

# ZigZagZine

Issue 4

CREATING, THINKING, IMAGINING

May/June 2008

## Discovering Tidepools on Rocky Shores

by Jessica Chase

Waves are crashing, pounding against the rocks, where plants and animals sway with the force of the tides, clinging to the rocks for dear life. This is the world of the tidepools.

Each day, the tides come in and go out over rocky shores, leaving behind water in rocky crevices. These are called tidepools. Exploring these, or "tidepooling," is a really great way to get up close to nature.

Along with my mom, I recently became a volunteer docent at a state park, where we give tours of the tidepools. I started training as a docent a couple of months ago for the opportunity to do volunteer work, and to be out in nature. I had been on a tour of tidepools with my Girl Scout troop when I was 7, and I had been doing a small study of them a little while ago. Other than that though, I hadn't really done much with tidepools before.

One of my mom's friends told us that [Natural Bridges State Park](#) was letting her and one of her sons, who was my age, train as docents, as a team. She thought we might like to do it as well. Since Mom and I had

been studying tidepools some before, we were already interested, and we decided to do it.

When I first started out, I was more attracted to the colorful animals of the tidepools that you can interact with and touch, like sea anemones, sea stars, and sea urchins. But as I learned more about the less showy creatures like mussels and barnacles, they began to seem even more amazing than the creatures I could touch and see react.

For example, barnacles glue themselves on their heads on the rock with a glue so strong that it has been studied and replicated for use in dentures! Even animals I already thought were cool got even cooler when I learned their backstories. Anemones can live for at least one hundred years, and it's possible they're even immortal!

After becoming a tidepool docent, and leading school groups on tours, I've found that often the younger kids, and sometimes even the older kids, feel the same way as I did when I just started learning about tidepools. Once they've gotten out on the



Photo by Jennifer Dees

Giant green anemone in a tidepool

"The shore is an ancient world, for as long as there has been an earth and sea there has been this place of the meeting of land and water. Yet it is a world that keeps alive the sense of continuing creation and of the relentless drive of life. Each time that I enter it, I gain some new awareness of its beauty and its deeper meanings, sensing that intricate fabric of life by which one creature is linked to another, and each with its surroundings."

— Rachel Carson,  
*The Edge of the Sea*

tidepools, they go right past all the mussels and barnacles and snails and start looking for anemones to touch.

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### The Nature Issue

We've got some really cool articles about nature in this issue, including a review of a movie about wetlands and Hurricane Katrina, owls in San Francisco and tidepooling.

Readers from around the country can send in articles, stories, poems, and artwork for our next issue. If you'd like to contribute to our July/August issue, see page 4 for details. In the meantime, check out our Web site at [zigzagzine.com](http://zigzagzine.com). — Jessica Chase, Editor

But if you can just drag them away from the anemones and start telling them about all of the amazing things some of these less colorful animals do, they suddenly become much more interested in them.

One of the great things about tidepools is that it's literally impossible to know everything about them. Even if you were able to learn all there is to know about tidepools now, there are still new things being discovered all the time.

For example, in recent years, a different kind of anemone was found in the tidepools in Northern California. It was at first thought to be a larger version of the aggregating anemone, but a DNA test proved the theory wrong. It was actually a specimen of an anemone previously only found in Southern California, the Sunburst Anemone. Because of global warming, the ocean is, on average, one degree warmer in Northern California, making it warm enough for the Sunburst anemone, and they are now migrating north. In time, they may displace some species native to the area.

A great place to learn about tidepooling is the [Monterey Bay Aquarium](#) Web site. They have an exhibit called "[Rocky Shores](#)," and their Web site also has some great tidepooling resources, including a tidepool field guide, and a wonderful video library, showing you the things you can't see out on the tidepools. For example, barnacles only stick out their feathery legs to feed when the water is over them, so we can't go out on the tidepools to see it, but the Web site has a video of them feeding underwater that you wouldn't be able to see otherwise.

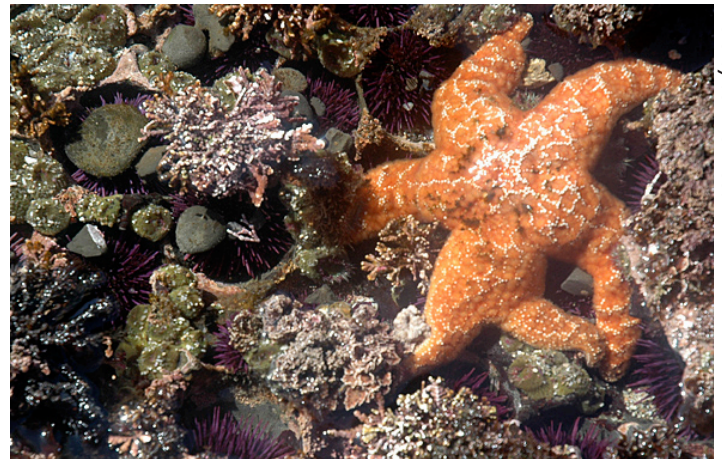


Photo by Jennifer Dees

**This ochre sea star has grown part of a new ray where it was damaged. It is surrounded by purple sea urchins that have excavated holes in the rock to keep themselves safe.**

erwise. It's really cool to see them flicking out their feet to catch their next meal. If you have a chance to actually visit the Monterey Bay Aquarium, the Rocky Shore exhibit is really amazing. There are touchpools where you can touch all sorts of tidepool animals like sea cucumbers, sea stars and more. You can see nudibranchs that are hard to find on the rocks, and various animals feeding underwater.

Would you like to explore tidepools? In order to tidepool, the shore has to be rocky. This environment isn't found all around the U.S. The best places are on the whole of the Pacific Coast, and in Massachusetts and Maine on the East Coast. From New Jersey south on the East Coast, the shore is all beaches or marsh.

Here are some places to start on both coasts:

In Northern California, [Bay Nature magazine](#) offers a list of great sites, from Mendocino County south to Monterey Bay. Farther south, there's [Carpinteria State Beach](#) near Santa Barbara, and many [great sites near San Diego](#).

For a real adventure, you can take a boat or a plane to the [Channel Islands National Park](#). That's definitely something I'd like to do!

In the Pacific Northwest, [Tongue Point](#) northwest of Seattle is supposed to be a good place, and there are many [great spots in Oregon](#).

On the east coast, visit [Acadia National Park](#) in Maine or the First Encounter Beach in Massachusetts (one of several U.S. sites in a [Travel Channel story](#)).  
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## Anime Girl

Illustration by Rebekah Astle



### Contributors to this issue

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# “Hurricane on the Bayou” Shows We Need to Preserve our Wetlands

by Jack Wooldridge

“Hurricane on the Bayou,” an iMax film showing in theaters nationwide, is quite a roller coaster ride. It starts by showing you the bayous near New Orleans as they were before Hurricane Katrina swept through that area. Then it shows you, through the science work of a fourteen-year-old fiddle prodigy, that the wetlands are disappearing. This may not seem like such a bad thing, but the disappearing of wetlands is very bad for the area. The wetlands do a lot to slow down hurricanes, and without the wetlands, a hurricane could cause enormous damage.

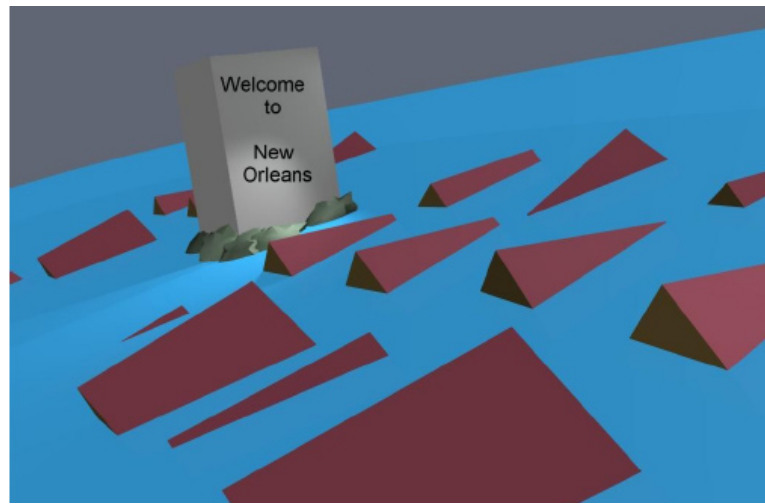


Illustration by Jack Wooldridge



our wetlands, planting more trees so that the soil will not erode so easily, not polluting the atmosphere (which is killing the trees that hold the soil in) and having levees that let the water through in small doses.

I really enjoyed the movie “Hurricane on the Bayou” and it definitely gave me food for thought. Visit the Web site, [www.hurricaneonthebayou.com](http://www.hurricaneonthebayou.com), to learn more about wetlands and hurricanes, and to find a theater near you showing the film (see “Theater Listings”).

The movie goes on to show how people were asked to evacuate New Orleans as Katrina swelled up over the ocean. Some did, but many couldn't.

When the storm swept into the city, many were unprepared for the sheer force of the hurricane. Without the wetlands there to stop it, there was nothing to halt the hurricane as it moved towards New Orleans.

After the storm, the film shows what is being done to help New Orleans and what can be done to prevent another hurricane of that magnitude. This involves preserving



Photos from “Hurricane on the Bayou” courtesy of MacGillivray Freeman Films Education Foundation.

# Whooo? Owls?

By Olive Lopez

You've seen pictures of owls—those cute, fluffy things that live in forest trees. At a local library you can find lots of books on these little creatures, fiction and non-fiction.

I conducted a survey among 40 children and adults. Some were school kids and some were homeschoolers. Of those,

- 16 do not think that owls live in San Francisco
- 20 do think that owls live in San Francisco
- 3 said maybe

So it might surprise you that some owls have been living in San Francisco for quite a while. They are native, but live in such a developed area you would think they would have gone and, well, flown off in the night. To live here, they need a source of food, and, of course, a place to sleep. There are plenty of rodents to feast on and trees for owls to sleep in. But natural habitat is scarce in San Francisco for an owl.

In our city we have parks with natural areas including the Presidio, Bernal Hill, Glen Park Canyon, Stern Grove and Golden Gate Park—places an owl may call home. Sometimes, unsuspecting arborists will trim trees, not knowing that an owl nest is hidden up in the branches. I guess camouflage is sometimes a bad idea.

Last year, I saw two owls on Bernal Hill. Both were Great Horned Owls. Of course, we always saw them when they were sleeping, but they were amazing to see even while they slept. Bad luck for the poor owls—one died last mid-April. As for the other one, I heard that it died also.

In March of this year, some friends and I saw a huge owl sleeping in a tree, with feathers fluffed up. What was really strange is that it was in the middle of a busy trail. With dogs, I would (if I were an owl) flap my wings drowsily and fly to a different tree for some quiet. But not this owl. This big, bushy owl just stayed there. I admired his spunk.

Other wild animals may also live in urban areas, such as coyotes.

If you are looking online for information about owls or any other creatures, [Flickr](#) has great pictures and [Youtube](#) has funny videos. You can also find information about owls and other animals at the [Audubon](#) Web site. *zzz*

## Did You Know?

All owls are carnivores, or meat-eaters. For more facts about owls, click [here](#).



This Great Horned Owl was taken to the San Francisco Zoo after someone removed her from her nest as a baby, over 30 years ago.



This Eurasian Eagle Owl is not native to San Francisco, but she now lives at the San Francisco Zoo.

## CONTRIBUTE!

We accept stories, poems, articles, and artwork from kids and teens. The deadline for our July/August 2008 issue is June 15.

If you'd like to see your work in *ZigZagZine*, please send submissions to [info@zigzagzine.com](mailto:info@zigzagzine.com). Check out our Web site at [zigzagzine.com](http://zigzagzine.com) for details!

# Genghis Khan

by Calvin Price

Genghis Khan was a mighty warrior, a wise ruler, and a strategic commander. His empire spanned across all of today's Mongolia and more. He conquered China and nearly Japan, though only bad luck stopped him.

I will start at the beginning. Genghis Khan was born in 1162 and died in 1227. At that time he did not have the name Genghis Khan (which means "oceanic ruler") and was called Temüjin. He got the name Genghis Khan later. He was the son of the clan chief Yesugei. Little is known about him until he was 13, when he was old enough to marry. After a long journey with his dad they stopped at a friendly tribe who sheltered them. Temüjin's eye fell on the clan chief's daughter Börte, and when his father left, Temüjin stayed with the tribe.

Bad luck would soon reach out to Temüjin. His father was poisoned by a group of Tartars. Tartars were the most feared Mongol tribe during that time. When Temüjin heard of how his father had been killed, he left Börte and went back to his village. Unfortunately, the tribe had already chosen a new leader and they left Temüjin, his mother, and his brother, in the desert. Life was hard for Temüjin and even harder for his brother. Temüjin killed him for food. Apart from that little is known around that time about him.

After a few years or so he was captured by an enemy tribe when they raided his house. He was taken prisoner but he killed his guard and escaped. The enemy searched for him but they could not find him. While he was trying to hide from the enemy tribe, he met a man named Bogurchi. Bogurchi was a very wealthy man and a very valuable ally. They later became blood brothers. Bogurchi helped Temüjin much.

Over four years passed and Temüjin's travels became greatly exaggerated. During these four years Temüjin married Börte, and convinced her father, Togrul, to help him take over his rightful position as tribe chief. Temüjin



Illustration from Wikipedia; public domain.

and Togrul then called out to the Mongol tribes to rally against the Tartars. The Tartars were a very mean tribe. They were prepared to do anything to get power, and they were so big that not one or even two or three tribes could defeat them. They did not rule over anybody else, but they could wipe out any clan that opposed them, and nobody ever disobeyed them.

Thousands of Mongol tribes came to Temüjin and Togrul's call bringing food, weapons, and horses. By then Temüjin was seventeen. After he had an army of hundreds of thousands of warriors, he continued to march on the Tartars until he died. He conquered China, a lot of cities in the Middle East, and some of Russia. He almost conquered Japan.

By the time he died, he had conquered more land than even the Romans. He died by an arrow in a siege in 1227 and is still remembered as one of the greatest leaders of all time. His warriors gave Temüjin the name Genghis Khan after he had conquered the Tartars.???

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