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## Exploring Our Little Corner of the World with the Galiano Naturalists

by Gloria Schmidt

### The Jellyfish Invasion of 2008

If you wandered to Galiano coastal waters in late August through September, you likely were astounded by the number of large, reddish-brown jellyfish, both on the beach and still adrift in the ocean. They were everywhere I went, throughout the Gulf Islands, the Lower Mainland, around Vancouver Island, and along the shores of Washington State. I wondered if this dramatic phenomenon had a man-made origin or was a natural occurrence.

Mary Arai, a marine biologist at the Pacific Biological Station in Nanaimo, said that the Lion's Mane jellyfish (*Cyanea capillata*) were at a peak of their four-year population cycle this year. History has shown this pattern for hundreds of years, so it had no relation to climate change or pollution. An interesting coincidence has been noted in years of jellyfish abundance, there is an unexplained drop in the fish population.

Jellyfish have been in the oceans for over 650 million years. They belong to a group of animals (phylum) called Cnidaria (NYE-dar-ee-ah), which also includes sea anemones and coral. They are simple invertebrates – with no brains, bones or heart. One thing they all have in common is a digestive system with only one opening.

A circle of tentacles surrounding this mouth aids in the capture and ingestion of prey.

*Cnid-* is the stem of the Greek word for nettle. Some aptly named Cnidarians have tentacles covered with stinging cells that can shoot microscopic harpoons filled with a toxin. A Lion's Mane jellyfish may have shaggy clusters of more than 150 tentacles covered with these stinging cells. People coming in contact with the tentacles may experience severe burning, sometimes with blistering, and prolonged exposure can even cause muscle cramps and breathing difficulties. Amazingly, even a detached tentacle with active cells can still deliver a sting, as can active cells attached to a dead jellyfish. The prompt application of unseasoned meat tenderizer to the affected area disrupts the toxin and may help to alleviate the discomfort. Severe stinging may require the attention of a doctor.



*These two young naturalists stay at stick's distance from a dead Lion's Mane jellyfish on Galiano.*

A jellyfish is made of 96% water, 3% protein and 1% minerals. The Lion's Mane jellyfish is one of the 75 species found in BC waters. It averages about 1-2 feet in width with tentacles trailing as much as 6 feet. They are found on along both coasts of North America and around the U.K.

This species of jellyfish has a very interesting life cycle. Early Fall is when the Lion's Mane finishes its sexual stage and dies. Each male and female jellyfish has released sperm or eggs into the water where fertilization took place. The fertilized egg hatches into a tiny free-swimming larvae, called a planula. After a few days of floating on the currents, the planula settles onto a firm surface and develops into a tiny attached polyp. The cup-shaped polyp has tentacles surrounding a single opening. This polyp can duplicate itself by budding, eventually producing a colony of related polyps. When large enough, the polyp stalk buds off a new baby jellyfish, called an ephyra. The young jellyfish swim off in early Spring to grow up into adults by Fall. These medusas are the gelatinous creatures we see in the waters and washed up on the beaches. So as seen this year, the shores lined with dead jellyfish was just part of their continuing, normal cycle.

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### **Natural Mysteries**

Last month's mystery was: Why don't spiders stick to their own webs? Well, the clumsy ones do. But most are more careful. Spiders produce two kinds of webbing: sticky and non-sticky. They build the basic frame – perimeter and spokes and a spiral from the centre – with the non-sticky silk. Then they lay down the circular strands of sticky webbing. When an insect gets caught on this, the spider follows a safe trail of non-sticky strands to retrieve its prey.

This month's Natural Mystery: Last month I tried to collect mushrooms for the Mushroom Festival, but all of the ones that looked delicious were cropped to the ground by deer. Might this be a good way to tell which mushrooms are edible? If deer eat them, are they safe for humans?

Have an answer? Send your thoughts to [galianonaturalists@gulfislands.com](mailto:galianonaturalists@gulfislands.com). Have a Natural Mystery of your own? Let us know, and we'll try to answer it.

THE GALIANO NATURALISTS are a group of curious explorers who enjoy observing, marveling, and sharing information about the natural world around us. Come join us. How? Just send us an email [galianonaturalists@gulfislands.com](mailto:galianonaturalists@gulfislands.com) at [galianonaturalists@gulfislands.com](mailto:galianonaturalists@gulfislands.com). Visit our [website](http://gulfnet.sd64.bc.ca/GalianoNaturalists.html) at <http://gulfnet.sd64.bc.ca/GalianoNaturalists.html>.