



The Mini Page

Next Week:
Fireworks
safety

Issue 24, 2024

Founded by Betty Debnam

Homes Under Water



photo by Peter Craig, courtesy NPS

Have you ever hunted for seashells at the beach? Did you know that they were once the homes of animals from a watery world?

This week, The Mini Page learns more about our world's beautiful seashells.

A big family

Sea animals with shells belong to a group known as **mollusks** (MAH-lusks). Mollusks also include some animals with no shells, such as the octopus.

Protection

Shells help protect animals with soft bodies and no backbones, or **vertebrae** (VER-tuh-bray). Soft-bodied animals with no backbone are called **invertebrates** (in-VER-tuh-brits). Most animals are invertebrates.

Seashells protect invertebrate sea animals. These marine animals, or creatures living in the water, build shell homes and live inside them. Some animals move into the shells of other animals after the original owner dies.

Building a home

Shells are made of a rocklike material formed from calcium and other minerals, like our bones are. Sea animals get these minerals from the water.

Shelled marine animals have a special skinlike covering over their bodies. This is called a **mantle**. The mantle **secretes** (si-KREETs), or produces and spreads, the material for the shell all around the animal's body.

Sea animals build their shells over time,

layer by layer. You can tell how old a shellfish was by counting the layers spreading out over the shell, much like counting the rings of a tree. Shellfish don't build their shells at a steady rate. They have growth spurts.

Colors

The beautiful colors on the shell vary depending on the animals' diets and how fast they are secreting the shell material.

Shellfish in warmer waters, where there is a big variety of food, will usually have many more colors than shellfish in colder waters.

How many shells?

Animals such as snails build single shells to live in. Sea snails such as the conch or whelk usually build shells in a spiral shape.

Other mollusks, such as clams and oysters, have two shells joined together with a kind of hinge. This type of shellfish is called a **bivalve** (BY-valve).

Have you noticed that you usually find only one half of a shell? When the animal dies or is eaten, the hinge usually breaks, and the two halves of the shell separate.

Mini Fact:

The giant clam is the largest bivalve on Earth. It can weigh up to 500 pounds.

Shellfish life

Shellfish have a strawlike organ called a **siphon** (SY-fun) that they use to pull water across their gills. They breathe and feed with their gills. They get their oxygen and food from the water.

Some shellfish also have a type of tiny plant called **algae** (AL- jee) living with them. The algae can make energy from sunlight and nutrients they get from the water. They share this energy with the shellfish.

Bivalves open their shells when they are eating or breathing. They close their shells when they feel threatened.

Shellfish that live in areas close to the coast may close their shells during low tide. This keeps the animal from drying out. When the tide comes back in, the animal opens up its house and lets the water in.

Collecting shells

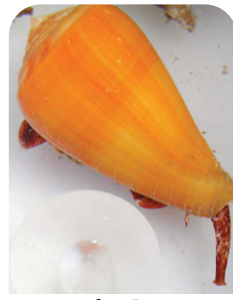
Never take a shell that is home to a living animal. All living things are important to the environment.

Some living shellfish can sting you. The nose area of some cone shellfish has a kind of harpoon. They inject their prey with venom to paralyze it, then they eat it. Sometimes people can have serious reactions to the stings.



photo courtesy of Islands in the Sea 2002 NOAA/OER

photo courtesy of ESC/NOAA



Tropical cone shell



Sinuous whelk

Resources



On the Web:

- bit.ly/MPmollusks

At the library:

- "Seashells: More Than a Home" by Melissa Stewart
- "Seashells and Beachcombing for Kids" by Stephanie Panlasigui and Erika Zambello

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Try 'n' Find

Words that remind us of seashells are hidden in this puzzle. Some words are hidden backward or diagonally, and some letters are used twice. See if you can find:



ALGAE, ANIMAL, BEACH, BIVALVE, CALCIUM, COLOR, HOME, INVERTEBRATE, LAYER, MANTLE, MOLLUSK, SEA, SECRETE, SHELL, SIPHON, SPIRAL, STING, VERTEBRAE.

X	E	A	G	L	A	E	T	E	R	C	E	S	V	V
R	E	Y	A	L	B	E	A	C	H	T	K	S	S	G
T	K	Q	G	U	C	A	L	C	I	U	M	J	K	P
A	S	L	E	T	A	R	B	E	T	R	E	V	N	I
O	U	E	M	E	A	E	A	R	B	E	T	R	E	V
S	L	L	H	R	N	L	A	R	I	P	S	W	O	P
T	L	T	V	O	I	M	D	L	N	O	H	P	I	S
I	O	N	K	K	M	W	J	E	C	O	L	O	R	D
N	M	A	C	Y	A	E	B	I	V	A	L	V	E	X
G	V	M	X	I	L	L	L	E	H	S	E	A	H	Z

Cook's Corner

Squash and Cheese Casserole

You'll need:

- 1 1/2 pounds sliced yellow squash
- 1 medium onion, diced
- 1/2 teaspoon salt
- 1 teaspoon sugar
- 2 tablespoons butter
- 4 eggs, lightly beaten

- 1/2 cup shredded cheddar cheese
- 1/2 cup low-fat milk
- 1/8 to 1/4 teaspoon cayenne pepper
- 1/4 cup freshly grated Parmesan cheese



What to do:

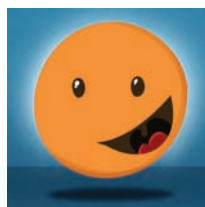
1. Combine squash, onion, salt and sugar in a pan with enough water to cover.
2. Bring to a boil; reduce heat and simmer for 10 minutes until vegetables are tender.
3. Drain the squash mixture; place in a bowl and mash.
4. Add butter and mix well. Stir in eggs, cheddar cheese, milk and cayenne pepper.
5. Spoon into a buttered 8-by-8-inch baking pan. Sprinkle with Parmesan cheese.
6. Bake at 350 degrees for 30 to 45 minutes, until set. Serves 4.

* You'll need an adult's help with this recipe.

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7 Little Words for Kids

Use the letters in the boxes to make a word with the same meaning as the clue. The numbers in parentheses represent the number of letters in the solution. Each letter combination can be used only once, but all letter combinations will be necessary to complete the puzzle.



1. fury (5) _____
2. way of dressing (5) _____
3. keep in your mind (8) _____
4. idea (6) _____
5. when the sun rises (4) _____
6. ask to a party (6) _____
7. finds at fault (6) _____

EGE	NOT	TE	DA
REM	MES	ANG	VI
ION	WN	IN	YLE
ST	BLA	EMB	ER

Answers: anger, style, remember, notion, dawn, invite, flames.

Mini Jokes



Shelly: What did the beach say to the wave?
Sherman: Long tide, no sea!

Eco Note



Record-breaking ocean heat of the past year appears to have caused a never-before-seen decline in phytoplankton, algae and bacteria, which many marine species depend upon for food. A study examined 21 years of satellite data and found that by April 2023, there had been a 22% drop in the microorganisms compared to the 21-year average. The study found that almost three-quarters of the global ocean surface saw such a decline. While marine ecosystems can sometimes recover, one scientist called these results "very concerning."

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For later:

Look in your newspaper for articles about marine life.

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