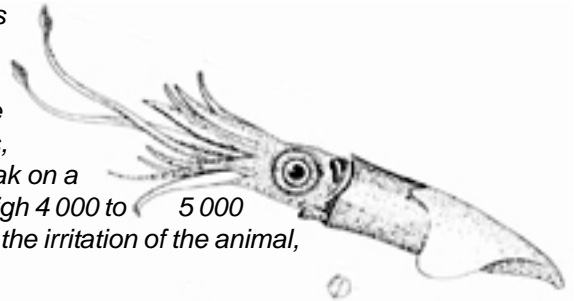


Captain Nemo's Nemesis

Before my eyes was a horrible monster, worthy to figure in the legends of the marvellous. It was an immense cuttle-fish, being eight yards long. It swam cross-ways in the direction of the Nautilus with great speed, watching us with its enormous staring green eyes. Its eight arms, or rather feet, fixed to its head, that have given the name of cephalopod to these animals, were twice as long as its body, and were twisted like the furies' hair.... The monster's mouth, a horned beak like a parrot's, opened and shut vertically.... What a freak of nature, a bird's beak on a mollusc! Its spindle-like body formed a fleshy mass that might weigh 4 000 to 5 000 lbs.; the varying colour changing with great rapidity, according to the irritation of the animal, passed successively from livid grey to reddish brown.

— Jules Verne, *Twenty Thousand Leagues Under the Sea* (1870)



Perhaps the most memorable squid in literature is this giant described by Jules Verne over a century ago. For a time when little was known about the giant squid, Verne's description was well researched and quite accurate.

For hundreds of years people have been intrigued by squids. There are many stories, most of them exaggerated, of giant squid attacking sea-going vessels and even pulling men off land. Old Norwegian legends tell of krakens, monsters so large that, from a distance, they resemble islands. Evidence suggests that krakens were actually giant squids, and the Norwegian word, kraken, is now used to mean both giant squid and sea monster. Although there are giant species of squid, most are small or medium in size, usually less than a metre long.

Squids are abundant in all oceans of the world. Approximately 40 species are known to live along the west coast of North America. A few live in shallow water close to shore, but most live in the open ocean far from land, often at great depths.

Squids are molluscs: although there is little superficial resemblance, they are related to snails, clams, oysters and slugs. The squid's body is generally torpedo-shaped, and has two tail fins at the posterior end. These fins are used as stabilizers when the animal is swimming rapidly, or they beat rhythmically for slower swimming.

Like its close relative, the octopus, a squid has eight arms. But unlike the octopus, it has two longer appendages known as tentacles. All ten appendages of the squid are, as Jules Verne notes, "fixed to its head", and are arranged in a circle around the mouth. Imagine if your arms and legs grew out of your face!

The squid's eight arms have suckers along their entire length, but its tentacles have suckers only at the ends where they widen to form structures known as clubs. The tentacles can shoot out rapidly to capture prey, grasping it between the clubs, as you might clap your hands together in front of you to kill a mosquito. The squid then pulls the prey to the arms where it is held and drawn towards the mouth. The mouth at the centre of the ring of arms is equipped with "a horned beak like a parrot's", which is used to kill the prey and then tear it into pieces small enough to swallow. "What a freak of nature, a bird's beak on a mollusc!"

Adapted for an active swimming existence, squids are predators feeding on fish, shrimp, krill and even other squids.

Squids use jet propulsion to attain great speeds when chasing prey or fleeing from predators. Water is drawn into the body and rapidly forced out by muscular contraction through a narrow funnel located just behind and below the head. The force of the water rushing out of the funnel propels the squid in the opposite direction, in much the same way that air escaping from a balloon will cause it to fly around a room. The funnel is flexible and can be turned in any direction, allowing the squid to change direction without turning its body.

Using this method of propulsion, some species are capable of tremendous bursts of speed. When fleeing from a predator, the Pacific Flying Squid swims fast enough to shoot out of the water and glide through the air for many metres.

Another squid escape mechanism is the ability to release a cloud of dark fluid known as ink. The ink is stored in a special sac in the body, and is expelled through a funnel as the squid darts backwards. By releasing a cloud of ink, a squid can confuse or startle a predator and temporarily conceal its escape route. Some squids emit an ink cloud approximately the same size and shape as their body, and escape while the predator is attacking the dummy squid.

Squids have an amazing ability to change their colour. Special pigment cells in the skin can expand to show dark pigment within, or contract to hide the dark colour and show a pale coloration, usually white or grey. Controlled by muscles, these cells can open and close as fast as you can open and close your eyes, making for rapid and dramatic colour changes. A squid changes colour primarily for camouflage, but when it is agitated or excited the colour changes can occur "... with great rapidity, according to the irritation of the animal...."

The largest species of squid in British Columbia waters is the Pacific Giant Squid. It regularly grows to three or four metres, and some reports have measured it as long as seven metres. The world's largest squids live in the North Atlantic, where giants measuring 18 metres long have been found washed ashore, and sightings of even larger squids have been reported.

Although rarely seen, giant squids must occur in considerable numbers, as they are a staple food of Sperm Whales. Captured Sperm Whales usually have squid beaks in their stomachs, the beak being the only indigestible part of the squid.

Battles between giant squids and Sperm Whales, although much glorified in fiction, are usually one-sided affairs: a squid has little chance against a hungry and much larger whale. In the past, people estimated the size of giant squids by the size of sucker scars found on captured Sperm Whales. Scars as large as dinner plates indicated squids much larger than any previously observed. This method is no longer used, since scars grow as whales grow. A small scar received by a young whale may be many times larger when the whale is fully grown.

Our knowledge of squids has come a long way since Jules Verne wrote his classic novel, but there is still much to learn about these mysterious denizens of the deep. Information is lacking for many of the known species, and surely there are unknown species inhabiting the ocean depths off the coast of British Columbia. Perhaps even a few monsters "worthy to figure in the legends of the marvellous".

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