

# Sepia Apama

## The Giant Australian Cuttlefish

by Paul Macdonald

The Sepia Apama congregate every year from mid June to mid August in the shallow rocky waters of False Bay which is bound by the industrial city of Whyalla and the picturesque Point Lowly in South Australia.

It estimated that during this period around 40,000 or more cuttlefish are present in the bay. This is an amazing spectacle to literally see 25 to 40 cuttlefish in your mask vision. These are the largest known cuttlefish in the world and can grow to a tube length of 60cm and weigh up to 10kgs.

This bay is very special as it is the only known site in the world where cuttlefish are known to aggregate in such large numbers for the purposes of reproduction. Later in the year and for a shorter period of time Southern Calamari are also known to aggregate in the bay for mating purposes. The importance of False Bay has been recognized by the South Australian Government and all cephalopods are now protected in the area.

The Giant Australian Cuttlefish is part of the cephalopod family and have 8 arms which it uses for grabbing, moving and camouflage. They also have 2 feeding tentacles that they use to strike with amazing speed. These are smooth along their length with a tentacular club covered with suckers. It uses these feeding tentacles to catch its prey which comprises of small fish, crustaceans and smaller cuttlefish. It eats its victims with its beak like mouth and tooth lined tongue.

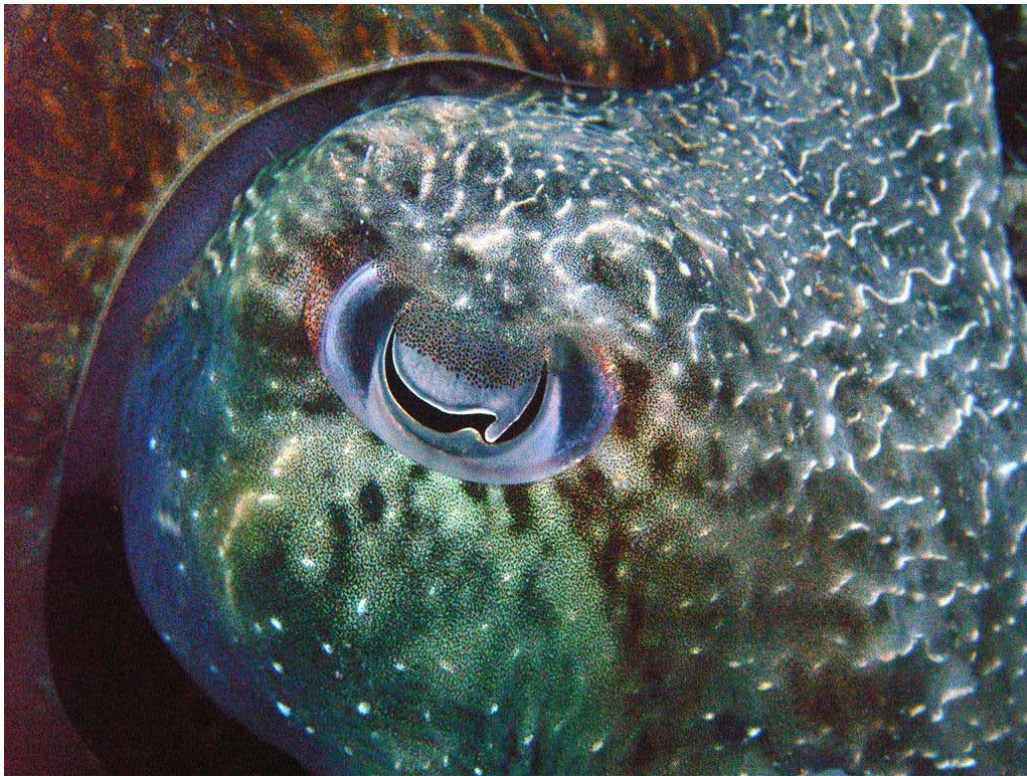


*Nikon D700, Sea & Sea housing, 15mm sigma fish eye lens, 1.4x TC, 2x Sea & Sea YS110 strobes, f/14, 1/60, ISO-400*

The Sepia Apama has a porous internal shell called a cuttlebone. Apart from providing structural strength for the body, the cuttlebone is multi chambered allowing for exceptional buoyancy control. Swimming generally is done from the small fin fringe around the mantle however if threatened it can move surprisingly fast using jet propulsion by pumping water over their gills and out their funnel.

The Giant Australian Cuttlefish only breeds





over one season and their lifespan is only 18 months, dying after breeding. Wild dolphins are often seen by divers during mating season feeding on the dying cuttlefish. Some cuttlefish do not reach maturity to breed in the first season so will survive through to the next. These older cuttlefish are the largest in the next season.

Cuttlefish have been described as the chameleons of the sea. They use 3 layers of colour changing cells to put on some amazing electric flashing displays or to blend in with their environment. The first layer consists

of chromatophores which sit just beneath the surface of the skin. The chromatophores consist of a central saccule cell that contains a colour pigment. This cell is attached to 15 to 25 muscles that stretch and contract to control the colour of the pigment. It has been estimated that there are up to 30,000 chromatophores per square inch, for photographers it's a bit like 30,000 dpi.

Under the chromatophores lies the next system of iridophores. This next layer functions by reflecting and refracting light and are responsible

*(Above left) Cuttlefish Eye, Black Point, Whyalla. Ricoh GX8, Sea & Sea housing, SeaLife strobe, f/6.2, 1/50 sec, 11mm, ISO-250*

*(Above right) Mating Cuttlefish, Stony Point, Whyalla. Nikon d200, Sea & Sea housing, 12-24 nikkor lens @ 19mm, 2x Sea & Sea YS110 strobes, f/7.1, 1/40 sec, ISO-100*

*(Right) Giant Australian Cuttlefish, Songvaar Wreck, Wardang Island. SeaLife DC310, SeaLife Housing, Onboard flash, f/3.5, 1/80 sec, 8mm ISO-100*





*Nikon d200, Sea & Sea housing, 12-24 nikkor lens @ 19mm, 2x Sea & Sea YS110 strobes, f/7.1, 1/40 sec, ISO-100*

*Diver with Cuttlefish, Stony Point, Whyalla. Nikon d200, Sea & Sea housing, 10.5 nikkor fish eye lens, 2x Sea & Sea YS110 strobes, f/6.3, 1/60 sec, ISO-100*

for the shimmering metallic green, blue and gold colours displayed by cuttlefish. The third layer consists of leucophores and they reflect whatever colour of light illuminates them.

During mating season females are outnumbered by males in a ratio of around 11 to 1. It is believed that males stay in the area for the whole season whilst the females come and go. The competition amongst

males for the females attention is quite intense. Males put on beautiful flashing displays of dark colours that roll and pulse across their skin to warn off other males. They will also attack each other with their beaks and males are often seen with chunks taken out of them by rivals. It is incredible to watch smaller males imitate females in order to sneak in close to other females and quickly mate with them

while the other larger males are still fighting.

The females will mate face to face with multiple males during the mating season and will hold several different packets of sperm, selecting up to three of these packets to fertilise her eggs.

Divers are able to get quite close to the cuttlefish during mating season. They are far too preoccupied with their sexual goings on to be concerned with large bubble blowing divers.

In recent years the numbers of Giant Australian Cuttlefish attending the aggregation has diminished significantly and has become cause for great concern amongst

environmentalists and locals. Whilst there are several theories about why the numbers have declined, they all remain unsubstantiated and there are a number of studies being undertaken in this regard. Hopefully the situation can be rectified in the near future and the cuttlefish can return to their historical aggregation numbers.

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