

Moon Snails

If you have ever come across clamshells with perfectly round, small holes drilled in them, you might have wondered how this happened. Especially since you can find tens and hundreds of them along the seashore when you are beach walking on a sandy shore. Not only are the holes perfectly round as if someone had used a mechanical drill, but the hole is beveled – meaning the hole has a raised edge on it. The mystery is solved when you discover the existence of a unique animal in the ocean that spends its life also walking along the sandy shore - the moon snail.

Lewis' moon snail is the largest of the group of animals called moon snails and is named after the famous explorer Meriwether Lewis, who discovered its beauty at the mouth of the Columbia River in the Pacific Northwest during the Lewis and Clark explorations. He brought many of these unique shells, captivated by their size and beauty.

There are hundreds of different kinds of moon snails all over the sandy coasts of the world, from low intertidal waters like the Lewis' moon snail to deeper waters. They all have a large foot they use to plow through the sand while the shell is mostly buried. They are on the move looking for clams, their favorite dinner. Their round, smooth, coiled shell can be over five inches in diameter, and their foot can be well over twelve inches long when fully extended. When necessary, the moon snail can pull the foot back into the shell, closing it neatly inside with an operculum, a tiny shell that acts as a trap door. In addition, the moon snail can pull its fleshy mantle almost completely over its shell. Its sandy color acts as camouflage while it proceeds on its way in the sand or mud. Predators include gulls, birds, skates, rays, crabs, and some people.

Moon Snails (Cont'd)

So what part of the animal makes that rounded, beveled hole in clams? When a moon snail comes across a clam, it wants the meat inside. It uses its radula, a tongue with rows of sharp, razor-like teeth that drill slowly into the shell of the other animal, usually at its hinge. The moon snail keeps drilling until a hole allows the moon snail to draw out its prey. The moon snail also secretes a liquid that helps soften the shell while drilling. Besides clams, some moon snails drill into scallops, oyster, mussels, and even other moon snails they encounter on their way. They don't move fast, but they methodically scour the sandy bottom for their food.

What makes the animal even more interesting is the female's unusual way of laying her eggs. Sometimes when beach walking at low tide in the spring, you may find grey, circular collars that look like remains of miniature tires. These collars are made from sand glued with mucus produced by the female moon snail. Inside each collar were hundreds of tiny moon snail eggs, but when the collar washes up on the shore it is dried and no longer of use. If the egg laying has been successful, the larval stage should have occurred in the completed collar and tiny moon snails would have emerged from it.

Meat from the east coast species are sometimes eaten in chowder, and some European countries utilize the meat as well. However, the west coast species are generally just admired for the shells they leave behind. But beach walkers should be aware that at least two kinds of large, hairy hermit crabs choose the Lewis Moon Snail shell for their home. Although collecting the empty shells would not affect the living moon snails, it would certainly limit the choices of these hairy hermit crabs.

Name _____

Date _____

Moon Snails Questions

Using the article and a dictionary, define the following vocabulary words:

beveled

mucus

radula

mantle

intertidal

Meriwether Lewis

operculum

hinge

Moon Snails Questions (Cont'd)

Using the article as a reference, answer the following questions in complete sentences:

1. Where do moon snails live? What is their habitat?
2. What do moon snails look like?
3. What is the name of the largest moon snail? Where does it live?
4. How does a moon snail get the soft meat out of a clam?
5. How is a moon snail egg case formed? What does it look like?
6. Who eats moon snails?
7. Why should you not remove an empty moon snail shell from the beach?

Name _____

Date _____

Moon Snails Answers

beveled – angled surface
(hole with a raised edge on it)

radula - tongue with rows
of sharp teeth

intertidal – the area formed between
low and high tides on the coast

operculum – a rounded shell that seals
off the soft parts of some snails from
predators (acts like a trap door)

mucus – a thick, glue-like substance

mantle – a layer of flesh

Meriwether Lewis – famous explorer -
Lewis and Clark exploration of the Pacific
Northwest

hinge – the muscle that opens and closes the
two parts of a clam Moon Snails

Moon Snails Answers (Cont'd)

1. Moon snails live all over the world on sandy seafloor bottoms in intertidal or deeper waters.
2. Their round, smooth, coiled shell can be over five inches in diameter, and their foot can be well over twelve inches long when fully extended.
3. The largest moon snail is the Lewis Moon Snail that lives on the Pacific Coast.
4. It drills a hole with its radula and draws out the meat.
5. They are made from sand glued together from mucus secreted from the moon snail. The collar resembles a piece of an old, miniature tire.
6. Predators include gulls, birds, skates, rays, crabs, and some people from the east coast of the United States and European countries.
7. Some large, hair hermit crabs use them for homes.