



Tall Tails – Investigating the myths surrounding Basking Sharks

SHARK

FACTS

Hibernation and Shedding Gillrakers - It was previously thought that Basking Sharks hibernated during the winter due to a number of circumstantial pieces of evidence mainly their disappearance during the winter months and that the liver weights of fishery caught Basking Sharks was much less in the Spring than in the Autumn indicating a cessation of feeding. This was supported by reports that the sharks shed their gillrakers over the winter and so were presumably incapable of feeding.

Recent studies (Sims *et al.* 2003, Francis & Duffy 2002) have disproved the theory that Basking Sharks hibernate and have proven that the sharks are very active throughout the year. It was determined that, in the Winter months, rather than spending time near the surface Basking Sharks spend more time in deeper water at depths of up to 900 m feeding on deep water plankton communities. Using satellite tags Sims *et al.* also discovered that Basking Sharks still move thousands of kilometres during the winter months actively tracking plankton blooms in order to feed.

Furthermore, it was determined that Basking Sharks do shed their gillrakers but not all in one go. Rather than losing their gillrakers all in one moult, over the winter months shedding and re-growing new gillrakers is an ongoing process.

Sea Serpents – Basking sharks have been responsible for a number of supposed sea monster stories.

When Basking Sharks decompose “the entire gill apparatus falls away, taking with it the shark's characteristic jaws, and leaving behind only its small cranium and its exposed backbone, which have the appearance of a small head and a long neck. The triangular dorsal fin also rots away, sometimes leaving behind the rays, which can look a little like a mane--especially when the fish's skin also decays, allowing the underlying muscle fibers and connective tissue to break up into hairlike growth. Additionally, the end of the backbone only runs into the top fluke of the tail, which means that during decomposition the lower tail fluke falls off, leaving behind what looks like a long slender tail. The pectoral and sometimes the pelvic fins remain attached, but become distorted, so that they can (with a little imagination!) look like legs with feet and toes, and male sharks have a pair of leglike copulatory organs called claspers, which would yield a third pair of legs. Suddenly, the basking shark has become a hairy six-legged sea serpent!” (Shuker 1995)



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Due to the morphology of Basking Sharks and the manner in which they decompose, a number of occurrences of sea serpents being trawled or washed up on shore have been reported over the years.

One of the most famous and heavily discussed was an incident in 1977

when a Japanese trawler pulled up a what was thought to be a sea monster. Click here to read Glen Kuban's dissection of the story: Sea-monster or Shark? An Analysis of a Supposed Plesiosaur Carcass Netted in 1977. (<http://paleo.cc/paluxy/plesios.htm>)

For a breakdown of some of the other instances of sea monsters click here to read Dr. Karl P. N. Shuker's article: Bring me the Head of the Sea Serpent.

(<http://www.strangemag.com/seaserpcarcsshuk.html>)

Breaching – Despite being the second largest fish in the sea Basking Sharks are capable of breaching (leaping clear out of the water) – no mean feat for an animal that can weigh up to seven tonnes!

It is not entirely clear why Basking Sharks do this but it is believed that to be a communicative tool similarly displayed by White Sharks (Pyle *et al.* 1996) and whales (Whitehead 1985). Sims *et al.* (2000) discusses courtship behaviour displayed by Basking Sharks studied over a five year period. During this time the group observed numerous sharks breaching all of which were large animals. Consequently, these displays are likely to be linked to courtship behaviour either through competition between males or females indicating receptiveness to mating.

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