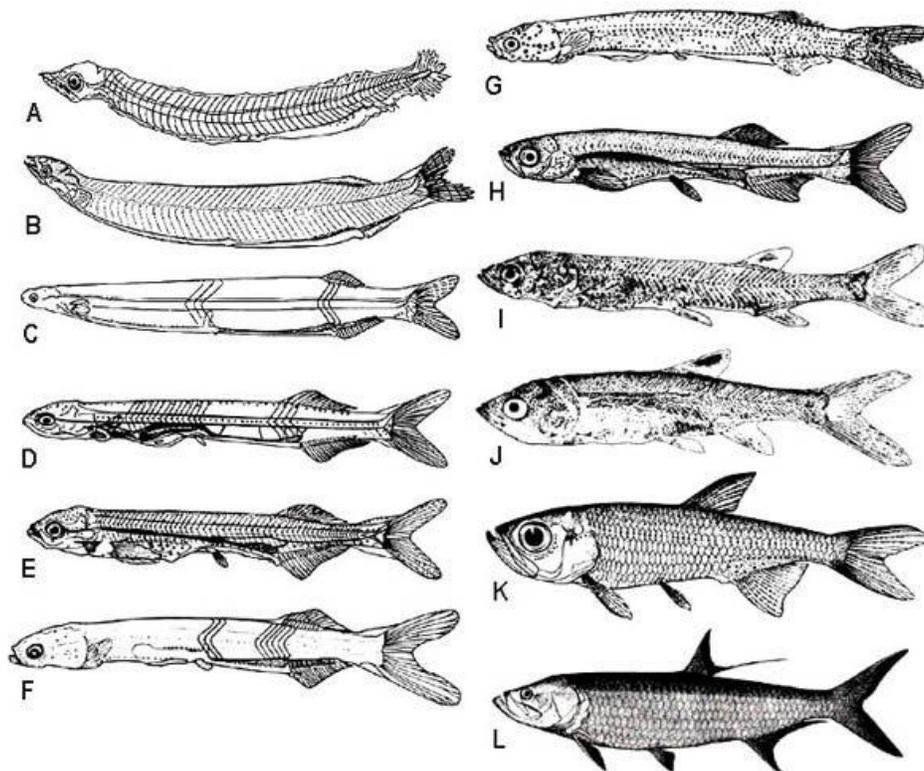


Fig. 4. Development of *Megalops atlanticus*. Stages A-C are leptocephalus larvae.

[<http://www.flmnh.ufl.edu/fish/gallery/descript/tarpon/tarpon.html>, downloaded 21 May 2015]