



**REAL ESTATE  
EVENTS CALENDAR  
101 THINGS TO DO  
MAPS TIDE CHARTS**



Vol. 27, No. 9, September 2017

[www.forgottencoastline.com](http://www.forgottencoastline.com)

850/697-5138



## *Horseshoe Crabs May Save Your Life* Ancient Animal "Blue Blood" Studied

*With Chester Butler*  
[www.floridagreenguide.org/](http://www.floridagreenguide.org/)

If you are visiting the beaches of the Forgotten Coast this month, you may get a chance to see a ritual that started long before there were dinosaurs. It is the mating ritual of Horseshoe crabs.

Two years ago, the Florida Wildlife Commission, the Nature Coast Biological Station, Sea Grant Florida and the University of Florida began a study of these animals in Cedar Key, Florida. The study is now expanded to include The Forgotten Coast beaches. Helping with the study are many local Florida Master Naturalists and Florida Green Guides.

For thousands of years the Horseshoe crabs have come to our beaches to mate. Although they mate year-round, in late spring and early fall they come ashore in large numbers. During the full and new moon phases, the tides will be high. That's when the crabs come ashore for sex on the beach.

It is quite a spectacle. The large females plow through the sand dragging several smaller males which grab and hold on to her shell with special claws. As the females deposit up to 2,000 eggs in the sand, they are fertilized externally by the males. Once the eggs are fertilized, the crabs return to the Gulf.

So why all the interest in the Horseshoe crab? Since 1987 the Horseshoe crab has been saving human lives. Here's how these ancient creatures help modern medicine save lives.

The crabs are caught live. They are quickly transported to laboratories where they are scrubbed and cleaned. Then technicians insert a

needle into the heart of the animal. A portion of the animal's bright blue blood is withdrawn and retained. The blood is blue because it is copper based. Human blood is red because of its iron component. Then the animals are quickly returned to the sea. Once back in the sea they make a fast recovery from their blood donation ordeal.

The retained blue blood is centrifuged. This process isolates a component of the blood called *Limulus amoebocyte lysate*, or LAL. LAL. The LAL test is used to test all injectable drugs and implantable devices for dangerous bacteria. Some of these bacteria are "super bugs". That means the infections and diseases they cause are not treatable with antibiotics. Bottom line? Without the LAL test, many of our injections and implants could be lethal!

This fall when the crabs come ashore they will be met by specially trained Florida Master Naturalists, Florida Green Guides and other volunteers. These citizen scientists will document the location, the number and mating behavior of the crabs. Some animals will be tagged. The size of the tag will indicate the sex of the animal. The tagged animals will be measured, weighed, aged and any injuries noted. Then they are returned to the Gulf unharmed.

The information collected is given to FWC and the University of Florida. This information will help scientists determine the population size, health, and movements of the crabs in the Gulf.

The little information that is known about them comes from research done by Anne and Jack

Rudloe of Panacea, Florida. The Gulf Specimen Marine Lab and Aquarium, founded by Jack Rudloe, has a Horseshoe crab exhibit you will not want to miss. The lab is "kid friendly" with many touch tanks to explore. A visit to the Lab is a fun way to spend an afternoon with your family. And you will learn a great deal about the marine life of The Forgotten Coast, too.

Want to make a contribution to this important research and help the Horseshoe crab survive? It's easy. Here's how;

Leave the mating crabs alone. If disturbed they may return to the sea without mating.

You may find a few crabs on their backs. Please turn them over to increase their chances of survival.

Do not pick up a crab up by its tail. This will injure the animal.

Educate others about the value of this animal to human health.

If you see a crab with a round blue and white tag, snap a picture of the tag or note the number on the bottom of the tag. Record the date, location and the condition of the animal (alive or dead). Report the information to FWC by calling 1-888-546-8587 or complete the reporting form at [www.fws.gov/crabtag/](http://www.fws.gov/crabtag/).

If you visit a beach and see volunteers working, feel free to engage them and ask questions. Florida Master Naturalists and Florida Green Guides are happy to share their special knowledge about Florida's wild side with you and your family.