

Domoic Acid Poisoning

An Overview for Huntington State Beach
Natural Preserve Monitors



By: Cheryl Egger

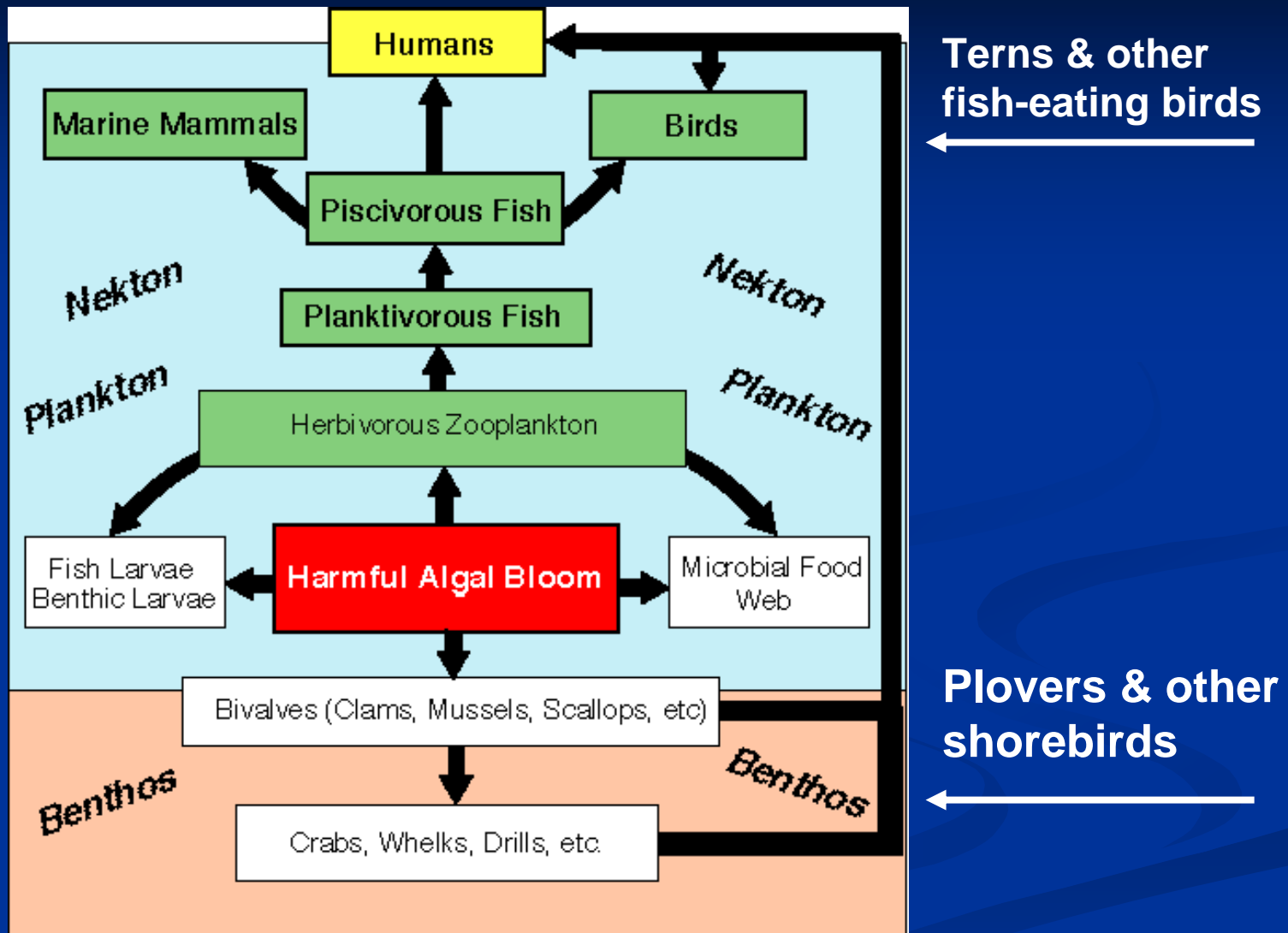
Domoic Acid (DA) – What is it?

- You may have seen news reports – pelicans falling from the sky, stranded, sick sea lions or closed fisheries due to Domoic Acid poisoning
- DA is a naturally occurring neurotoxin
- DA is known to be produced by two types of algae (*pseudo-nitzschia* and *p. australis*)
- It is not known what triggers its production
- DA works its way up the food chain and is concentrated in fish
- It is also concentrated in clams and crabs
- Toxicity of DA depends on concentration



pseudo-nitzschia

Domoic Acid Poisoning Food Chain



Some fisheries are closed by CA State Health Officers when DA is present, to protect humans

What to look for...

- Bird with seizures
- Bird with head twisting back
- Bird with head moving side to side
- Disorientation
- Motor weakness
- Legs outstretched
- Toes curled

Brown Pelican with Advanced Symptoms of DA Poisoning

Least Terns and other
marine fish-eating birds
could show similar
symptoms



What to do with affected birds

- Get the bird into care quickly
- If on the beach or outside the fence, please take to:
The Wetlands & Wildlife Care Center,
or call 714.374.5587
 - The center is located at PCH and Newland
 - There is no transfer of DA to humans by handling the animal
- Lifeguards will also help with pick up and transport
- If affected bird is seen inside the preserve, call the predator mgmt. phone number on your badge

How is it treated?

- Aggressive fluid therapy
- Supportive care
- Many birds do survive with treatment and are released if they get into care quickly
- However, the hippocampus area of the brain responsible for long term memory and spatial navigation is affected and the after-release success is unknown

Research

- All birds taken into care with symptoms of DA poisoning have blood samples taken to determine DA
- Researchers are very interested in finding out which species are affected by DA
- Due to the Endangered status of the Least Tern, researchers want to pay attention to anything that would affect their population

Research, Continued

- Water testing is being done from a boat along the LA and OC coastlines by Caron Labs and USC about once per week
- We will be notified if there is DA present in our local waters
- The presence of DA in the water does not always mean there will be an outbreak of DA poisoning
- We will notify you of a possible outbreak

First Indications of a possible outbreak in birds (not always in this order)

- Water tests are positive for DA
 - Doesn't always mean an outbreak
- DA poisoned seals and sea lions are found with symptoms
- Birds, especially Brown Pelicans are found with symptoms

You will be notified by email of any possible outbreak in our area



Friends of Animals 

TODAY'S RESCUE
APRIL 10, 2008
Elephant seal pup, Hermosa

Elephant seal pup, Redondo
Sea Lion, Manhattan Beach

Slowly recovering
after a grand mal
seizure, this
pregnant sea lion
stranded in
Manhattan Beach

ALL SIGNS POINT TO DOMOIC ACID



Peter Wallerstein
Marine Animal Rescue Specialist



Friends of Animals 

TODAY'S RESCUES

APRIL 15, 2008

Elephant seal, Hermosa/relocated

Elephant seal, Venice /relocated

Elephant seal, Redondo

Sea lion, Manhattan Beach DOMOIC



NOT A PRETTY PICTURE
POSSIBLE DOMOIC RESCUE
Manhattan Beach

Peter Wallerstein
Marine Animal Rescue Specialist

Sources:

Ennis, Stephanie, Pseudo-nitzschia, USC

Harrington, Robert, Least Tern photos

Kam, Cyndie, Brown Pelican photo

Kaveggia, Susan, Treating Domoic Acid
Poisoning in Brown Pelicans,
and Personal Communications

Wallerstein, Peter, Marine Animal Rescue

