

# Flamboyant Cuttlefish



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## FastFacts

- Named for its flamboyant display of skin colouration when evading predators or mesmerizing prey.
- Reach only 6-8cm in length.
- Hunt their favourite food, small fish and crustaceans, during the day.
- Females lay up to 100 eggs then die shortly after.
- Of the more than 100 species of cuttlefish described, the flamboyant cuttlefish is the only species known to be toxic.
- No conservation concerns at this time.

## PrettyLethal

The flamboyant cuttlefish is truly a feast for the senses with its extravagant display of pink, yellow, and black ripples pulsating along its body, warning predators. It is a display that clearly says "keep away, I'm dangerous". However, at only 8cm long, this outrageous display may seem overly confident...or does it?

The flamboyant cuttlefish, like all cuttlefish, has a cuttlebone with chambers that can be filled with gas and fluid to regulate buoyancy. However, the cuttlebone of this little beauty is so small that it can't float for very long. One is more likely to see a flamboyant cuttlefish ambling across the sand and muddy substrate, using two of its ten tentacles to "walk" along the ocean floor.

Scientists have only recently discovered why this small cuttlefish can get away with boldly walking about in the open during the day in search of crustaceans and little fish to eat. The flamboyant cuttlefish is one of only three cephalopods known to be toxic; the other two are the blue-ringed octopus and the striped pajama squid. However, it is unique in that it is the flesh that is toxic (not a venomous bite) and considered to be just as toxic as the blue-ringed octopus, which can kill humans. The toxin extracted from the muscle of the flamboyant cuttlefish is new to science and may lead to new medical discoveries.

## LATINNAME

# *Metasepia pfefferi* (Hoyle, 1885)



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## CamouflageMaster

The colour display of the flamboyant cuttlefish is enough to shame a chameleon and truly makes it a master of camouflage. The skin of the cuttlefish is made up of layers of pigmented skin cells; a yellow layer, red layer and brown layer. Each pigment cell is literally a little ball of colour that is so tightly bound up that it is invisible. However, when the muscle that is attached to each pigment cell is flexed, it stretches the ball out into a disc of colour. When the muscle relaxes, the pigment cell bounces back into an invisible ball. The muscles are wired directly to the brain so that pigment changes are instantaneous as information is perceived by the eye then transmitted to the brain, which then signals the pigment cell muscles.

Deeper still in the skin, are layers of iridescent reflecting cells that produce blue and green colour, as well as red and pink. At the base of this, lies a white layer, making the cuttlefish rainbow complete and allowing it to produce virtually any colour it wishes instantaneously.

However, the flamboyant cuttlefish disguise does not simply end with colour. It is also capable of changing the texture of its skin. It can flatten and raise projections known as papillae on its skin allowing it to not only mimic the background colour, but also the texture.

What's even more amazing is that juvenile cuttlefish are capable of these extravagant colour displays the moment they leave the shelter of their egg.

Like all other cuttlefish, the flamboyant cuttlefish breeds once and then dies. Females will lay up to 100 eggs and place each one carefully in rock crevices or under coral ledges or even in abandoned shells. The round white eggs turn clear as they develop.

There is still much to be learned about these incredible creatures. Luckily their small size and toxic flesh make them unappealing for commercial fisheries, though they are sometimes sought after for the aquarium industry.

Flamboyant cuttlefish are known to occur throughout the [Coral Sea Conservation Zone](#) in depths of 3 to 86 meters.

## Sources

Jereb, P.; Roper, C.F.E. (eds) Cephalopods of the world. An annotated and illustrated catalogue of cephalopod species known to date. Volume 1. Chambered nautilus and sepioids (Nautilidae, Sepiidae, Sepiolidae, Sepiadariidae, Idiosepiidae and Spirulidae). FAO Species Catalogue for Fishery Purposes. No. 4, Vol. 1. Rome, FAO. 2005. 262p. 9 colour plates.

[http://www.bbc.co.uk/nature/blueplanet/factfiles/molluscs/flamboyant\\_cuttlefish\\_bg.shtml](http://www.bbc.co.uk/nature/blueplanet/factfiles/molluscs/flamboyant_cuttlefish_bg.shtml) [accessed 20July2010]

[http://www.pbs.org/wgbh/nova/transcripts/3404\\_camo.html](http://www.pbs.org/wgbh/nova/transcripts/3404_camo.html) [accessed 20July2010]

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