

# Horseshoe Crab Exploration Challenge!

Visit Snows Cove Preserve in Sedgwick OR Snow Natural Area in Brooksville along the Bagaduce River and search for Horseshoe Crabs along the shoreline just beneath the water close to the shore. To complete this challenge, find at least 1 Horseshoe Crab or explore 1 Horseshoe Crab Spawning Area (the shoreline along the trails).

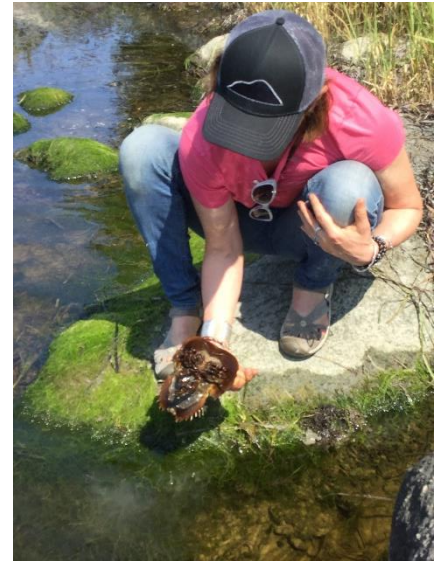
Your Name:

Observation

Trail Name:

Number of Horseshoe Crabs Sighted:

Nature Observations About Your Location:



## Horseshoe Crab Info & Important Information

Horseshoe crabs are “living fossils” meaning they have existed nearly unchanged for at least 445 million years, well before even dinosaurs existed. Horseshoe crabs are not actually crabs at all, they are much more closely related to spiders and other arachnids than they are to crabs or lobsters!

There are four species of horseshoe crabs still around today. Only one species, *Limulus polyphemus*, is found in North America along the Atlantic and gulf coasts from Maine to Mexico. The other three species are found in Southeast Asia. Despite existing for hundreds of millions of years, horseshoe crabs are nearly identical to their ancient relatives. Horseshoe crabs have a tank-like structure consisting of a front shell called the prosoma, a back shell called the opisthosoma, and a spike-like tail called a telson. Some people think horseshoe crabs are dangerous animals because they have sharp tails, but they are harmless. Really,



horseshoe crabs are just clumsy and they use their tail to flip themselves back over if they get overturned by a wave.

Though the horseshoe crab's shell is hard, it is very sensitive to the world around it. The crabs are especially sensitive to light. They have 10 eyes, a pair of compound eyes on the prosoma, and "photo receptors" in other areas, primarily along the tail.

**\*Never pick up a horseshoe crab by its tail, as it can harm the animal. Instead, gently pick it up by both sides of the prosoma using both hands.**

Horseshoe crabs are an important part of the ecology of coastal communities. Many fish species as well as birds feed on horseshoe crab eggs. Horseshoe crabs are also extremely important to the biomedical industry because their unique, copper-based blue blood contains a substance called "Limulus Amebocyte Lysate", or "LAL". This compound coagulates or clumps up in the presence of small amounts of bacterial toxins and is used to test for sterility of medical equipment and virtually all injectable drugs. That way, when you get a vaccine, you know it hasn't been contaminated by any bacteria. Anyone who has had an injection, vaccination, or surgery has benefited from horseshoe crabs! Additionally, research on the amazing and complex compound eyes of horseshoe crabs has led to a better understanding of human vision.

Horseshoe crabs are also used in several fisheries. The marine life fishery collects live horseshoe crabs for resale as pets in aquariums, research subjects, or as educational specimens, and both the American eel and whelk fisheries use horseshoe crabs as bait along many parts of the Atlantic coast.

### **Threats to horseshoe crabs**

Horseshoe crab numbers are declining throughout much of their range due to habitat loss and over development of coastal shoreline areas.

