

**What is the most valuable fish in Pacific Islands? Tuna, because of its export value? Or emperors — the most commonly caught reef fish? No, it's a fish that is full of bones and not often caught to eat.**

**Recreational fishers,\* who regard bonefish as prized sportfish because of their fighting ability, are prepared to travel great distances to catch them. The fishers buy local food, stay in local accommodation and often pay for local guides.**

**And because most fishers release bonefish immediately after capture, one fish can be caught and released many times. One bonefish, therefore, has the potential to bring many thousands of dollars to a local community.**

## The fish

Are all bonefish the same? Evidently not — there are several different species\* of bonefish but the one most commonly caught by fishers in the Pacific has the scientific name\* of *Albula vulpes*. Bonefish are silver with darker fins and can reach a length of up to 90 cm. The world International Game Fish Association (IGFA)\* record is 8.62 kg for a bonefish caught in South Africa in 1962; since then there have been unconfirmed reports of fish weighing more than 9 kg.

Bonefish are named for the many fine bones they contain or for their elusive habits, with names such as grey ghost. In French Polynesia they are called *o'io*, *albulu* or "sorte de mulet".

Recreational fishers stalk bonefish as they move across shallow sandy areas hunting shrimps, small molluscs and crabs. Bonefish are caught by fly fishing\* — a special method in which fishers use a rod and reel with a line and an almost weightless fly or "lure" to encourage the fish to strike.

Although larger bonefish may swim either alone or in small groups, smaller fish often travel in large schools.\* As medium-sized predators,\* bonefish are an important link between invertebrates\* and larger predators in marine food webs\* (see Teachers' Resource Sheet 6: Marine food webs).

Bonefish are generally not preferred as food although they are eaten in some countries such as Hawaii, Kiribati, French Polynesia and the Cook Islands. However, they are highly valued by sports fishers and have the potential to be of great economic benefit to countries in which they are found.

## Lifecycle

Bonefish reach sexual maturity between 3 and 4 years of age. In the Pacific, bonefish appear to spawn in deeper water over several months of the year around the time of the full moon.

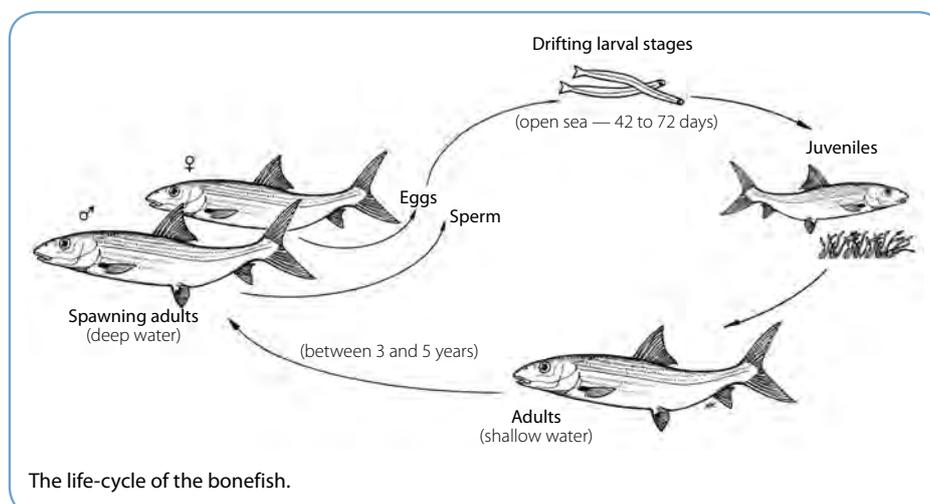
Fertilised eggs hatch into larvae\* which drift in the ocean for long periods, perhaps for over two months. Many larvae do not reach areas in which to settle and many others become food for other fish. Only a small number of drifting larvae survive to settle in shallow sandy areas where they grow into juveniles that look like miniature versions of their parents.

Bonefish may live for more than 19 years but are taken by many predators including sharks and barracudas. Their main defences are their cautious behaviour and fast escape speed. For these reasons, fishers find that schools of bonefish are easily frightened or "spooked" and the fish are difficult to catch.

## Habitat

Adult bonefish are commonly found in intertidal flats, mangrove areas, river mouths and deeper adjacent waters.

A fish that breathes air? Bonefish can live in waters, such as in warm lagoons and creeks, that contain very little dissolved oxygen — they do this by swimming to the surface and gulping air into a lung-like swim bladder\* (see Teachers' Resource Sheet 5: Fish anatomy).



## Distribution

Bonefish inhabit tropical and warm temperate waters around the world. They are fished on the east coast of North and South America and the Caribbean. They have been found in several Pacific Islands including New Caledonia, Fiji, Cook Islands, Kiribati and French Polynesia.

## Management

All fisheries need to be managed to ensure that fish stocks are not overexploited\* and continue to provide benefits to people in the future.

Some managers have imposed direct measures to protect bonefish stocks. In the Cook Islands fishery\* in Aitutaki, for example, fishers are required to have a permit and to fish only in designated areas. Fishing in spawning\* areas is prohibited from three days before until three days after the full moon.

Most sports fishers release their catch immediately after capture. This type of fishing, called “catch and release”, involves fishers returning caught fish to the water as quickly as possible. This practice is likely to protect bonefish from overexploitation.

However, management actions could include protecting important bonefish habitats\* including seagrass beds in lagoons and limiting the number of local guides in a given area.

