

**Maritime Rescue Institute**  
**Coastal Notes – 25 September 2007**

People are endlessly fascinated by sharks; they are frightening, mysterious, predatory and unpredictable. Not a lot is known about their life cycles; they don't make the easiest of research animals. The film 'Jaws' has left an indelible image of indiscriminate attack, huge teeth and terror: the theme tune for the shark has become the epitome of menace. Just as in the film however, sharks aren't invincible – they do have their enemies, chief of which are the killer whales. Killer whales will kill a shark by torpedoing upwards into the shark's stomach, causing it to explode.

A shark on the attack can generate up to  $6\frac{1}{2}$  tons per square inch of biting force. There's little chance of surviving such a bite. Yet, despite their reputation, more people are killed each year by dogs, pigs or deer than by sharks. Shark attacks tend to get more publicity, but in reality are much much rarer.

The shortfin mako shark is probably the fastest fish in the sea, reaching speeds not much short of 100kph. With that kind of speed, the chosen victim would have little chance of escape in the open sea.

Another speedy underwater creature is the Gentoo penguin of the Antarctic; its streamlined body can travel at up to 40 kph. It actually flies underwater, even though Gentoos are flightless on land.

There are all sorts of other oddities in the marine world. Polar bears are left handed, while a small car could drive through the major blood vessels of the blue whale. Jelly fish are 95% water. Sorry girls, but most lipsticks contain fish scales; fish scales are the ingredient which gives some cosmetics their "frost" or "pearlescence". Nail polish, eye shadow, and blusher have all contained fish scales, though some companies now use synthetic substitutes to obtain that shimmery effect.

A starfish turns its stomach inside out to eat. When it finds something tasty (like a snail), it extrudes its stomach through a tiny hole. The stomach is like a transparent bag made out of thin rubber. It wraps around the prey, completely surrounding it, and the prey is digested.

If the prey is a tough morsel like a hard-shelled mussel, the starfish attaches its suction-tube feet to the mussel's shells and simply pulls them apart. It can do this because it is able to exert a huge, steady force with a network of hydraulic tubes that run through its entire body. Once the shells are open, the stomach goes in through the gap and dinner is served! In spite of this ingenuity a starfish has no brain.

An electric eel can produce a shock of 600 volts. That's enough to stun large animals – even knock a horse off its feet.

Finally, just to prove that it's not just salt water that has strange creatures with unexpected capabilities, some frogs can pull their eyes into their throat to help push food down!

[www.maritime-rescue-institute.org](http://www.maritime-rescue-institute.org) to find out more about us.

Your online shopping can support MRI also; log onto [www.buy.at/mri](http://www.buy.at/mri)

For further information or to get involved with MRI as a volunteer, please contact 01569 765768 or email [hamish.mcdonald@btconnect.com](mailto:hamish.mcdonald@btconnect.com).