

# **Horseshoe Crabs on Edisto Beach**

## **General Description**

One of the most interesting visitors to Edisto Beach is the horseshoe crab. Horseshoe crabs are not actually crabs but are more closely related to spiders and scorpions. The species here is the Atlantic horseshoe crab, which is the only existing species of horseshoe crab found in North America. Three other species of horseshoe crabs exist in Southeast Asia. Spawning takes place primarily in May and June and particularly during full and new moons, when hundreds of mating horseshoe crabs can be found along Edisto Beach. In the fall, they move to deeper ocean waters or to the Atlantic continental shelf for the winter.

Horseshoe crabs are one of the oldest species on Earth, and it is estimated they have existed for between 400 and 500 million years. In fact, the horseshoe crabs found on our beaches today have existed largely unchanged for some 250 million years, which is why they are often referred to as living fossils. Horseshoe crabs primarily eat worms and mollusks living on the ocean floor. They may also feed on crustaceans and even small fish, mostly foraging at night. Horseshoe crabs can grow to two feet long and live up to 25 years.

## **Nesting**

Horseshoe crabs usually nest between the high and low tide marks on the beach. Females lay about 4,000 eggs in each nest and dig five to seven nests in one visit to the beach. Each female returns to shore multiple times in one year until she has laid all of her 80,000 to 100,000 eggs. Incubated by the sun, the eggs hatch in two to four weeks. The hatchlings dig up through the sand at high tide, allowing the waves to carry them out to sea.

## **Importance of Horseshoe Crabs**

Horseshoe crabs are a vital part of our shore ecosystem. Many species of migrating shorebirds replenish with horseshoe crab eggs on their migratory journey to northern breeding grounds. Additional horseshoe crab predators include many fish and invertebrates which feed on horseshoe crab larvae. Adult horseshoe crabs are a favorite food of sea turtles, including loggerheads.

Horseshoe crabs also contribute to human health through medicines. Horseshoe crabs are harvested for their unique blood, which contains copper making it blue in color. Their blood

has properties useful to the biomedical and pharmaceutical industries. If you have ever needed a vaccine or IV fluid, you most likely benefited from the use of horseshoe crab blood.

## **Horseshoe Crabs on the Beach**

Most commonly what we encounter on Edisto Beach are the shells which have molted off a growing crab. Horseshoe crabs molt several times during their first years and then roughly once a year afterward. As horseshoe crabs come ashore to spawn, it's possible that in rough weather with strong waves, a horseshoe crab may get flipped over with its legs facing the sky. Normally the crab will use its tail or telson to right itself. But if the telson is damaged or impaired, they may have trouble flipping back over. If horseshoe crabs are found with their legs facing the ground, they are not stranded, and it is best not to disturb them. But if you encounter an overturned horseshoe crab on the beach, it is safe to flip them back over if handled properly. Despite their appearance, horseshoe crabs are not dangerous. Their tails might look scary, but they cannot sting. They do have photoreceptors that allow them to sense light, so never pick a horseshoe crab up by its tail -- the tail is very sensitive and easily injured. Grasp both sides of the shell of the head portion of the animal, pick the animal up, and set it down with its legs down, and point it back toward the water. Don't get your fingers caught in the area between the head and the abdomen (the hinge). This is where the crab bends and your fingers could get pinched.



Photo by Ken Tingman

## **Protect Our Horseshoe Crabs**

Because horseshoe crabs are both ecologically and economically valuable, in 2023 the US Fish and Wildlife Service halted the harvesting of horseshoe crabs in the Cape Romain National

Wildlife Refuge in South Carolina from March 15 to July 15 to aid their reproduction. This decision was influenced by the importance of horseshoe crab eggs as a food source for migratory birds, the ongoing use of horseshoe crabs for bait, and the use of their blood in medical products. The ban supports the conservation goals of the refuge, spanning 66,000 acres of marshes, beaches, and islands near Charleston. Though there is no similar ban here in Edisto, we want to work together to protect this ancient marine animal and preserve its valuable role in keeping Edisto Island's environment healthy and thriving!

**Sources:** South Carolina Department of Natural Resources <https://dnr.sc.gov> and Ecological Research & Development Group <https://horseshoecrab.org> (2025)