

Cephalopholis fulva (Coney)

Family: Serranidae (Groupers and Sea Bass)

Order: Perciformes (Perch and Allied Fish)

Class: Actinopterygii (Ray-finned Fish)



Fig. 1. Coney, *Cephalopholis fulva*.

[<http://www.arkive.org/coney/cephalopholis-fulva/image-G95143.html>, downloaded 27 February 2017]

TRAITS. *Cephalopholis fulva* is a relatively medium-sized grouper species that reaches a maximum length of 40cm (Coelho et al., 2012). They occur in three colour forms. In the deep they are red/dark brown, in the shallows they are orange-brown and those found in both are yellow (Fig. 1) (Arkive, 2017). Both the red/dark brown and orange-brown colour forms have small blue spots that cover their head and body (Fig. 2) while the yellow form has spots located only on the front part of the head and body (Arkive, 2017). The coney is oblong in shape with small nostrils and rounded dorsal, anal and pectoral fins (University of Florida, 2016). There are nine spines and 14-16 soft rays in the dorsal fin and three spines and 9 soft rays in the anal fin (Fishbase, 2016). Also present are small canine teeth.

DISTRIBUTION. Their distribution is limited to the Atlantic Ocean, between South Carolina and Bermuda, to the south of Brazil (Fig. 3) (University of Florida, 2016).

HABITAT AND ACTIVITY. Found among coral reefs (Fig. 4) at depths that range from 2-150m, commonly around 35m. In Bermuda and the West Indies they usually hide in caves and under ledges during the day (University of Florida, 2016). They can change to a bi-colour form to aid with their concealment during the day (Arkive, 2017). In Mexico, they prefer high visibility conditions at deep reefs (University of Florida, 2016).

FOOD AND FEEDING. Diet consists primarily of small fish such as *Cantherhines pullus*, *Monacanthus tuckeri* as well as annelids (worms) and crustaceans. They also prey on *Chelonia mydas* turtle hatchlings during seasonal periods (Coelho et al., 2012; University of Florida, 2016). The coney is a top predator, at the 4.1 ± 0.4 trophic level (Fishbase, 2016). They are diurnal sit-and-wait predators that wander continuously near the bottom of the reef, and follow moray and snake eels to feed on flushed prey. Juveniles feed on fish in damselfish schools by mimicking their behaviour through folding their fins (IUCN, 2017; Arkive, 2017).

POPULATION ECOLOGY. Coney are solitary and territorial especially the males (Pictolife, 2016; University of Florida, 2016). Their mean population density is 29 fish/ 100m² while their mass is 13 kg/100m² (Coelho et al., 2012). In Bermuda, a maximum age of 28 years was reported while a maximum of 11 years observed in southern United States. Females live up to an average of 22 years compared to 28 years for males (Trott, 2006). They have a natural mortality rate of 0.18 per year (IUCN, 2017).

REPRODUCTION. Coney are protogynous hermaphrodites meaning that they are born females and transform to males at a later stage in their life (Trott, 2006). Females mature at 16cm in size and transform to males at 20cm in size. Mating occurs from April to July and spawning peaks during June. Off the Puerto Rican coast, ovaries ripen from November to March (IUCN, 2017). Spawning is pelagic meaning it occurs neither near the bottom nor the shore and it occurs over several days in small groups (Trott, 2006; IUCN, 2017). A female produces 150,000-282,000 eggs based on fecundity estimates. The eggs are 0.95mm in diameter and contain a single oil globule. Larvae have a long duration period with a large dispersal capability. They grow fast during the first year reaching 60% of their size and then grow slowly after the first few years (IUCN, 2017).

BEHAVIOUR. Juvenile coneys are found mainly in shallow seagrass, reef, rubble and rock habitats. They utilize off-reef habitats and seek shelter in neighbouring structures after being observed disturbed by observers (Claydon and Kroetz, 2008). These juveniles resemble the brown chromis (*Chromis multilineata*) as they are yellow with black scattered spots and orange eyes so it is able to utilize “aggressive mimicry” and prey on unsuspected fish in their schools. Coney change to the bi-coloured form (Fig. 5) to aid with their concealment throughout the day (Arkive, 2017). They also hide in crevices or caves during the day (University of Florida, 2017).

APPLIED ECOLOGY. It is Least Concern on the IUCN Red List. This is due to its abundance and wide distribution amongst fished areas as well as its occurrence in several protected marine areas (IUCN, 2017). However, as fishing pressure of this species increases owing to a decline in large valuable fish and more data is obtained, a re-evaluation of this categorization is needed. It is also utilized in sport fishing, by aquatic enthusiasts as pets, and in commercial aquaculture as food (IUCN, 2017).

REFERENCES

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Fig.2. *Cephalophilis fulva* deep- water blue spots trait

[<http://www.arkive.org/coney/cephalophilis-fulva/image-G93394.html>, downloaded 4 March 2017]

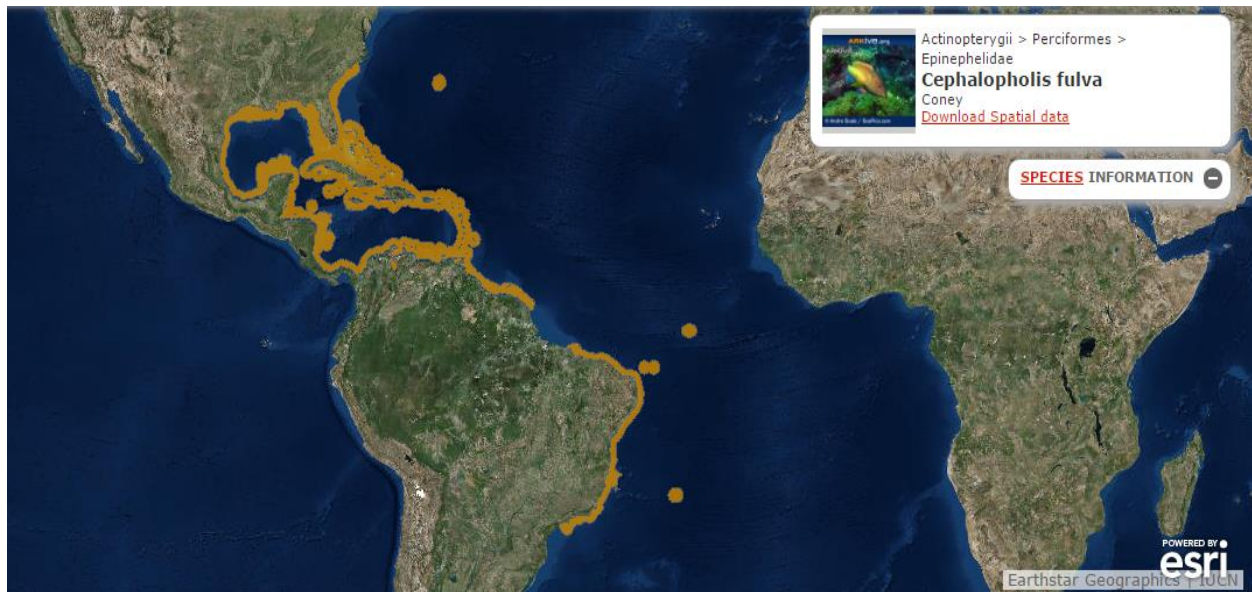


Fig. 3. *Cephalophilis fulva* geographic distribution.

[<http://maps.iucnredlist.org/map.html?id=132806>, downloaded 4 March 2017]



Fig. 4. Coney in its coral reef habitat.

[<http://www.arkive.org/coney/cephalopholis-fulva/image-G95142.html>, downloaded 4 March 2017]



Fig. 5. Coney in its bi-coloured form as an anti-predator behaviour.

[<http://www.arkive.org/coney/cephalopholis-fulva/image-G95144.html>, downloaded 4 March 2017]