

## *Coryphaena equiselis* (Pompano Dolphinfish)

Family: Coryphaenidae (Dolphinfish)

Order: Perciformes (Perch and Allied Fish)

Class: Actinopterygii (Ray-finned Fish)



**Fig. 1.** Pompano dolphinfish, *Coryphaena equiselis*.

[<http://colapesce.xoom.it/PescItalia/pisces/Perciformi/Coryphaenidae/lampugadorata.htm>, downloaded 5 April 2015]

**TRAITS.** The pompano dolphinfish is one of the most colourful pelagic gamefishes which is found worldwide (Fig. 1). The vividly coloured blue and green dorsal surface of this species is flanked with yellow and gold sides which also have a few blue-green overtones (Gardief, 2015). The ventral surface of the species may be either yellow or white in colour and are multiple small blue-black dots across the head and body (Gardief, 2015). Juvenile *Coryphaena equiselis* have distinctive bars present along their sides (Fig. 2). When these fishes have met their demise by the removal from water, their extensive coloration fades into a dull grey-green hue. The body of the pompano dolphinfish is elongated and fusiform in shape, with a single dorsal fin extending the entire length of its body. The species' anal fin begins approximately midway along the body and ends in line with the dorsal fin. The pelvic fins are located under the pectoral fins, in grooves in the body. Upon maturation, the front of the male's head develops a pronounced ridge, which distinguishes them from females (Fig. 3). Pompano dolphinfish have a square shaped tooth patch on the tongue which aids in distinguishing it from its cousin *Coryphaena hippurus* (mahi mahi), which have a smaller oval tooth patch (Fig. 4).

**DISTRIBUTION.** Pompano dolphinfish are a widespread species which are found in both tropical and subtropical areas worldwide. Usually a surface-dwelling species, however they have also been found at depths of as much as 119m. The pompano dolphinfish is highly migratory and native to many regions across the world, including throughout the Caribbean islands such as Barbados, Antigua and Bermuda, Bahamas, St. Vincent and the Grenadines and also Trinidad and Tobago. This species inhabits the Indian, Atlantic and Pacific Oceans, as well as the Mediterranean, Black and Caribbean Seas (Fig. 5). Generally, this species is found in areas between 45°N and 45°S (Gardief, 2015), but are often mistaken for the females or juveniles of their cousin, *Coryphaena hippurus* (mahi mahi or common dolphinfish). This species generally migrates in a northward direction during the spring and summer, which may be as a result of the movement of their food.

**HABITAT AND ACTIVITY.** The pompano dolphinfish is identified as a pelagic and oceanodromous species, being mostly oceanic but it may also be found entering into coastal waters from time to time (Collette et al., 2011). Generally, the pompano dolphinfish is rarely found in waters less than 24°C (Gardief, 2015).

**FOOD AND FEEDING.** The pompano dolphinfish is carnivorous in nature, with the adults feeding on smaller fish e.g.: flying fish (approximately 25% of their food by weight) and squid, while the larvae and juvenile feed on crustaceans, mainly copepods (Gardief, 2015). Other organisms used as a food source for this species are crabs, shrimp and cephalopods. This species is noted for their swift moving and agile nature as predators and can easily overcome, subdue and feed on their prey. *Coryphaena equiselis* feed mainly during the day as both their vision and lateral line system are relied upon to detect and devour prey (Gardief, 2015). The males are more active feeders than the females and as a result of this they tend to be a bit larger than females of the same age (Gardief, 2015). Predators of this species include sharks, marlin, tuna and also various seabirds.

**POPULATION ECOLOGY.** This species occurs in schools of varying sizes which may be determined by either size and/or sex (Gardief, 2015). These schools can also comprise both common and pompano dolphinfish. They can commonly be found either following closely behind boats, drifting under lines of seaweed or under floating objects and/or debris (Collette et al., 2011). The species grows rapidly throughout its life cycle, with males and females both reaching maximum lengths of around 95cm (Gardief, 2015), but are most commonly around 50cm (Collette et al., 2011). The maximum lifespan of this species has been estimated to 3-4 years.

**REPRODUCTION.** *Coryphaena equiselis* spawn in pairs and begin to spawn at approximately 20cm (Gardief, 2015). The spawning season is relatively lengthy and multiple spawning per year is common in both males and females. In tropical areas, although spawning occurs year round there is a usual spike in the abundance of larvae and juveniles during the summer months. The larvae hatch at approximately 4mm in length and within a few days they can reach to lengths of approximately 5.7mm (Gardief, 2015). When the larvae are at approximately 15mm, the mouth and eyes are fully developed. The pompano dolphinfish is dioecious, with separate males and females. This species has external fertilization and are open water egg-scatterers (Luna, 2004).

**BEHAVIOUR.** Males and females are easily distinguishable from each other at approximately 4 months of age by the examination of the shape of the head. Maturity is attained at about the age of 5-7 months and they continuously spawn upon reaching this age. The eggs are pelagic (buoyant). The schooling behaviour is that small females are more associated with tide lines where clumps of *Sargassum* seaweed are present whereas small males tend to prefer the open ocean along with the mature males and females (Palko et al., 1982). Schooling behaviour of the pompano dolphinfish also depends on ecological differences within the species, as adults, juveniles and larvae form separate schools (Palko et al., 1982).

**APPLIED ECOLOGY.** The IUCN Red List of Threatened Species published 2011, states that due to the small size of this species of fish, it is of a lesser commercial importance than *Coryphaena hippurus*, thus resulting in there being no significant threat to it and it is therefore graded as of Least Concern (Collette et al., 2011). The pompano dolphinfish is a migratory species, mainly doing so in a northward direction during the summer. Since both the pompano dolphinfish and the mahi mahi can be found in the same school, this provides an advantage to the species; when there is a limit on the size of mahi mahi caught, the pompano dolphinfish will also receive protection as a result of its smaller size (Collette et al., 2011). This species is also harmless to humans and a quite popular gaming fish in areas such as South Africa, The pompano dolphinfish is also revered for its sweet taste and is considered an excellent food fish, even used in place of swordfish as a result of its firm texture (Collette et al., 2011).

## REFERENCES

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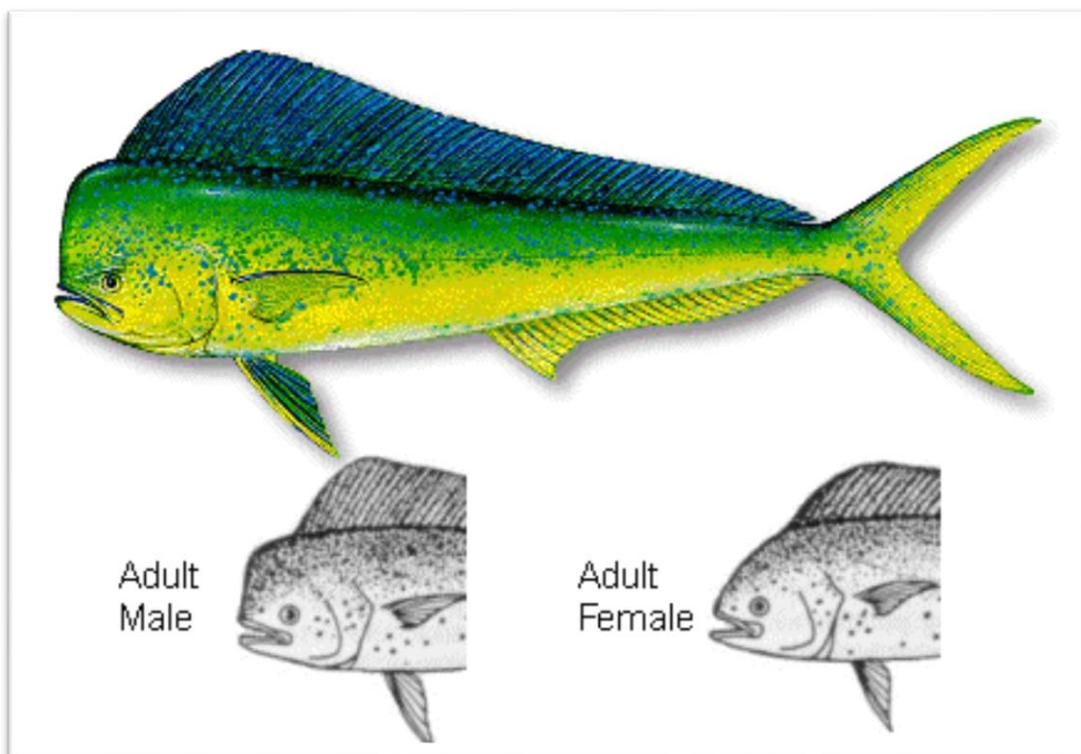
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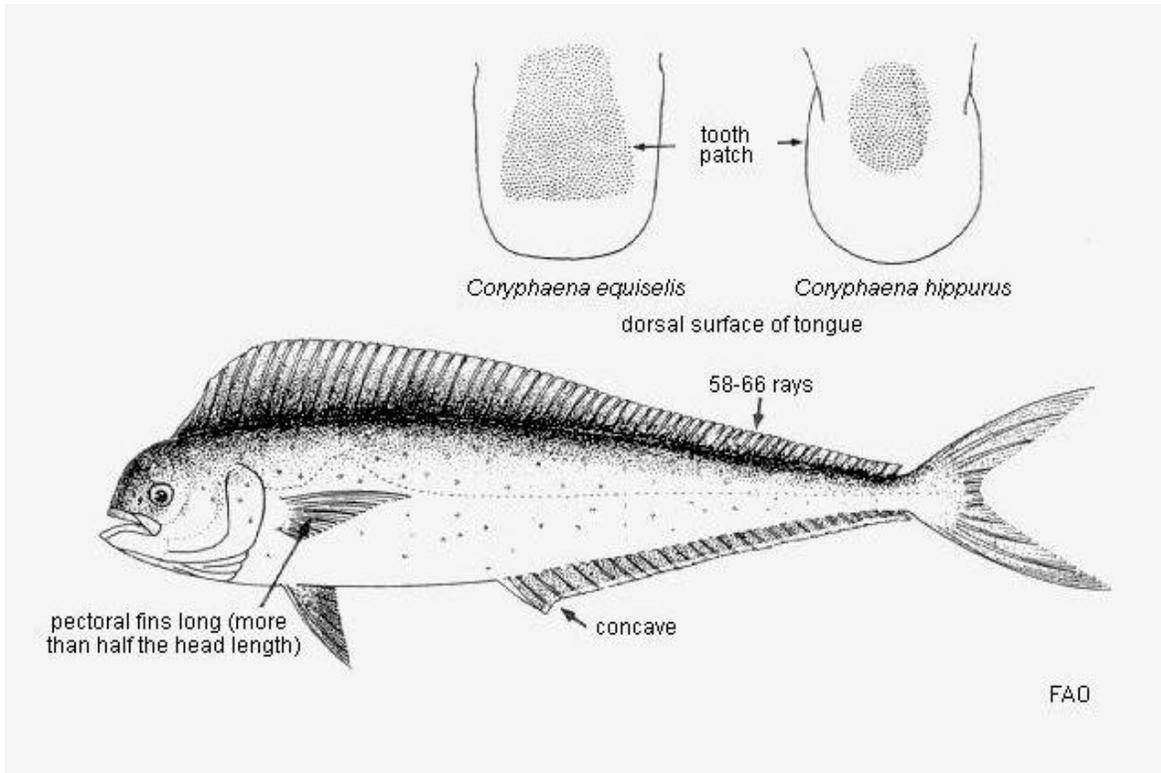
**Fig. 2.** Juvenile pompano dolphinfish (length 19cm).

[<http://www.flmnh.ufl.edu/fish/gallery/descript/pompanodolphin/pompanodolphin.html>, downloaded 6 April 2015]



**Fig. 3.** Difference in appearance of male and female dolphinfish.

[<http://www.kuuloakai.com/quarry.asp>, downloaded 7 April 2015]



**Fig. 4.** Differences in dentition in *Coryphaena equiselis* and *Coryphaena hippurus*.

[<http://www.fishesofaustralia.net.au/home/species/1729>, downloaded 8 April 2015]



**Fig. 5.** World distribution map for pompano dolphinfish (red coloured area).

[<http://www.flmnh.ufl.edu/fish/gallery/descript/pompanodolphin/pompanodolphin.html>, downloaded 6 April 2015]