



## The Main Character Of The Scene

by Katja Aglert and Janna Holmstedt

The common octopus, *Octopus Vulgaris*, can often be seen hung out to dry in the harbour of Antiparos, Greece. Low season, high tide – this is where the Swedes go for vacation, the common Swede. These two kinds of vulgaris are brought together in Greek cuisine; on the small island of Antiparos octopus is served at every tavern. We will stay here for a week, enough time to try all the vegetarian dishes on the menus twice and hopefully also enough time to find a living octopus. We have read it is practically impossible to spot one in its natural habitat, since it is so good at camouflaging itself within its surroundings.

Squids and octopuses belong to the class Cephalopoda, which means 'head foot'. They have well developed senses and are thought to be the most intelligent of invertebrates. Their large brain is donut shaped with their stomach passing through the centre. They have three hearts, blue blood and they use jet propulsion to swim. Squids, apart from having two more arms than octopuses, also have a reduced internal shell called a pen.

Thursday morning. On the beach alone, we position ourselves as to mark our territory: Sunglasses and sunhat on, a book, backpacks and water bottles placed as if to form a shield. Another couple arrives and settles down at an ultimate distance displaying the same behaviour. Later a third party, a woman, singel-minded, heads for the opposite side of the small beach. The three groups are now evenly spread out occupying the area collectively but still keeping enough distance to reserve solitude and integrity. After a while yet another creature appears, of the same species, but stark naked. He chooses a spot between the female groupings (disturbing the balance of the beach) and throws out his tentacles. No visible reaction from anyone. We go snorkeling in the sea.

The octopus is not a social creature, it lives alone except during the mating season. If a neighbour comes too close to an octopus' habitat it throws out an arm or chases away the intruder in some other way. The nest is an important base for the octopus, and it uses it to capture prey, or to find refuge in escaping enemies. It isn't uncommon for them to build a protective wall in front of the entrance out of stones and suchlike. There is often a scarcity of housing for octopuses and it defends its nest to a greater extent than other creatures. It doesn't just go to the trouble of fortifying the nest, but also makes an effort to keep its home clean and comfortable. It smoothes and cleans the sand in the area by squirting water on it, and it keeps the nest uncluttered by food debris. If you see a pile of crabshells next to a rock you can be sure that it is an octopus' nest.

Below the surface, lesson number one: a sea cucumber is not an octopus. The octopus' abilities to camouflage themselves, make smoke screens out of ink and quickly jet away are fundamental to their survival. Because they are invertebrates their bodies have an amazing ability to stretch out, and also to become narrow to enable it to fit into small nooks and crevices. To make a comparison, imagine a human being that only needs to maintain the structural integrity of her teeth, but maintains the same body mass. The skin has many layers of chromatophores, pigment cells that allow color change. A single, fully-grown animal has 1-2 million chromatophores. Experiments have been performed where a white board was placed under an octopus, and it actually became totally white. It can change the color, patterning, and shape of its body as required, as well as change the surface structure of the skin, say from smooth to a set of bristly spines. But these different adaptational capacities aren't just for protection, they are also used to make various signals used to communicate both within the species and with other animals. To alert others to danger, for example, two dark spots are created on the back. In states of excitement, like before mating, the body flickers red like a flame.

*Octopus Vulgaris* becomes sexually mature during the later part of its life. The mating process is a complicated movement pattern that takes place in open waters for long periods of time. For a male, the object is to find a female that is willing, and a first sign of such prospects is that the female cleans her suckers in the male's presence. In response the male displays his largest suckers to the female. Eventually the male approaches the female with his hectocotylus, or mating arm. Most of the mating takes place at a



certain distance, and the process can last for hours. When the mating is finished the female rejects the male. During the act, it sometimes happens that the female changes her mind and suddenly runs away with the male lagging behind.

Bang them hard to make the meat tender. While talking to us the old man rhythmically sways from one side to the other, smashing a bunch of dead octopuses against the terracotta toned rock. Behind him in the turquoise water a group of noisy naked guys are playing volleyball. He says he goes out in the morning in his boat to lower buckets into the sea. After a while he hoist them up with the octopuses inside.

So that might be a good idea – to make the octopus come to us.

In the harbour to get octopus fishing gear. While passing the pier, one hears the sound of dead octopuses being smashed against the concrete. Tourists stroll off the ferries towards buses which will take them to the island's stalagmite caves. A man passes by carrying a transparent plastic bag filled with octopuses. At the local store we buy a red bucket and blue string. An empty water bottle will do for a float. We have picked the perfect spot for our octopus mission, where the water is not too deep and has lots of rocks and sandy bottom. We dive down and anchor the bucket with some big stones, attach the blue string to the empty bottle and pray that our artificial grotto will be tempting enough for a curious octopus to settle in. Now all we can do is wait.

During the 1970's Jaques Cousteau and his crew made an experiment with a languster in a closed glass container that they put outside an octopus grotto. The glass container was sealed with a cork that had a little hole drilled into it. When the octopus noticed the tasty lobster next to his home it considered the situation briefly, went into an attacking pose and threw itself out and onto its prey. To his surprise he couldn't reach the tasty tidbit that was anxiously moving about inside the container. The octopus began to investigate the glass container with its arms and paused when he felt the cork that stuck out. He touches it until he discovers the hole, and then slips an arm through. This caused the lobster to move, which made the octopus realize that it is alive. The octopus starts to finger the cork with more arms until it flies out of the glass container, allowing the octopus to slip in and get its well deserved prey. The whole thing took about three hours, from the point when it noticed the bait until it successfully caught it. Not an especially long time for such an achievement, considering how long it takes for a dog to learn to sit, for instance.

The next morning we head for our bucket spot. With the waves like roller-coasters we swim out and hoist up the grotto, immediately realizing the bucket mission failed. It's empty.

Back in the harbour we spot dead octopuses everywhere. "They like white", a fisherman in a boat tells us while we stare at him from a bench on the embankment. He is gutting the day's catch. "You cut out fish shapes from white plastic and put them on a line with hooks and go like this", he says and makes tugging sideways movements with his right hand. "But you have to know where they live. Behind him, the Theila lies at port – a boat that takes tourists on round trips. We have already bought tickets for the daytrip tomorrow since it is said to include good snorkeling.

In "The Book of Imaginary Beings" Borges writes about the Kraken – the Scandinavian version of a huge sea monster which appears to be an island. When mariners land there to light a fire they are pulled down into the depths of the ocean by the beast on whose back they made camp. The Kraken, described by Erik Pontoppidan in his "Natural History of Norway" published in 1754, has tentacles capable of encompassing the largest of ships and it turns the sea murky with a discharge of liquid.

Traces of this huge creature have actually been found, in the form of sucker marks on whale skin and parts of tentacles inside the stomachs of sperm whales. Dead carcasses of the giant squid, *Architeuthis*, have washed ashore, and from this we know it can become 18 meters long, weigh a ton and have eyes big as lunch plates – the largest eyes of any animal in the world. It has never been observed alive in its natural habitat,



until just recently. In September 2005 Japanese zoologists observed and photographed an eight meter long Architeuthis at a depth of 900 meters, close to the Bonin islands south of Japan in the Pacific. Its two long feeding tentacles were studded with rows of suckers sharp as knives, and after a struggle that went on for 4 hours the giant squid got away, leaving a tentacle stuck on the scientist's hook behind. The tentacle that was cut off was still active when they hauled it up to the boat. The suckers gripped the boat deck and the scientists' hands when they touched the tentacle:

It's just us and the seniors on the tourist boat Theila for seven hours. We are given a biological description of the "Swede" by the captain: they stay in pairs, avoid large groups, do not talk and become very, very social when drinking. When the happy crowd rumbles off the boat at noon for a barbeque on the beach we take our snorkeling gear and float around in the shallow water. A car tire, some plastic plates from previous barbeques, plenty of sea urchins and sea cucumbers. Everything looks almost twice as big below water. All of a sudden, we spot something tiny under a rock surrounded by smaller stones and a protective stone wall. Two yellow eyes behind a curled pink arm with suckers. After we have been observing it for a while, hovering above, its eyes pop up a bit further as if feeling comfortable with being the main character of the scene. A school of fish pass in the blue-green water and all that can be heard are the cracking sounds from hermit crabs and our own breaths through the snorkles.

References:

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