

Soundside Learning

This Week On Core Sound

Core Sound Partners With West Carteret High School

Student Leadership Academy Plans Eco-Day

The Core Sound Waterfowl Museum & Heritage Center is proud to announce that we are partnering with the West Carteret High School Student Leadership Academy to launch the Core Sound Eco-Fun Camp on Monday, June 13th.

This one day event will provide our area's youth with an opportunity to *learn* from each other. Participants will have the opportunity to take part in learning, hands-on, about our Core Sound marine estuary environment with activities highlighting responsible use of our environment. Our high school student-educators will lead participating students through each of the exhibits, learning about topics from responsible fishing to the construction of bird feeders using 100% natural resources.

After participants have completed the exhibits, all attendees will have the opportunity to hear from guest speakers representing various areas of expertise from honeybees and pollination to the construction of eco-friendly seed bombs!

Groups or individuals who are interested in attending this camp should complete the Eco-Fun Day registration form which can be found by [clicking here](#), or by requesting a copy by emailing education@coresound.com.



Students use microscopes to examine marine life at Core Sound's Earth Day Event, circa April 2022.

Photo: CSWM&HC Collection

Did You Know?

Each year humans dump more than 18 billion pounds of plastic into the world's oceans.



Sound Reading
Material For You &
Your Child

The Earth Book

By: Todd Parr

With his signature blend of playfulness and sensitivity, Todd Parr explores the important, timely subject of environmental protection and conservation in this eco-friendly picture book. Featuring a circular die-cut Earth on the cover, and printed entirely with recycled materials and nontoxic soy inks, this book includes lots of easy, smart ideas on how we can all work together to make the Earth feel good - from planting a tree and using both sides of the paper, to saving energy and reusing old things in new ways.

Horseshoe Crabs: The Original “Blue Bloods”

Living Fossil Holds Key Medicinal Ingredient

You’ve probably seen them creeping slowly along the white, sandy shores of Core or Shackleford Banks during the summer months. Though they may look frightening with their sharp telson, these living fossils pose almost no threat to humans, yet *we* may depend upon *them* for our very survival. What are these mysterious, prehistoric creatures?

Horseshoe crabs have roamed the earth in excess of 300 million years, and are found in nearly all of the waters of the world. Along the east coast of the United States and throughout the Atlantic Ocean is found one of the four extant species of horseshoe crab, *Limulus Polyphemus*, the Atlantic Horseshoe Crab. These armor plated creatures roam the sea floor and shallow estuaries, feeding on algae, clams, and other invertebrates. During the early summer as our coastal waters gradually warm, males and females will emerge from the deep, en route to the shall beaches where they will begin their mating rituals. One mating pair of horseshoe crabs can produce over ten thousand fertilized eggs.



Horseshoe crabs are bled at a lab.
Photo: Smithsonian Magazine

For centuries, they have been harvested and used by humans. Coastal Native Americans were known to use the sharp telson to tip their spears, and used the shell as a bowl-like container. In 1956, however, an American medical scientist named Fred Bang announced a most astonishing discovery. Through years of research, Bang discovered that the blood of the Atlantic Horseshoe crab is exceptionally sensitive to bacteria. The blood, which is bright blue in color, contains a much higher concentration of immune cells than that of human blood. These immune cells act as hyper-active “guards” and when confronted with any bacteria, the cells flock to the source and clot around the bacteria, thus destroying it. During his research, Bang noticed this phenomena of the blood clotting around traces of toxic bacteria and would go on to create the *Limulus amebocyte lysate*, or LAL Test.

The LAL Test is now the standard in the medical and pharmaceutical industry to test newly developed vaccines for bacterial contaminants that might otherwise cause illness, or death for those injected with the vaccine. During the early stages of the development of the COVID-19 Vaccines, the LAL Test was used to verify the safety of those vaccines.

Due to the large and ever-increasing demand for the blood of the horseshoe crab, a large commercial fishery of these creatures has developed in response. Fishermen collect the live specimens and bring them to market on ice, slowing their metabolic rate to ensure their survival. The crabs are then partially bled and returned to the wild, alive. By the time the blood reaches its final state of refinement, it’s a whopping \$60,000 per gallon!

Chances are, almost all of us owe our personal health to Fred Bang, his research, and the blood of our beach-going friends, the horseshoe crab.