

Australian Anglerfish

by Paul Macdonald

Anglerfishes are a strange family of around 40 species with pectoral fins modified for crawling, the first dorsal spine modified into a device for luring prey and the 2nd and 3rd spines long and separated. They have large extendable mouths and expandable stomachs for feeding on large prey. These odd creatures are very difficult to spot by divers as they resemble the sponge or weed of the reefs they inhabit. Whilst known as anglerfish in Australia, they are also known as frogfish in other counties.

There are 23 anglerfish species found in Australia with 3 commonly found (and endemic) to Southern Australia being the Smooth, Prickly and Tasselled Anglerfishes.

Anglerfishes are of the Antennariidae family and are found in almost all tropical and subtropical oceans and seas around the world. They live generally on the ocean floor around coral or rock reefs. They are often brightly coloured and blend in with their surroundings. Colouration can also vary within one species, making it difficult to differentiate between them. The front most of the three dorsal fins is called the

illicium or “rod” and is topped with the esca or “lure”. The esca takes a different form in each species. Because of the variety of colours even within a single species, the esca and illicium is a useful tool to differentiate among different varieties. The esca usually resembles the food of the anglerfish’s prey. If lost, the esca will regenerate. In many species the illicium and esca can be withdrawn into a depression between the second and third dorsal fins for protection when they are not needed.

Anglerfish generally do not move very much, preferring to lie on the sea floor and wait for prey to approach. Once the prey is spotted, they approach slowly using their pectoral and pelvic fins to walk along the floor. Anglerfish eat crustaceans and fish. When potential prey is first spotted, the anglerfish follows it with its eyes.



Ricoh GX8, Sea & Sea housing, SeaLife strobe, f/13, 1/60 sec, 15mm, ISO-250

Then, when it approaches closer, the anglerfish begins to move its illicium in such a way that the esca mimics the motions of the animal it resembles. As the prey approaches, the anglerfish will slowly move itself to prepare for its attack. The catch itself is made by the lightening fast opening of the jaws, which enlarges the volume of

the mouth cavity up to twelve times, pulling the prey into the mouth along with water. The attack can be as fast as 6 milliseconds. Anglerfish can also expand their stomachs to swallow animals up to twice their size.

There are no means to distinguish between male and female anglerfish other than by dissection. Whilst most



Nikon D700, Sea & Sea housing, 105mm, 2x Sea & Sea YS110 strobes, f/14, 1/60, ISO-400

anglerfish species spawn at the surface releasing 10s of thousands of eggs to be distributed by the currents, those endemic to Southern Australia show a level of parental care for their eggs. In the case of the Smooth Anglerfish and the Prickly Anglerfish one of the mating pair stays close by to guard the



Nikon D700, Sea & Sea housing, 105mm 2x Sea & Sea YS110 strobes, f/14, 1/60, ISO-400

eggs from would be predators. With the Tasselled Anglerfish, courting males gather round the female whilst she lays around 5000 eggs in a large mass. As the male releases sperm, the female fans it to the eggs with the caudal fin. The female then covers the eggs completely with her side and guards them.



Nikon D700, Sea & Sea housing, 105mm, 2x Sea & Sea YS110 strobes, f/14, 1/60, ISO-400

The approach of these anglerfish species means they have a narrow geographic distribution compared to other anglerfish species.

The Tasselled Anglerfish (*Rhycherus filamentosus*) is covered with fleshy tentacles which provide it with camouflage in its natural habitat.



Nikon D700, Sea & Sea housing, 105mm 2x Sea & Sea YS110 strobes, f/14, 1/60, ISO-400

The species is extremely difficult to spot as it is well camouflaged when it remains motionless.. This species is brown to red above with dark marks on the sides separated by white areas extending up from below. It has a dorsal fin comprising four parts. The first is a long illicium with an esca that resembles two worms. The second and third dorsal spines are separate. These are followed by 12 to 13 soft rays.

The Tasselled Anglerfish grows to 23 cm in length. It is endemic to Australia and lives on rocky reefs

from Bass Strait to South Australia.

The Prickly Anglerfish (*Echinophryne crassispina*) has a short, deep body that is covered with tiny bifurcate spines. The eyes are surrounded by a ring of close-set dermal spinules. The dorsal fin is comprised of four parts, a short illicium two separate skin-covered spines and a long-based soft-rayed fin that is separate from the caudal fin.

Colouration of the species is variable, but may be reddish, brown, pinkish or yellowish and it grows to

about 7 cm in length. The species is endemic to Australia, occurring from Tasmania and Victoria to South Australia.

It is not commonly seen because it lives under rocks and ledges.

The Smooth Anglerfish (*Phyllophryne scortea*) is highly variable in colour. It can be yellow, orange, brown or black and have patches of grey. It may also have skin flaps on the body. The Smooth Anglerfish is a slightly compressed, deep-bodied fish. It has a dorsal fin that is divided into four parts. The illicium protrudes from the tip of the snout and is the first spine of

the dorsal fin. It is followed by two separate spines that are covered by puffy-looking skin. The posterior surface of the second spine is concave. The fourth part of the dorsal fin comprises 15 to 16 rays.

The species grows to 10 cm in length and is endemic to Australia, occurring from Tasmania to south-western Western Australia.

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