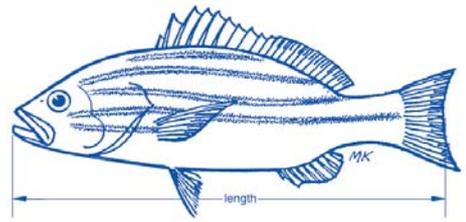


# Reef snappers (Lutjanidae)



**Mangrove red snapper**  
(*Lutjanus argentimaculatus*)



**Two-spot red snapper**  
(*Lutjanus bohar*)



**Blacktail snapper**  
(*Lutjanus fulvus*)



**Common bluestripe snapper**  
(*Lutjanus kasmira*)



**Humpback red snapper**  
(*Lutjanus gibbus*)



**Emperor red snapper**  
(*Lutjanus sebae*)



## Species & Distribution

**The family Lutjanidae contains more than 100 species of tropical and sub-tropical fish known as snappers.**

Most species of interest in the inshore fisheries of Pacific Islands belong to the genus *Lutjanus*, which contains about 60 species.

One of the most widely distributed of the snappers in the Pacific Ocean is the common bluestripe snapper, *Lutjanus kasmira*, which reaches lengths of about 30 cm. The species is found in many Pacific Islands and was introduced into Hawaii in the 1950s.



## Habitats & Feeding

**Although most snappers live near coral reefs, some species are found in areas of less salty water in the mouths of rivers.**

The young of some species school on seagrass beds and sandy areas, while larger fish may be more solitary and live on coral reefs. Many species gather in large feeding schools around coral formations during daylight hours.

Snappers feed on smaller fish, crabs, shrimps, and sea snails. They are eaten by a number of larger fish. In some locations, species such as the two-spot red snapper, *Lutjanus bohar*, are responsible for ciguatera fish poisoning (see the glossary in the Guide to Information Sheets).





## Reproduction & Life cycle

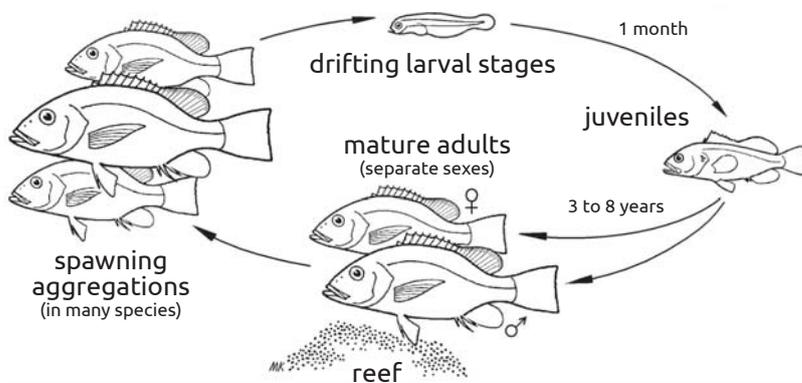
*Snappers have separate sexes. Smaller species have a maximum lifespan of about 4 years and larger species live for more than 15 years.*

Many common species grow to sizes of 25 to 35 cm and reach reproductive maturity at about 45 per cent of their maximum size (that is, 11 to 16 cm in the most common species).

Snappers generally spawn throughout the year in warmer waters but during the warmer months in cooler waters. Many snappers travel long distances to particular areas along outer reefs and channels to breed (in spawning aggregations), often around the time of the new moon and full moon.

During breeding, females (♀) release eggs (often more than 1 million) and these are fertilised by sperm released by males (♂). In most reef-associated snappers, fertilised eggs hatch within a day or two into small forms (larval stages) that drift with currents for about 1 month. Less than one in every thousand of these small floating forms survives to settle on a reef as a young fish (juvenile).

And less than one in every hundred juveniles survives the period of 3 to 8 years that it takes to become a mature adult capable of reproducing.



## Management measures & Options

Minimum size limits for snappers have been applied in some countries (e.g., 30 cm length from the tip of the mouth to the middle of the tail). However, the particular species of snapper is not usually stated. Taking into account the wide variation between snapper species, this size limit would be of little use in protecting larger species. Size limits should be applied to individual species.

Some countries have restricted fishing methods to the use of hook and line only. Catch (bag) limits have also been applied but such a measure is usually inappropriate in community-based fisheries.

Locally managed fish reserves (no-take areas) could be established but, for species that travel long distances to spawning sites, these will not protect reproducing fish. However, if spawning times and areas are known by local fishers, the following management actions are possible:

- a ban on fishing during the times that fish form spawning aggregations, which may require a number of short closures (say for 3 to 4 days) around the periods of new moon and full moon, depending on the particular species;
- a ban on fishing at known spawning areas or sites; such sites may include particular areas along outer reefs and channels where snappers are known to gather to breed.

Additional community actions could include:

- support for local national minimum size limits or (if not available) set community-based minimum size limits at about 50 per cent of the maximum size of the species;
- a ban on the use of gear such as gill nets which catch too many fish;
- a restriction on small-mesh gill nets; enforcing a minimum mesh size may allow smaller fish to escape and grow to a size when they can reproduce.



## Fishing methods

*Snappers are most often taken by using baited hooks and handlines but are also caught by using spears, traps and gill nets.*

Many snappers are caught as they gather in large groups to breed (in spawning aggregations). Fishing in this way is destructive as these breeding fish are responsible for producing small fish, many of which will grow and be available to be caught in future years.