



Seen a strange plant at Pigs Lake? It's Azolla!

By Maxx Happel  
ERMA B. REESE ELEMENTARY

I went to Lodi Lake to learn about turtles. Originally, I was going to write an article on turtles. When I took my dad to Pigs Lake (located in the Lodi Lake nature area), it was completely covered in grass-like stuff.

I was amazed because it looked like grass you could walk on. I tried to walk on it but my shoe went through the plant to the water. After that, I discovered it was a thick layer of fern called Azolla. When I went on a field trip with my class a few months ago this lake was clear water with no Azolla growing on it.

Azolla is a floating fern. It grows very fast and covers water quickly. Its colors range from green, pink, orange and red. It does not like cold temperatures and dies back in winter. It is a small plant that can only grow on fresh water. The plant is about 1 to 2 centimeters across.

Azolla can be used as a fertilizer,



Azolla grows on the surface of Pigs Lake.

food for animals, it helps to keep water from evaporating and is used to help increase rice production. Azolla grows fast in the shade. In the shaded areas it is green but in the sunny areas it was red.

In Asia, Azolla helps keep weeds out of rice paddies by blocking the sun light from getting to the soil. Azolla has shown to increase rice production in these areas by 50 percent. Azolla is part of our watershed area.



COURTESY PHOTOGRAPHS

Maxx Happel stands in front of Pigs Lake, where the water plant azolla grows on the surface.

How Lodi got its storm basins

By Aaron Wolff  
ERMA B. REESE ELEMENTARY

I recently had the chance to interview one lady who changed the way we see Lodi. She was Mrs. Lola Costa. If you ask her, she will tell you that she is a farmer's wife, but if you listen to her stories you will find out she is so much more.

Her family has owned, for about 50 years, a little over 30 acres of cherry trees near Costco, and they own Felix and Sons, a cherry packing company. She helps run it all.

In the 1970s, Lodi was having problems with flooding on the north end of town. The city was looking for a way to control the floods, and one solution was to build a ditch around the city for water runoff, with a tall fence to keep people out of the water.

Mrs. Costa had heard about the ditches and was very upset they could harm people, because she was worried about someone climbing the fence and drowning. She read an article in the magazine Atlantic Monthly about a similar problem in a city in this valley. The article said their city used water basins to help control flooding there.

Water basins are an area that gathers water during storms and drains off into an outlet such as the river or another body of water. During dry times, the water basin could act as a sports park or other usage.

Mrs. Costa was timing a swim meet with another parent who happened to be then-Mayor Wally Katnich. She told him about the article and that she would petition against the ditch.

Then he went to the next City Council meeting and proposed the idea of water basins instead of ditches to control flooding in

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Getting to know our local salmon

By Monica Lopez Chavez and Paisley Bender  
LOCKEFORD SCHOOL

Have you ever seen a male or female salmon and their eggs? If you haven't, that's OK. Our class studied all about salmon. The first thing we did was we painted the wooden salmon. That helped us learn the names of the salmon body parts. We made the wooden salmon because our fences are not very colorful.

Second, a nice salmon ranger gave our teacher two salmon. We made fish prints by rolling paint on

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Find out what students learned about the local fish. Pages 6 & 7

the salmon. Our teacher cut open the salmon and we saw the teeth and guts! When we cut open a female salmon we saw all of the eggs and when we cut up a male salmon we saw some milt.

Then, we adopted salmon eggs in the classroom and had to write in a journal. We had to write and draw what we saw in the tank. We even had to wonder about salmon stuff. We learned about the salmon life cycle: eggs, alevin, fry, fingerling, smolt, adult. That's the salmon life cycle. Life cycles are good in every way.

Here are three interesting facts about salmon:

1.) Salmon live in fresh river water when they are born. When they grow up, they live in ocean salt water for 3 to 5 years. Then they come back to the same river they were born in and lay their eggs.



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Chinook salmon and steelhead trout.

2.) Salmon were almost extinct because people would catch salmon to show off to other people and then throw them away.

3.) Some farmers put dust on

their plants so bugs don't eat the plants. When it rains, the dust goes into the river and could kill the salmon. Bears and other animals like birds and fish eat the salmon.

Lots of things could kill the salmon.

Our favorite things about raising salmon were cutting open the salmon, making the fish prints, and painting the wooden fish.

S.J. County environmental health employee shares details of her job

By Yuridia Cortes, Ronald Osorno and Nimra Gul  
HERITAGE ELEMENTARY

*Editor's note: As part of her job with San Joaquin County, Laurie Cotulla was responsible for investigating the first groundwater contamination cases resulting from underground storage tanks. She then was the lead investigator for the Downtown Lodi groundwater contamination discovery.*

**Q:** Where did you attend college?

**A:** UC Davis.

**Q:** Why did you choose to study about water instead of insects or plants?

**A:** My degree is in biology, so I actually studied all aspects of life sciences, but when I went to work as an environmental health specialist I was asked to choose a specific area to do extra work on, and I chose the water program.

**Q:** What was your career, or job title?

**A:** I was a registered environmental health specialist for San Joaquin County for 28½ years. My job was enforcement of local (city and/or county), state and federal



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Former San Joaquin County employee Laurie Cotulla, second from left, was interviewed by students from Heritage Elementary School.

public health and environmental protection laws and regulations. This involved making inspections, approv-

ing operating and construction permits for food facilities (like restaurants and grocery stores), public

swimming pools, dairies, water wells and septic systems, small public water systems, solid waste facilities (like Harney Lane Landfill), hazardous waste generating and storage facilities, underground storage tank facilities (like gas stations), and oversight of the clean up of contaminated soil and groundwater caused by spills and leaks from underground storage tanks.

**Q:** What interested you in working for the county?

**A:** I initially went to work for the county because it looked like an interesting job where I could use my biology degree and not be in a lab doing the same thing over and over. It turned out to be an extremely challenging and rewarding career.

**Q:** What were the most rewarding aspects of your job?

**A:** The most rewarding part of my job was knowing that my decisions and actions made a difference, not only by preventing people from becoming ill due to exposure to contaminated food and water, but also by protecting the environment from being degraded and damaged by improper storage, use and disposal of sewage, chemicals and solid waste.

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Did you know?



Raccoons live in the Mokolumne watershed

By Jocelyn Flores  
ERMA B. REESE ELEMENTARY

Did you know that raccoons are in the watershed? I had no idea until I did a little research. Raccoons usually eat insects, frogs or crayfish. Sometimes even garbage, fruits and vegetables.

One fun fact about raccoons is when they are born they are blind and deaf. They always use their paws to swim, too.

Some of the raccoons' predators are bobcats, cougars and wolves. Raccoons can get away by climbing up trees, though, so they are safe.

I think that raccoons are very interesting. In fact, they are my second favorite animal.



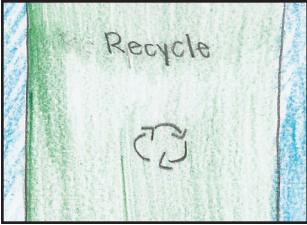
Creative writing about nature

Could a fox and a rabbit ever be friends? What do fish think about all day? Students explore the inner lives of local animals in creative short stories. **3**



An interview with marine biologist

A student interviews Michelle Workman, supervising biologist for the East Bay Municipal Utility District. **5**



Find out how you can help

What can you recycle? What can go down your drain? What are the Earthkeepers and Storm Drain Detectives clubs? Find out how to pitch in. **7**