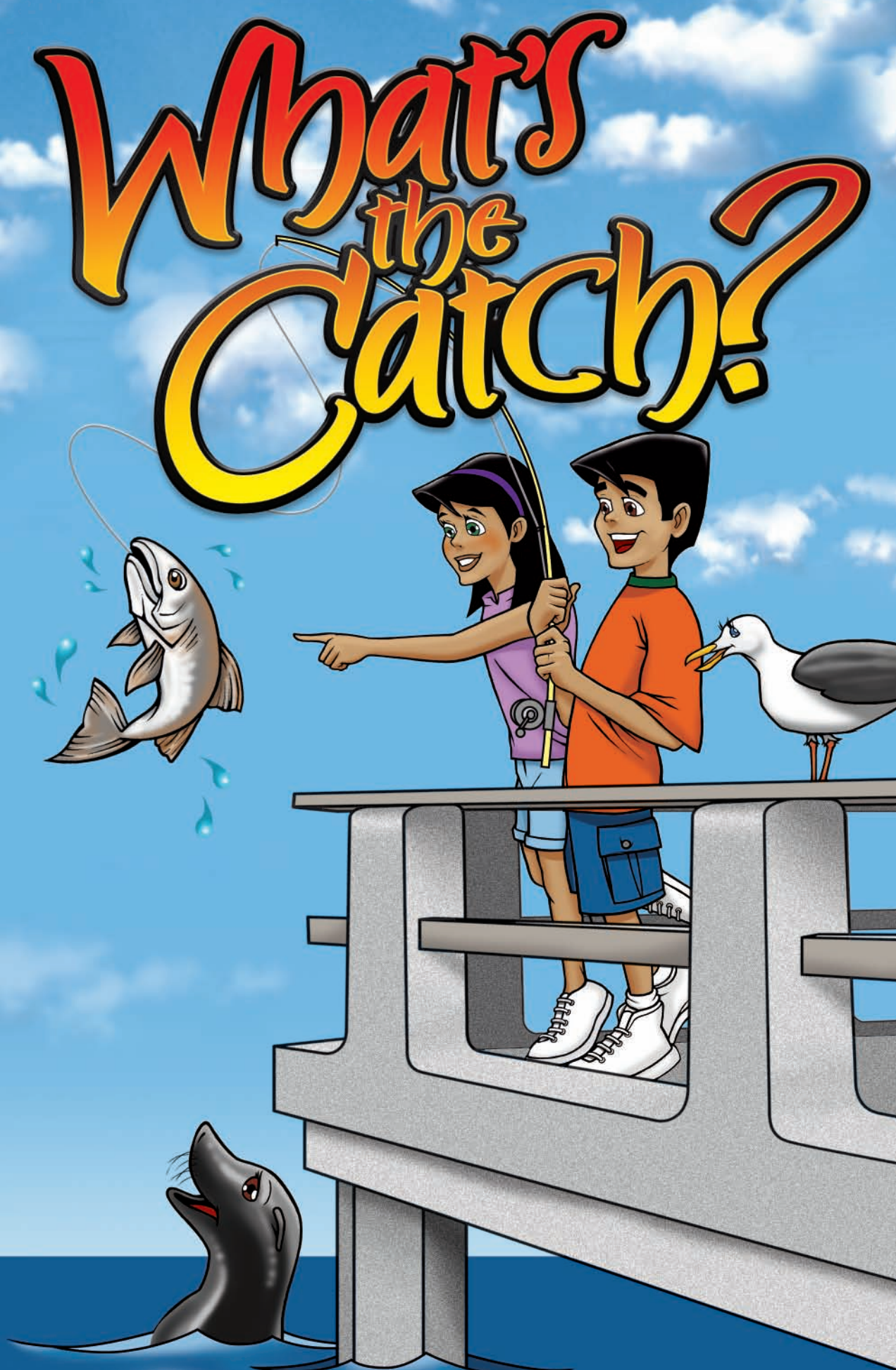

What's the Catch?

Cabrillo Marine Aquarium

MSRP and Cabrillo Marine Aquarium

present

Our Gull Amanda

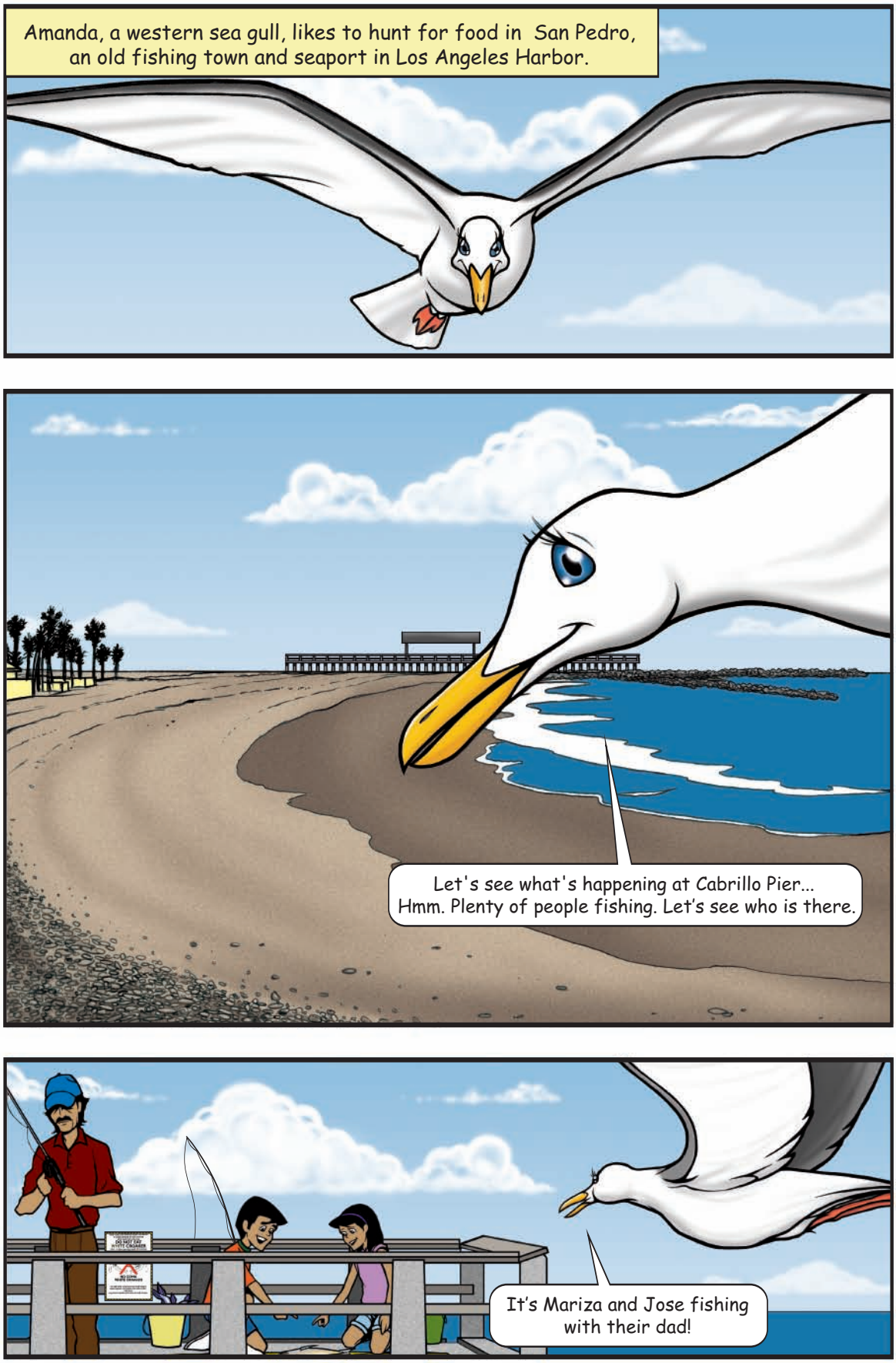
in

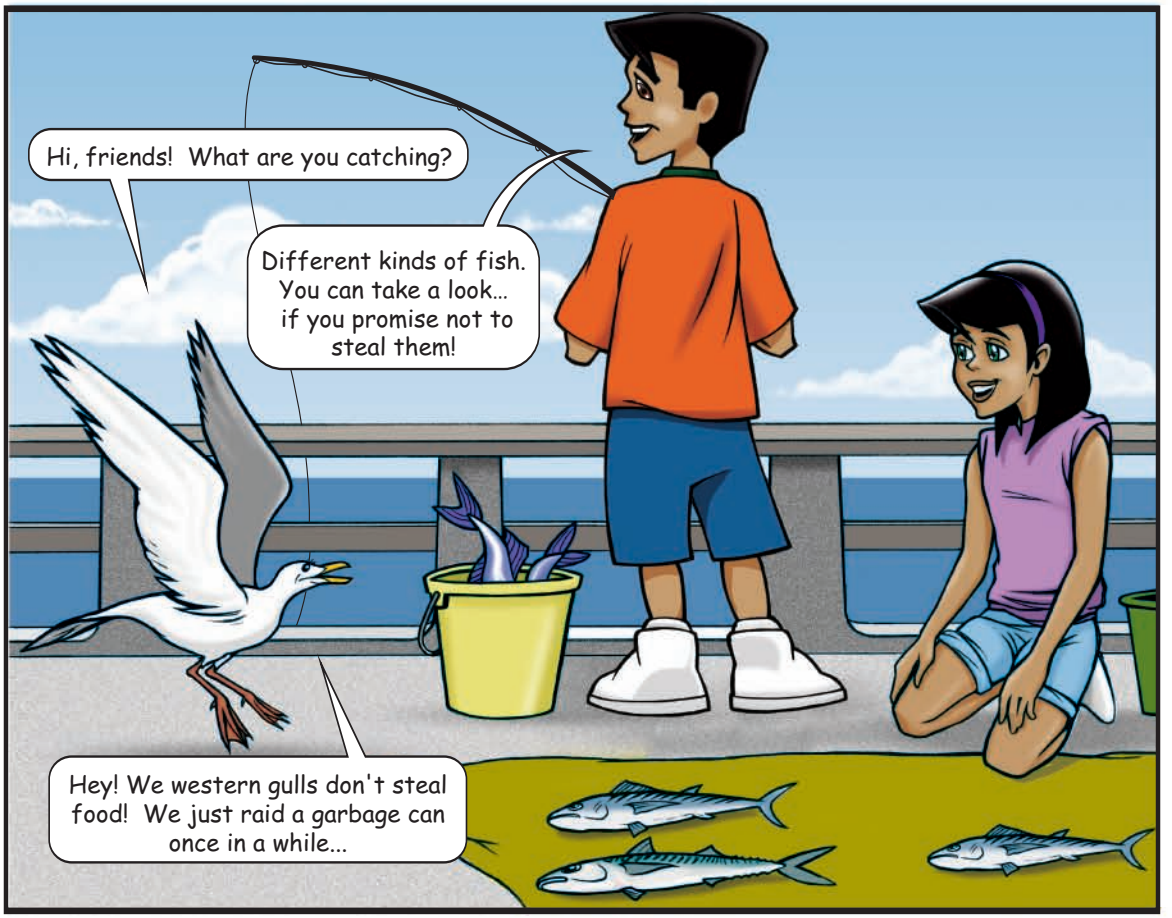
What's the Catch?

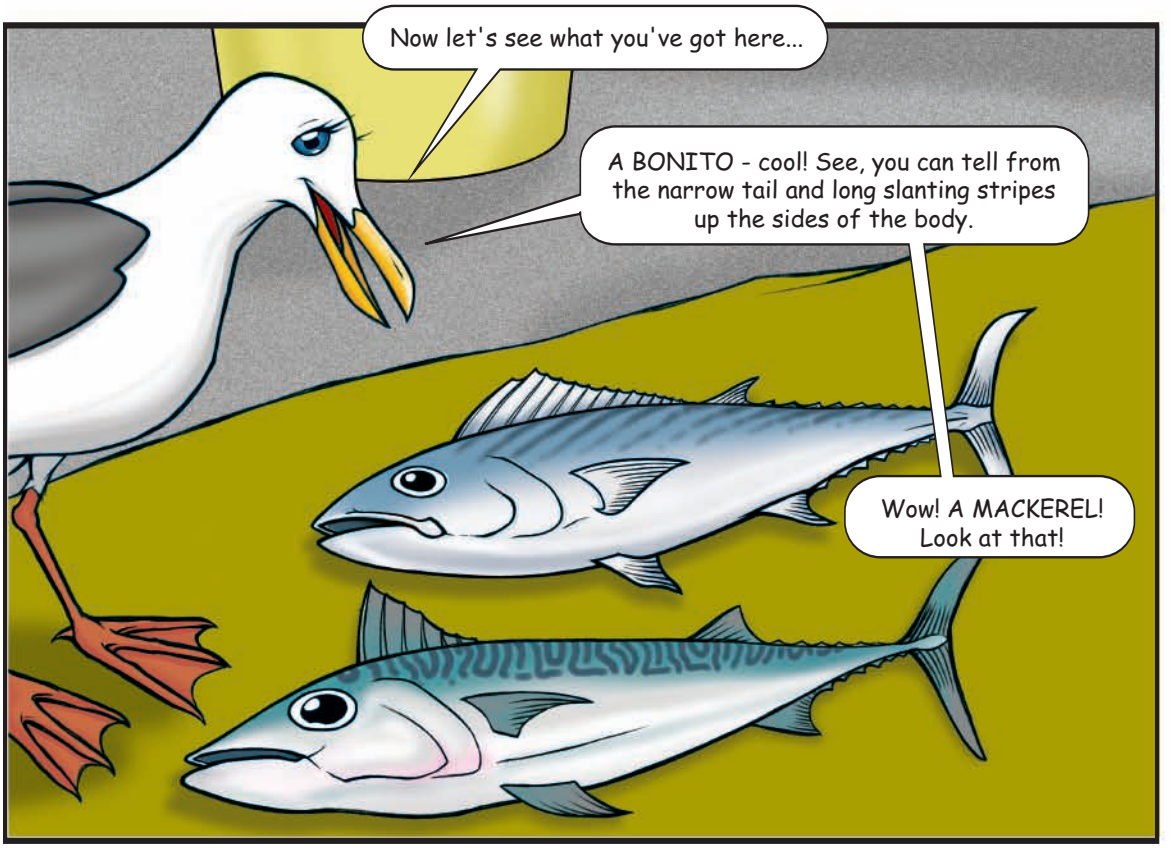
MSRP is a multi-agency effort to restore natural resources harmed by past releases of DDTs and PCBs in the southern California marine environment. Funded by a legal settlement with the companies and industries responsible for the chemical releases, MSRP is working on a variety of restoration projects, including projects to restore fishing opportunities in Southern California. For more information, please visit us at **www.montroserestoration.gov** or call **(562) 980-3236**.

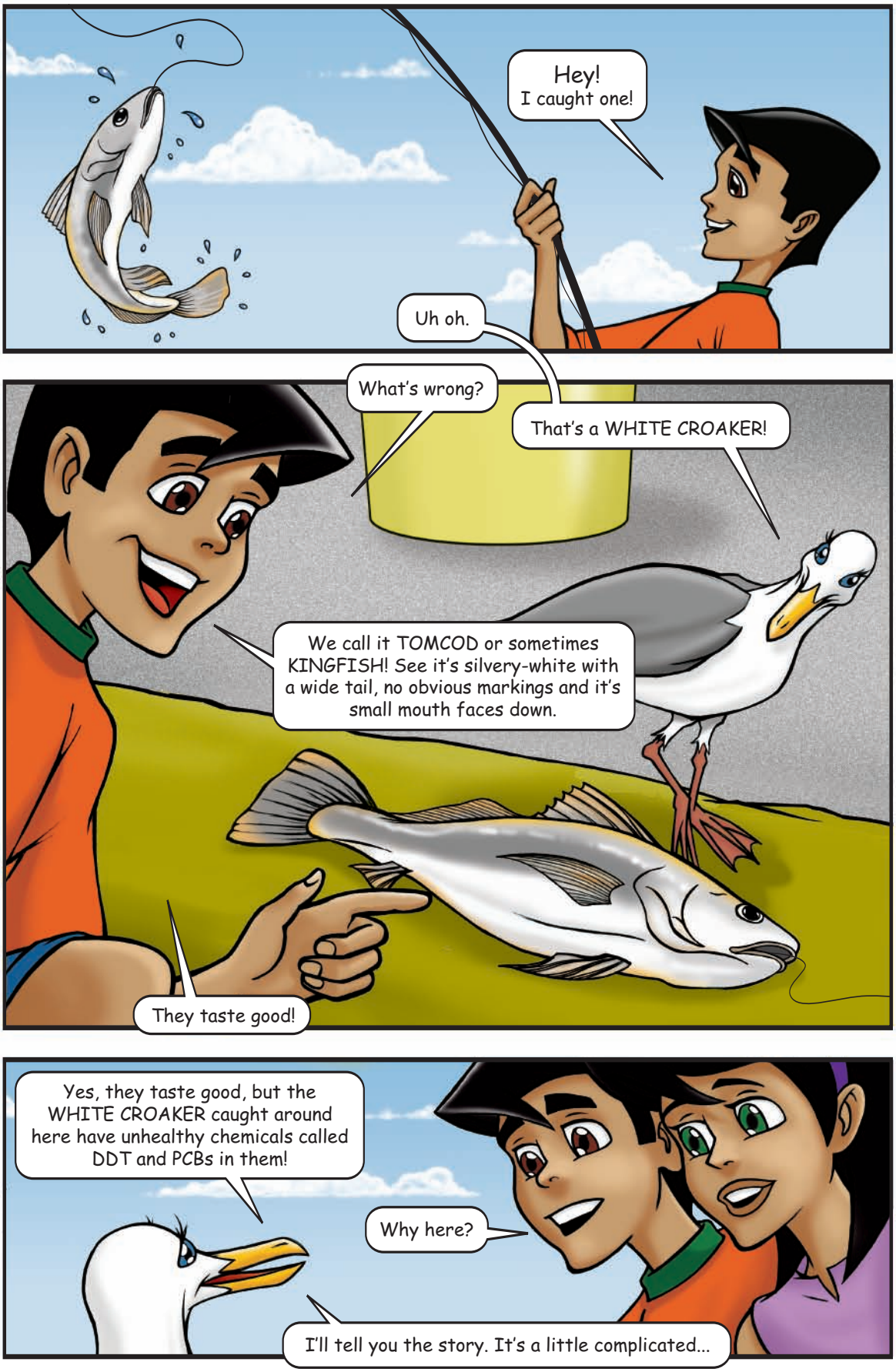
Cabrillo Marine Aquarium

Cabrillo Marine Aquarium is an educational, recreational, and research facility dedicated to providing rich and varied opportunities for early and continuing education of the general public about the marine environment of Southern California. Cabrillo Marine Aquarium is located at 3270 Stephen White Drive in San Pedro and is a facility of the City of Los Angeles Department of Recreation and Parks. Visit our website at **www.cabrilloaq.org** or call **(310) 548-7562**.


Amanda, a western sea gull, likes to hunt for food in San Pedro, an old fishing town and seaport in Los Angeles Harbor.
Let's see what's happening at Cabrillo Pier... Hmm. Plenty of people fishing. Let's see who is there.
It's Mariza and Jose fishing with their dad!


Hi, friends! What are you catching?
Different kinds of fish. You can take a look... if you promise not to steal them!
Hey! We western gulls don't steal food! We just raid a garbage can once in a while...


Now let's see what you've got here...
A BONITO - cool! See, you can tell from the narrow tail and long slanting stripes up the sides of the body.
Wow! A MACKEREL! Look at that!


Hey!
I caught one!
Uh oh.
What's wrong?
That's a WHITE CROAKER!
We call it TOMCOD or sometimes KINGFISH! See it's silvery-white with a wide tail, no obvious markings and it's small mouth faces down.
They taste good!
Yes, they taste good, but the WHITE CROAKER caught around here have unhealthy chemicals called DDT and PCBs in them!
Why here?
I'll tell you the story. It's a little complicated...

Marina Del Rey

Factories using PCBs

Los Angeles International Airport

Long ago, a big factory in Los Angeles made DDT, a mix of chemicals that was widely used from the 1940s to the 1970s to kill insects. Other factories used chemicals called PCBs for things like making paper and colling electrical transformers.

A lot of waste DDT and PCBs went into the Los Angeles County sewage system. But the sewage treatment plant which cleans up our household waste could not clean up the DDT and PCBs, so they went into the ocean along with the waste water.

The factories also dumped their waste chemicals on their properties and when it rained, the chemicals washed into storm drains and into the Los Angeles Harbor.

Scientists found that letting DDT and PCBs get into the ocean was bad for wildlife like fish and birds and for people. In 1971, the county sewage plant stopped factories from putting these chemicals into the sewer pipes, and the government made the factories clean up their dumps.

White Point

Waste Water Outfall Pipes

DDT Chemical Plant

Sewage Treatment Plant

Dominguez Channel

Waste Water Pipeline

San Pedro

Cabrillo Beach Bath House

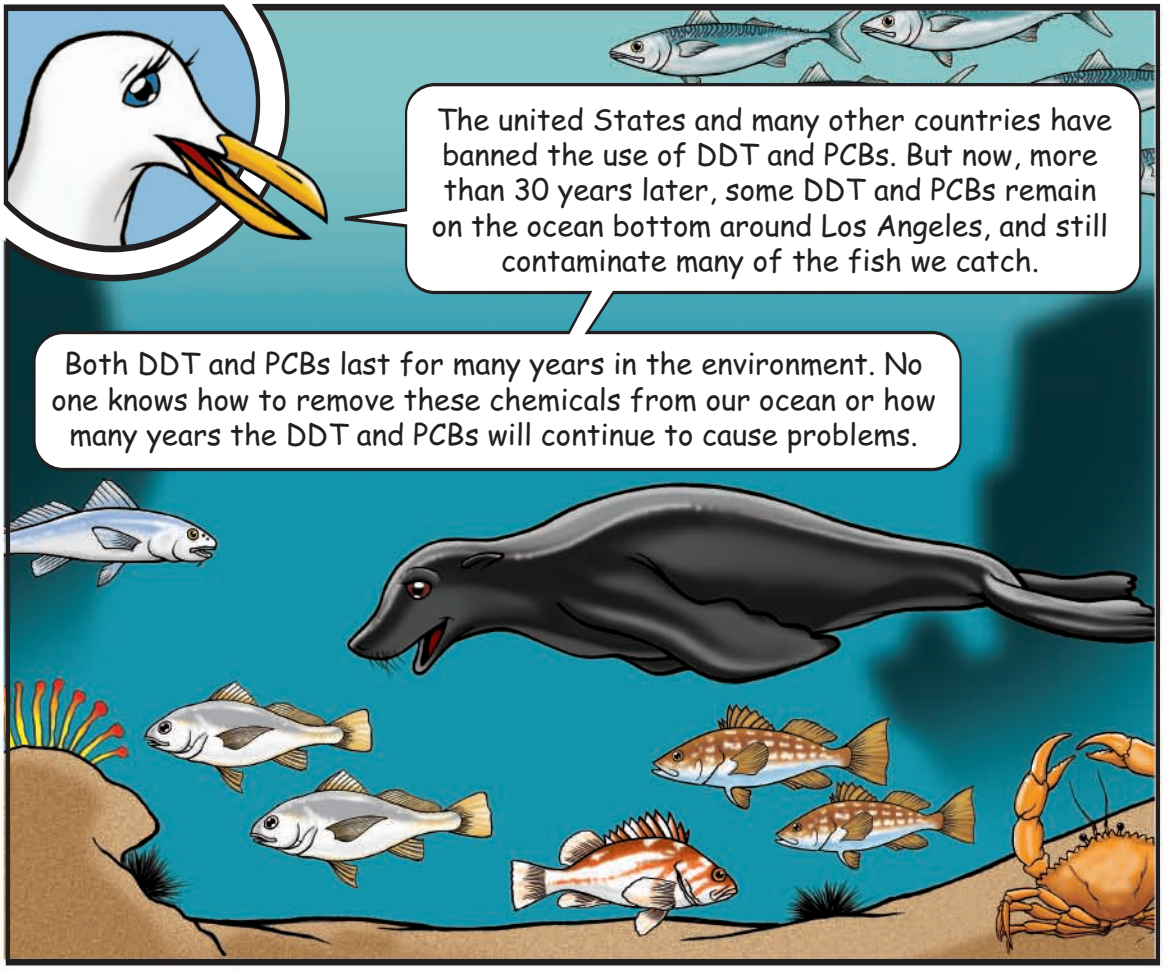
Los Angeles Harbor

Breakwater

Angel's Gate

Point Fermin

Breakwater


The united States and many other countries have banned the use of DDT and PCBs. But now, more than 30 years later, some DDT and PCBs remain on the ocean bottom around Los Angeles, and still contaminate many of the fish we catch.
Both DDT and PCBs last for many years in the environment. No one knows how to remove these chemicals from our ocean or how many years the DDT and PCBs will continue to cause problems.

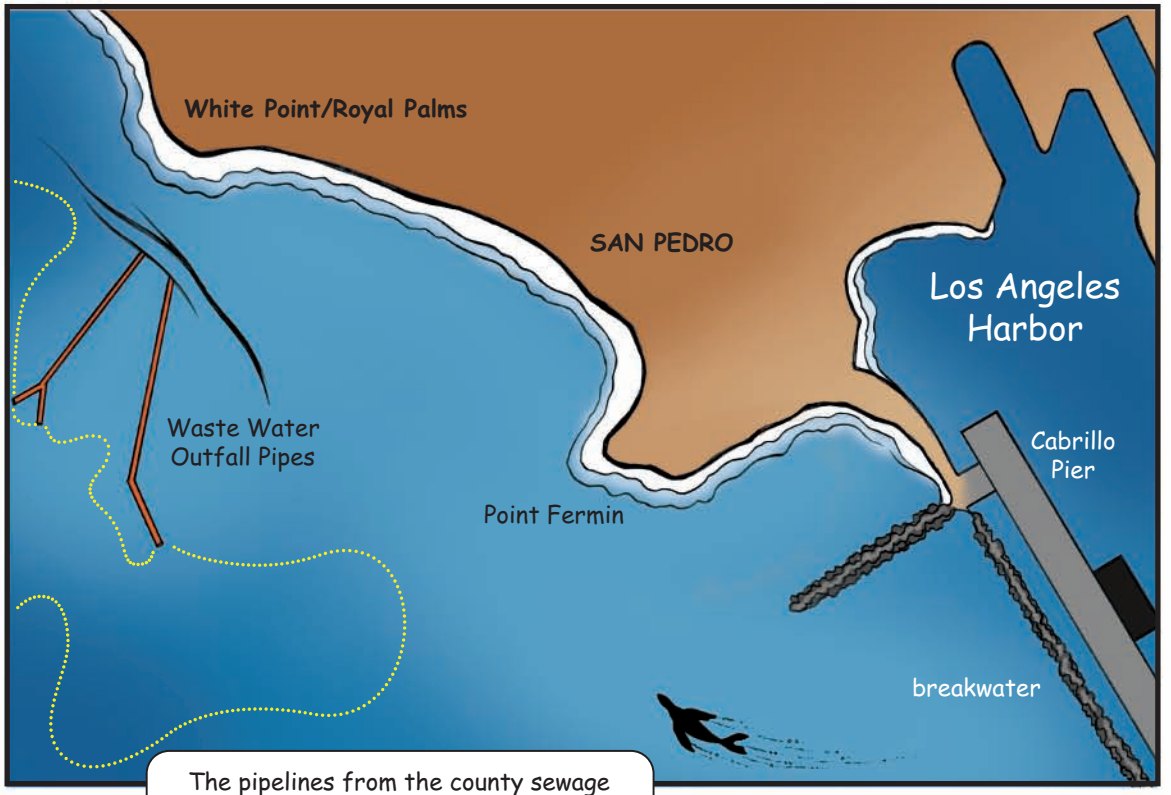
What do DDT and PCBs do to fish and birds?
Well...I know a friend who can help me explain it to you.

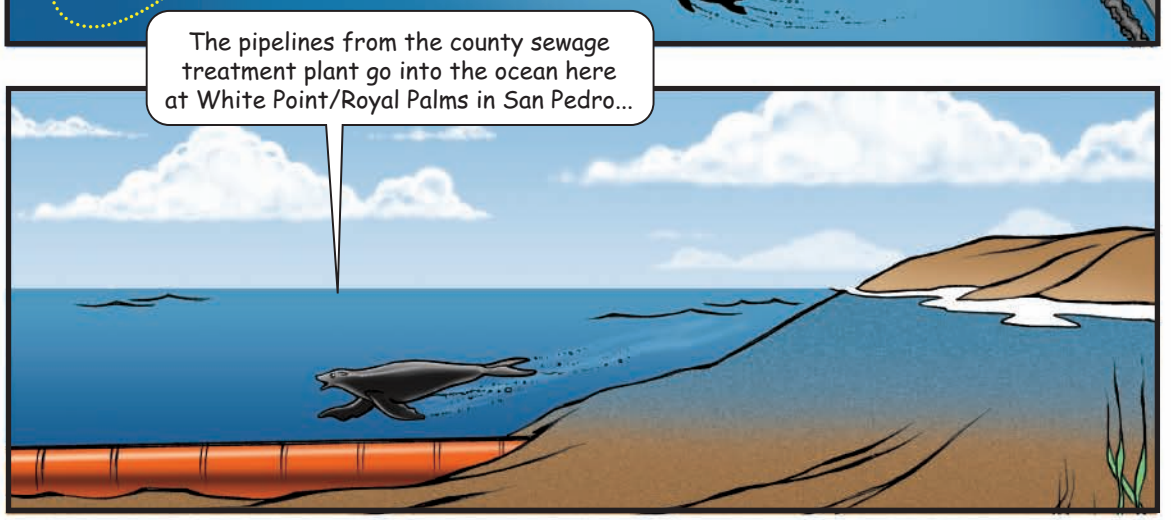
Let's see...Ah ha! There he is!
2SJR
Ahoy, Fernando!

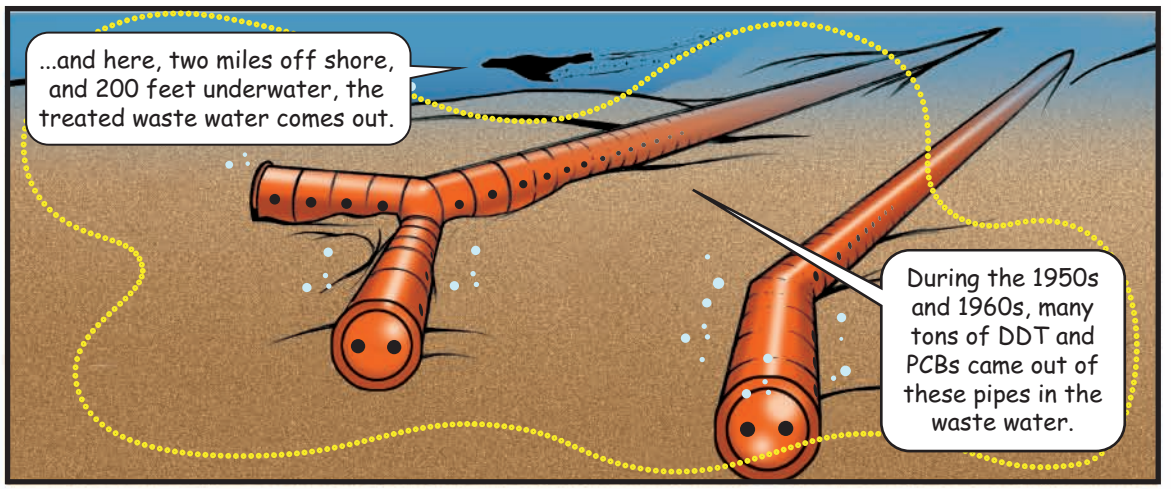
Ahoy Amanda! What brings you this way?
Could you could help me explain about DDT and PCBs to some friends of mine?
DDT and PCBs? I'd be glad to!

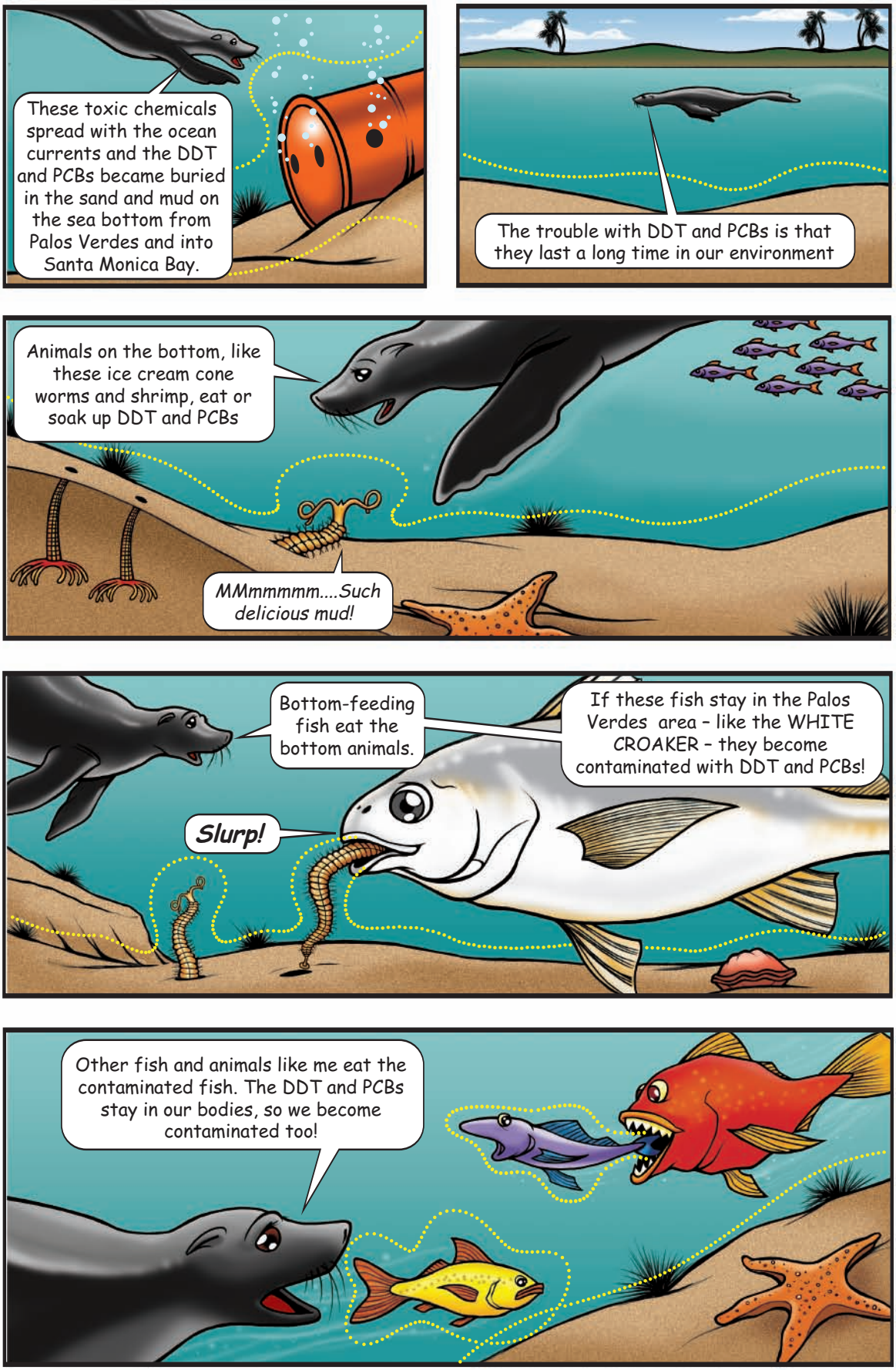
Mariza, Jose...

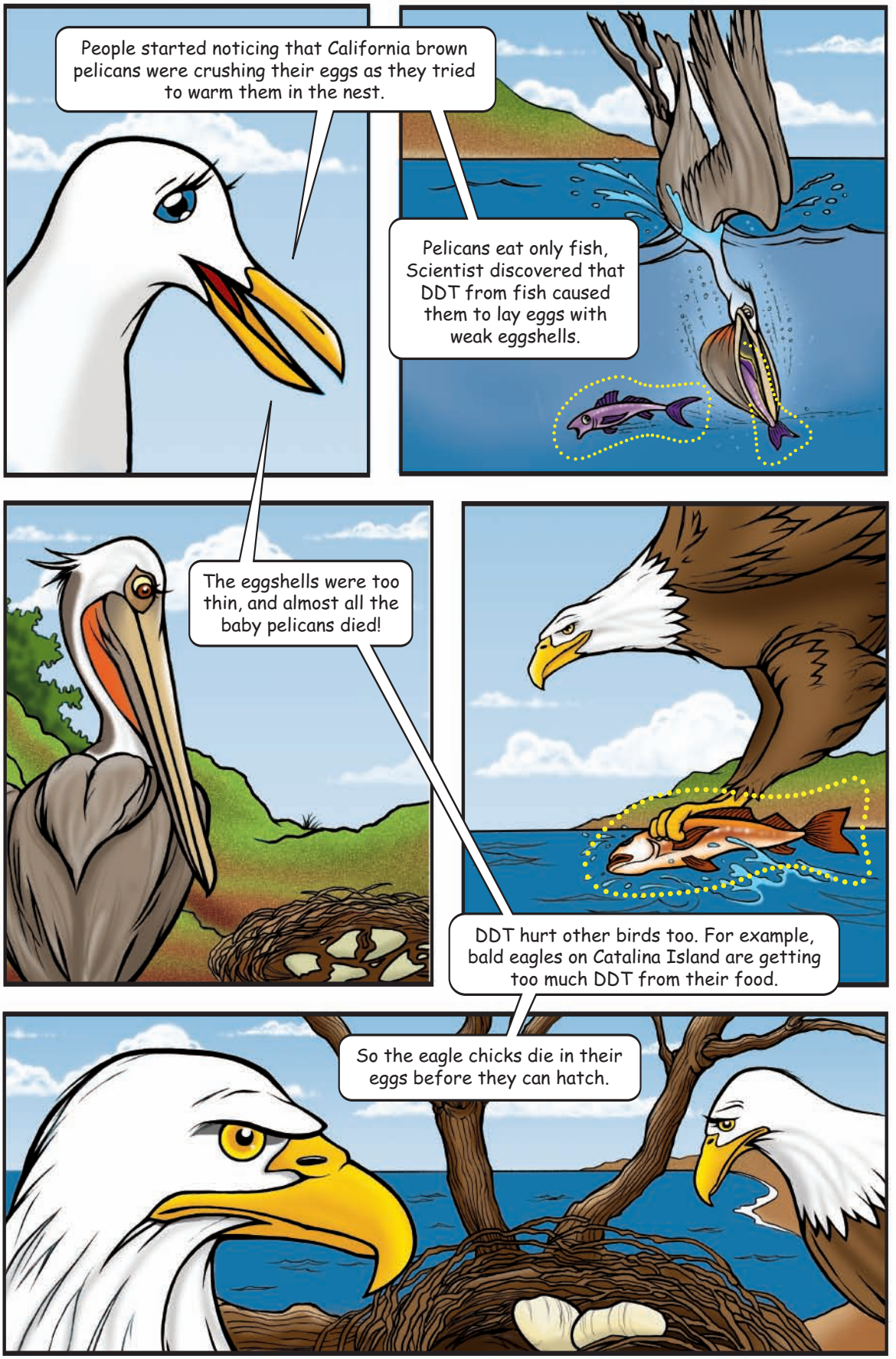
...meet Fernando!
Hi kids!
Hi!
Cool! He's a California sea lion!
Amanda said you wanted to know more about DDT and PCBs. I'll tell you what I know...

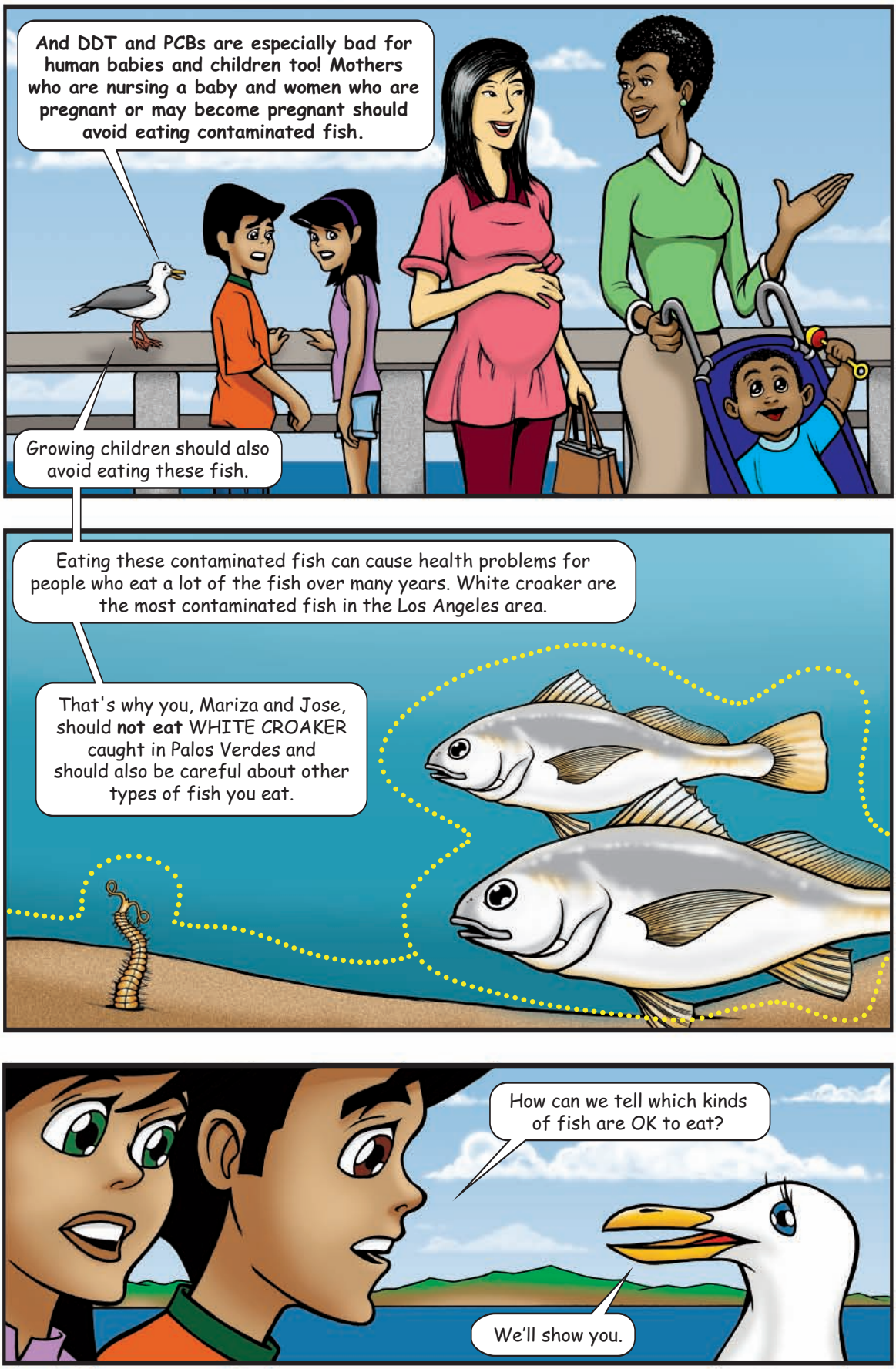

White Point/Royal Palms
SAN PEDRO
Los Angeles Harbor
Waste Water Outfall Pipes
Cabrillo Pier
Point Fermin
breakwater

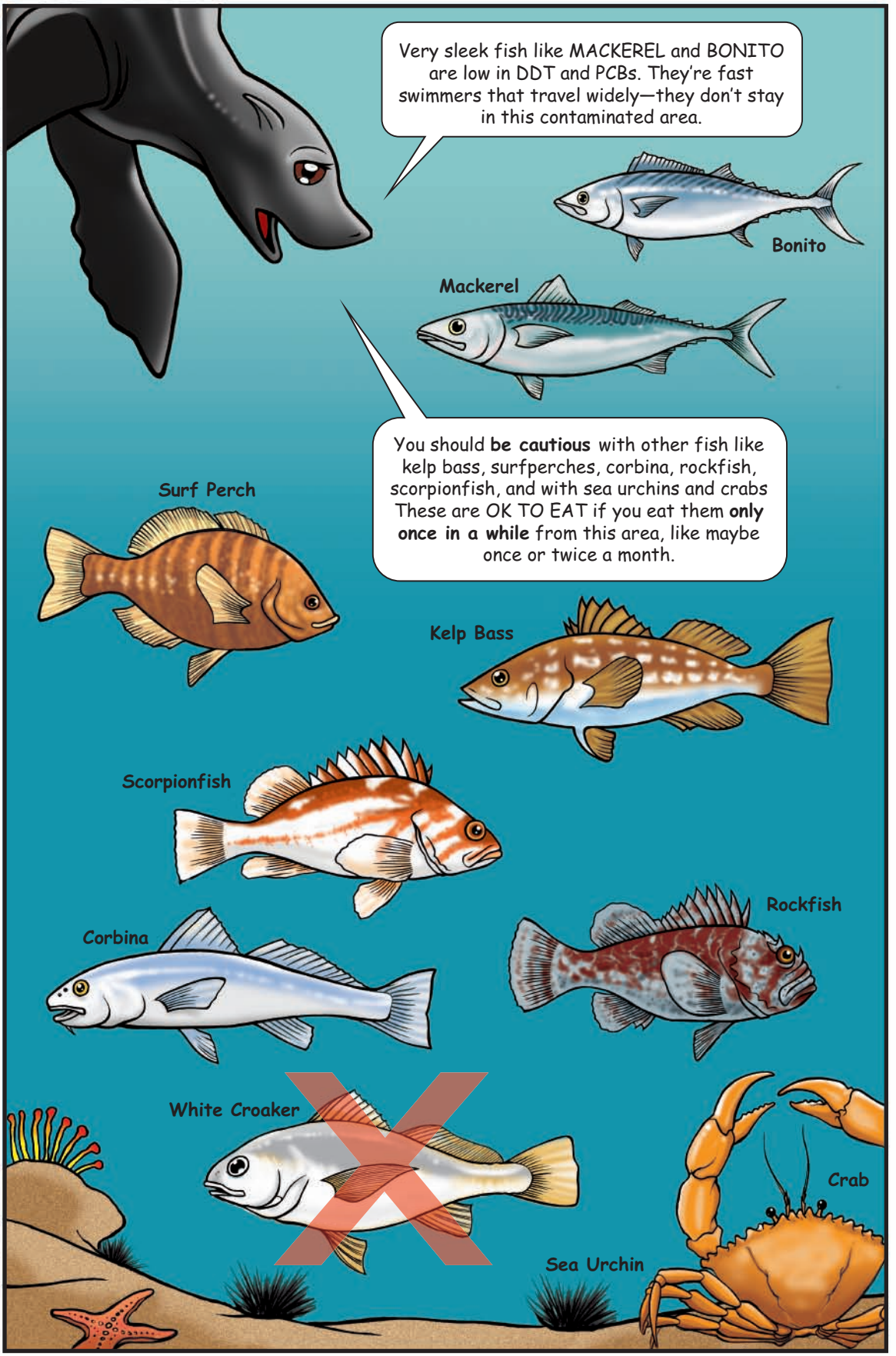

The pipelines from the county sewage treatment plant go into the ocean here at White Point/Royal Palms in San Pedro...


...and here, two miles off shore, and 200 feet underwater, the treated waste water comes out.
During the 1950s and 1960s, many tons of DDT and PCBs came out of these pipes in the waste water.

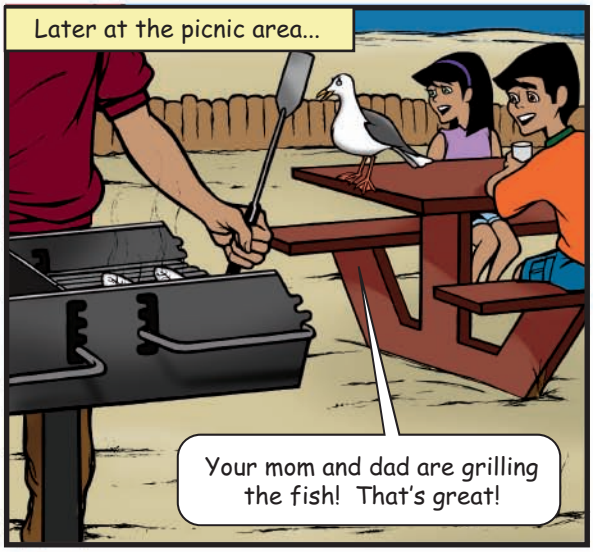

These toxic chemicals spread with the ocean currents and the DDT and PCBs became buried in the sand and mud on the sea bottom from Palos Verdes and into Santa Monica Bay.
The trouble with DDT and PCBs is that they last a long time in our environment
Animals on the bottom, like these ice cream cone worms and shrimp, eat or soak up DDT and PCBs
MMmmmmm....Such delicious mud!
Bottom-feeding fish eat the bottom animals.
If these fish stay in the Palos Verdes area – like the WHITE CROAKER – they become contaminated with DDT and PCBs!
Slurp!
Other fish and animals like me eat the contaminated fish. The DDT and PCBs stay in our bodies, so we become contaminated too!

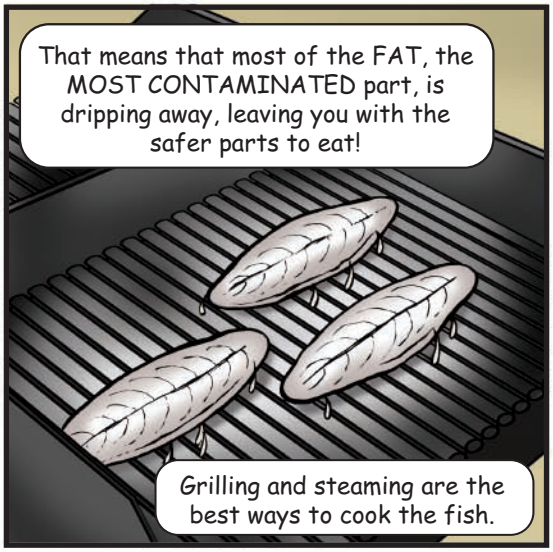

People started noticing that California brown pelicans were crushing their eggs as they tried to warm them in the nest.
Pelicans eat only fish, Scientist discovered that DDT from fish caused them to lay eggs with weak eggshells.
The eggshells were too thin, and almost all the baby pelicans died!
DDT hurt other birds too. For example, bald eagles on Catalina Island are getting too much DDT from their food.
So the eagle chicks die in their eggs before they can hatch.

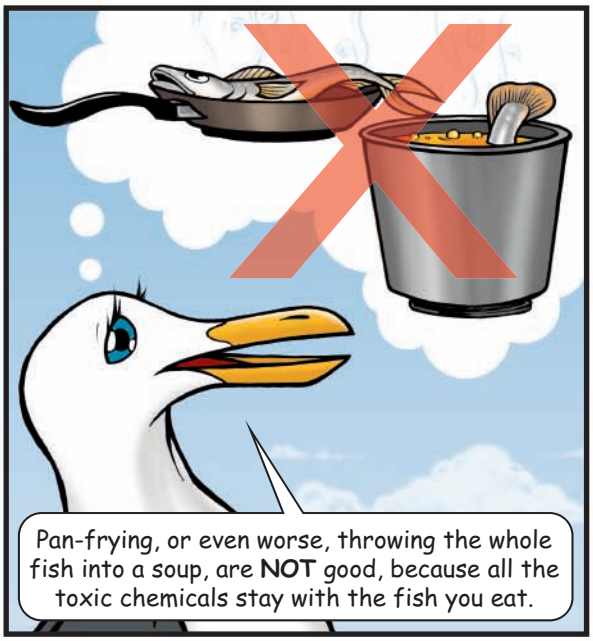

And DDT and PCBs are especially bad for human babies and children too! Mothers who are nursing a baby and women who are pregnant or may become pregnant should avoid eating contaminated fish.
Growing children should also avoid eating these fish.
Eating these contaminated fish can cause health problems for people who eat a lot of the fish over many years. White croaker are the most contaminated fish in the Los Angeles area.
That's why you, Mariza and Jose, should **not eat** WHITE CROAKER caught in Palos Verdes and should also be careful about other types of fish you eat.
How can we tell which kinds of fish are OK to eat?
We'll show you.


Very sleek fish like MACKEREL and BONITO are low in DDT and PCBs. They're fast swimmers that travel widely—they don't stay in this contaminated area.
Bonito
Mackerel
You should **be cautious** with other fish like kelp bass, surfperches, corbina, rockfish, scorpionfish, and with sea urchins and crabs These are OK TO EAT if you eat them **only once in a while** from this area, like maybe once or twice a month.
Surf Perch
Kelp Bass
Scorpionfish
Rockfish
Corbina
White Croaker
Crab
Sea Urchin

Okay kids, let's clean these fish. Mom's waiting for us at the picnic area.
Bye Fernando!
Thanks!
Bye kids!
You're dad is doing the right thing, he's returning the White Croaker.
This is called "catch and release".
Just to be careful he's cleaning these fish the right way too!
He's throwing away all the insides, the fatty areas, the dark meat areas and the skin! These parts of the fish have the most DDT and PCBs.
The light-colored meat on the sides of the body is the safest to eat.


Later at the picnic area...
Your mom and dad are grilling the fish! That's great!

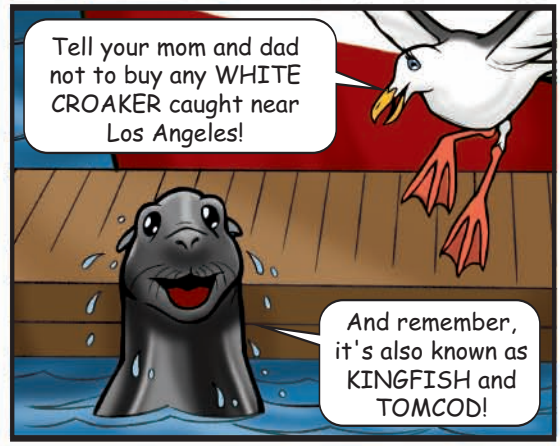

That means that most of the FAT, the MOST CONTAMINATED part, is dripping away, leaving you with the safer parts to eat!
Grilling and steaming are the best ways to cook the fish.

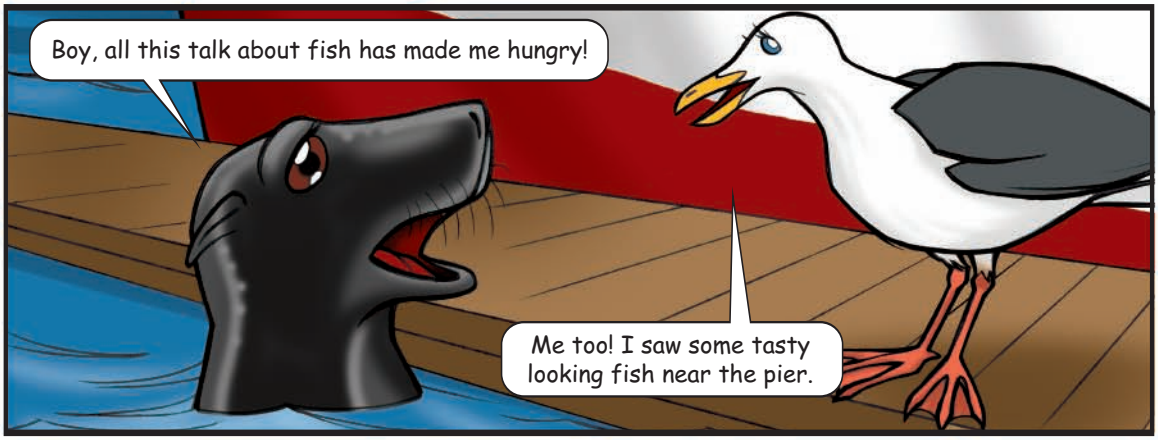

Pan-frying, or even worse, throwing the whole fish into a soup, are **NOT** good, because all the toxic chemicals stay with the fish you eat.

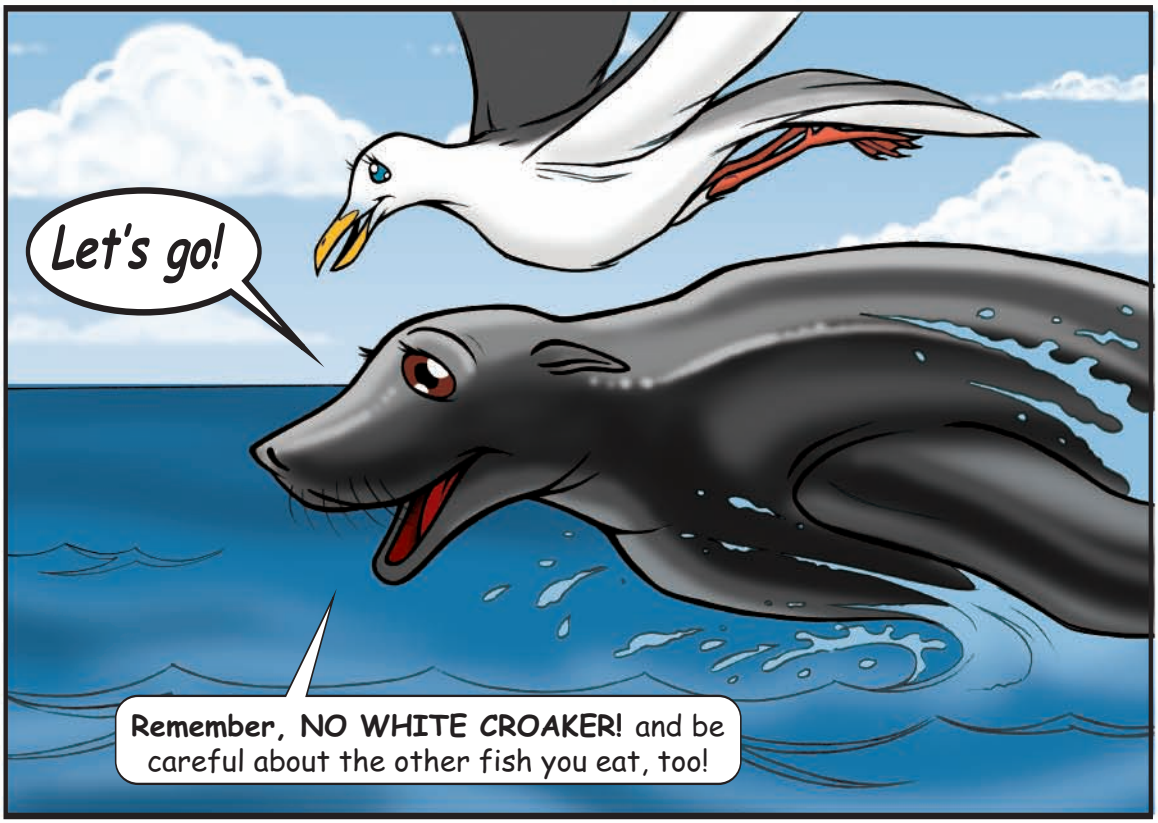
You know, fish is a great food—nutritious and usually healthy!

And it tastes great!
Yes it does!
But in the Los Angeles area, you have to be careful where you catch the fish, and which ones you eat!

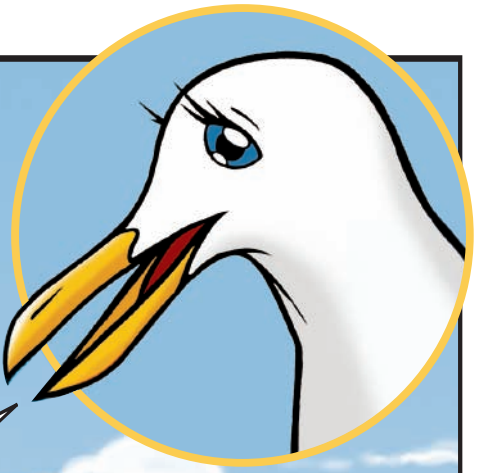
Be careful which fish you buy from a restaurant or a market.
FISH MARKET AND RESTAURANT
Deep Blue Sea


Tell your mom and dad not to buy any WHITE CROAKER caught near Los Angeles!
And remember, it's also known as KINGFISH and TOMCOD!


Boy, all this talk about fish has made me hungry!
Me too! I saw some tasty looking fish near the pier.


Let's go!
Remember, NO WHITE CROAKER! and be careful about the other fish you eat, too!

Fish Smart!

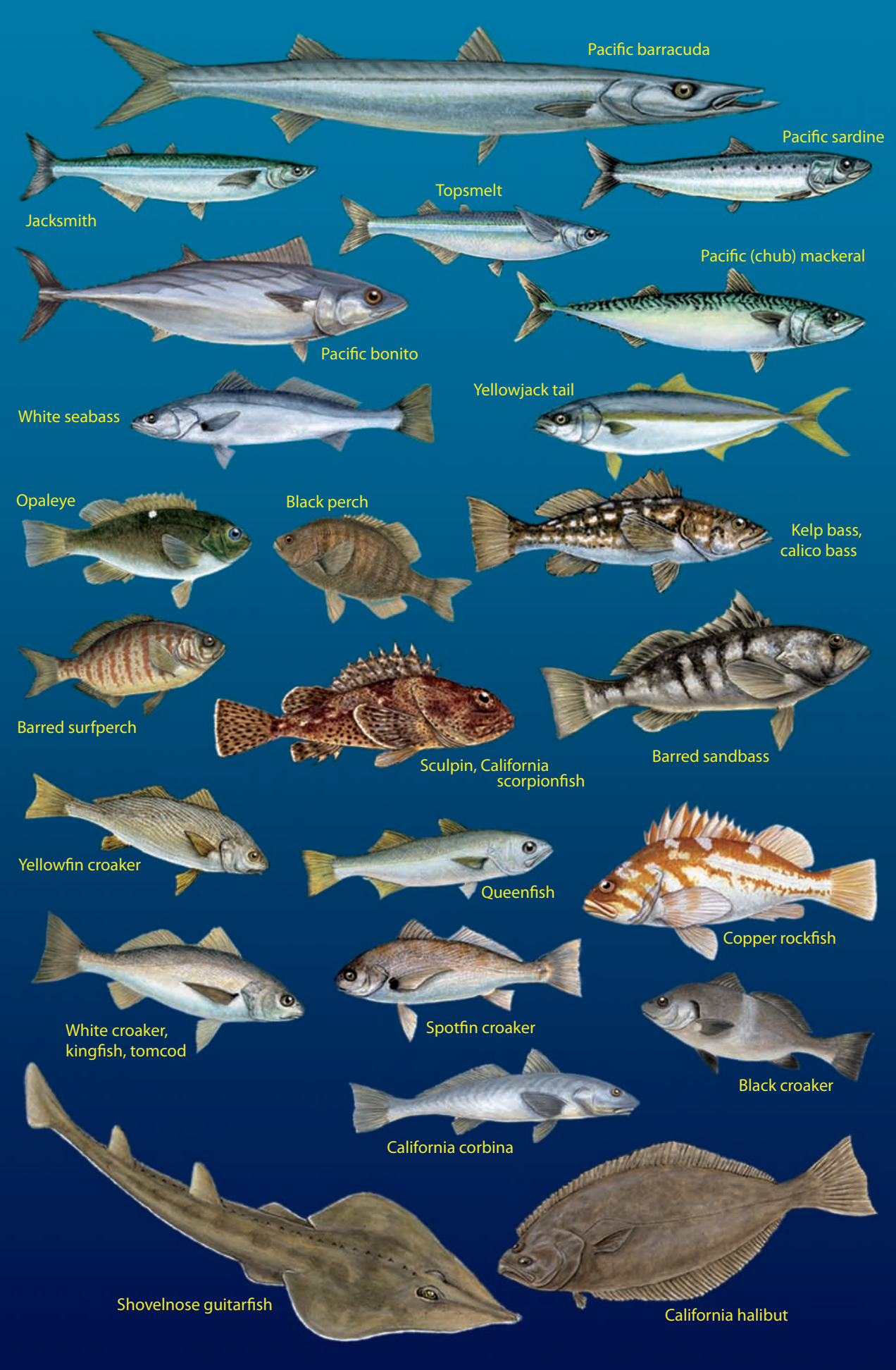


Some of the most common fish along the Los Angeles coast are contaminated with DDT and PCBs. The State of California suggests you limit the amount of some of the fish you eat.

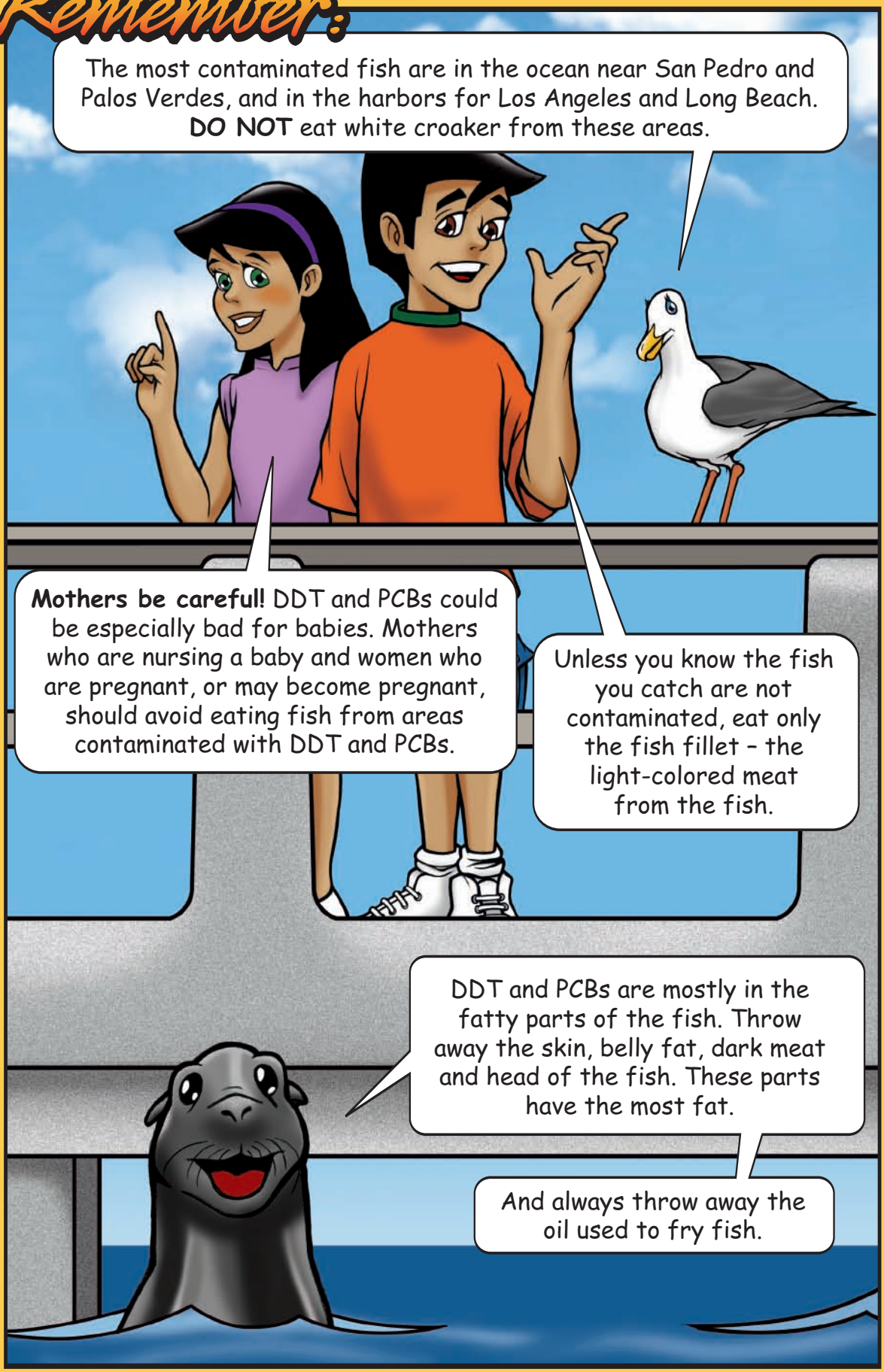
Use the drawings on the next page to know what fish you catch. Compare them to consumption advisories in your area to help you decide what fish you can keep and eat.

You can learn more about fish contamination and consumption advisories by:

- Looking for signs on fishing piers.
- Talking to people handing out information about fish contamination. They can usually be found at your fishing pier, at health clinics, and at local fairs.
- Visiting **www.oehha.gov/fish.html**, the website of California's Office of Environmental Health Hazard Assessment, a government group that creates the advisories.


Pacific barracuda
Pacific sardine
Jacksmith
Topsmelt
Pacific (chub) mackeral
Pacific bonito
White seabass
Yellowjack tail
Opaleye
Black perch
Kelp bass,
calico bass
Barred surfperch
Sculpin, California
scorpionfish
Barred sandbass
Yellowfin croaker
Queenfish
Copper rockfish
White croaker,
kingfish, tomcod
Spotfin croaker
Black croaker
California corbina
Shovelnose guitarfish
California halibut

Remember:


The most contaminated fish are in the ocean near San Pedro and Palos Verdes, and in the harbors for Los Angeles and Long Beach. **DO NOT** eat white croaker from these areas.
Mothers be careful! DDT and PCBs could be especially bad for babies. Mothers who are nursing a baby and women who are pregnant, or may become pregnant, should avoid eating fish from areas contaminated with DDT and PCBs.
Unless you know the fish you catch are not contaminated, eat only the fish fillet – the light-colored meat from the fish.
DDT and PCBs are mostly in the fatty parts of the fish. Throw away the skin, belly fat, dark meat and head of the fish. These parts have the most fat.
And always throw away the oil used to fry fish.