By Ms. Jeanette Nowak
Informative Text 2015-2016

# Giant Pacific Octopus

## Introduction

In the marine world, there is a class of species known as cephalopods. Cephalopods consist of the octopus, squid, and cuttlefish. These highly intelligent sea creatures are known for having fun by opening jars and escaping from aquariums! In early days, cephalopds were once known as the "devil fish" because sailors thought the cephalopods would use their arms and crush the ship into pieces. Today, we know that is not true and I would like to inform the reader about cephalopds, especially the Giant Pacific Octopus. In this informative essay, the reader will learn more about the parts of a body, camouflage use, environment life, and conservation efforts as it relates to the Giant Pacific Octopus.

## Parts of a Body

The Giant Pacific Octopus is a very beautiful sea creature but has a complex body structure. Most people think that an octopus has tentacles but they do not. Only the cuttlefish and squid have two tentacles which are used for feeding and grasping. The Giant Pacific Octopus has eight arms with two rows of suction cups. If one of the Giant Pacific Octopuses arms gets bit off by another sea animal or is decapitated for another reason, they don't have to worry about being short an arm. It takes on average six weeks for the new arm to regrow. If there

happens to be blood loss, the Giant Pacific Octopus has blue blood. The blood is blue because they have a high concentration of copper in their bloodstream. Copper helps them survive in the deep cold temperatures of the North Pacific Ocean. Unlike humans, the Giant Pacific Octopus does not have a spine or any bones in its body. This makes it easy for them to squeeze into tight spaces as small as a quarter. The only hard part on the Giant Pacific Octopus is its beak, which is made of chitin. This prevents the Giant Pacific Octopus from traveling though even smaller spaces. The only hard part on the Giant Pacific Octopus is its beak, which is made of chitin. The beak is used to bite its prey or open shells.

| Arms | Tentacles |
|---|---|
| * Octopuses | * Squid and Cuttlefish |
| * Eight arms | * Two tentacles, eight arms |
| * Used for moving, grasping, touching, smelling | * Used for feeding and grasping |
| * Suckers are in two rows all along the arm | * Suckers are in clusters toward the tip |
| | * Tentacles are longer than arms |

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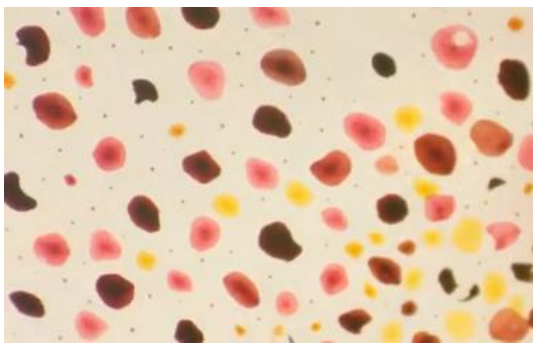
# Camouflage

When it comes to being masters of disguise, the Giant Pacific Octopus is the winner among all the other ocean species. Camouflage is defined as blending in with certain aspects of their environment. There are four main vocabulary terms that will be discussed when talking about the Giant Pacific Octopus: shape, texture, size, and color. Shape is defined as the outline or area of an object. For example with the "moving rock" trick the Giant Pacific Octopus will curl its body into the shape of a rock which is circular. The definition of texture is the way something feels using your sense of touch or how you think it looks using sight. When the Giant Pacific Octopus does the "moving rock" trick, it changes its skin to look rough or bumpy to blend in with its surroundings. When it comes to size, that means how big or small something is and how much space it takes up, The Giant Pacific Octopus squeezes its body together very tightly so it does not use much space around it to look like a small floating rock on the base of the ocean. Lastly, color is the pigmentation of something; the way something appears based on how it reflects light.

The coolest thing about the Giant Pacific Octopus is that its skin has special pigmentation called chromatophores which allows it to change color in less than one second. Chromatophores come in three different colors such as red, brown, and yellow. These colors twitch all the time because they are constantly moving around day and night blending into their habitat. Another neat thing is that their skin can resemble patterns that help them survive in the ocean from their predators.



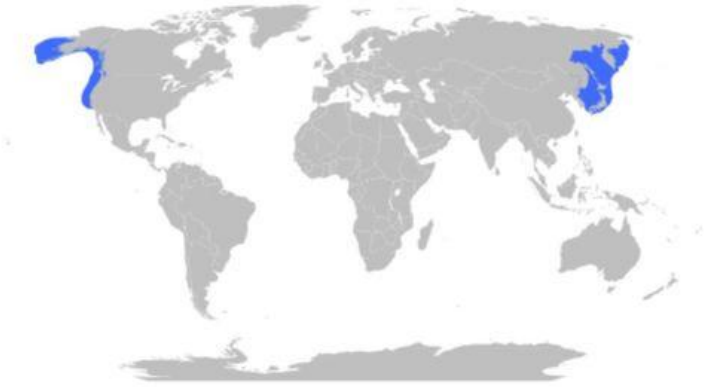
The reason why the Giant Pacific Octopus uses camouflage is because they need to protect themselves from halibut and ling cod as well as large marine mammals such as whales. Using camouflage also allows the Giant Pacific Octopus to be crafty when hunting for their own food by hiding to then surprise attack their prey. Next time you go scuba diving, see if you can find a Giant Pacific Octopus lurking around you.

# Environment Life

When the Giant Pacific Octopus is not found living in aquariums found around the United States or other parts of the world, they are living in the wild in their natural habitat. I would like to list several facts about the Giant Pacific Octopuses habitat, diet, life span, and tool use.

## *Habitat*

- North Pacific Ocean
  - Along Korea and Japan (right side of map in blue)
  - Along Alaska and California (left side of map in blue)
- Around 330 feet below the ocean surface
- Approx. 60 degrees Fahrenheit
- Live in dens



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# *Diet*

- Shrimp
- Crab
- Snails
- Shellfish
- Sharks

# *Life Span*

- 3-5 years
- Terminal spawners
- Lay 18,000-74,000 eggs

# *Tool Use*

- Use coconuts to hide in from predators
- Use coconuts for play activity

I would like to elaborate more about why the Giant Pacific Octopus is a terminal spawner. According to Creating Pacific Octopuses by Julie Kalupa of University of Wisconsin - La Crosse, after the female Giant Pacific Octopus lays her eggs, she will protect them for about six to seven months. During this time she will not leave the eggs alone, even to find food. The male octopus will swim around the ocean and will not eat either. He will die shortly after reproduction from hunger, muscle loss, or victim of prey from another animal. The female octopus will care for her eggs by moving them around with her arms and use her siphon to clean the eggs to

make sure that algae does not grow on them. After the eggs hatch, she will blow them away using her siphon from her and the tiny baby octopuses will float to the surface of the ocean. For about 30-90 days the baby octopuses will float around. This makes them easy prey and why only 2 out of 57,000 baby octopuses will grow to maturity. The mom octopus will not live for much longer after the eggs hatch because of starvation, illness, or become prey as she does not have much strength to protect herself from danger.

# Conservation


Even though the Giant Pacific Octopus is not on the endangered species list, it is still wise to protect our sea creatures. Some common threats to sea life is water pollution and over-fishing. The Giant Pacific Octopus is consumed by humans or used for food to catch other sea life by fishermen. Ways we can protect our sea critters is to reduce, re-use, and recycle our items. Reduce our use of plastic bottles and to clip those plastic rings around soda cans so they can't get caught in them. Water pollution does not hurt marine life but all life. Every year there is Cephalopod Awareness Days from October 8-12. What will you do to protect our marine life?

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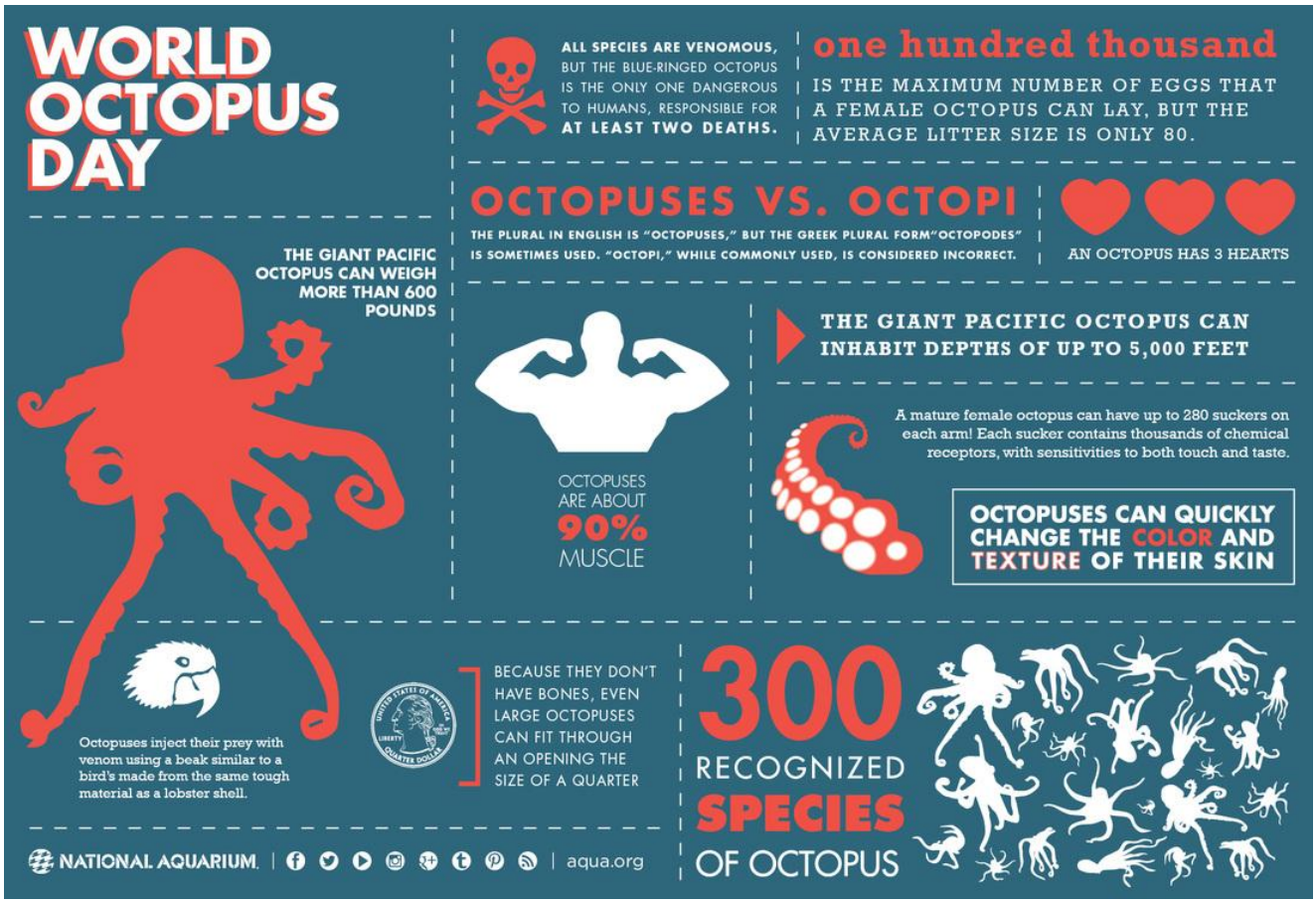


# Conclusion

I hope you enjoyed learning about the intelligent marine species of the North Pacific Ocean, the Giant Pacific Octopus. Now that I have explained more about their parts of a body, camouflage, environment life, and conservation, the Giant Pacific Octopus will not scare you like those fisherman in the past who called them the "devil fish." What are three pieces of information you will pass along to someone to make them more informed about the amazing cephalopod, the Giant Pacific Octopus?

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# Sources

Giant Pacific Octopus by Monterey Bay Aquarium Foundation; http://www.aqua.org/explore/animals/giant-pacific-octopus

The Giant Pacific Octopus: *Enteroctopus dofleini by* Julie Kalupa of University of Wisconsin - La Crosse; https://bioweb.uwlax.edu/bio203/s2012/kalupa_juli/Index.htm