Creature Feature

Question: What has 10 eyes, a sharp tail, blue blood, ancestors who lived on earth before the dinosaurs, and lives in Great Bay?

Answer: The Horseshoe Crab!

The horseshoe crab, *Limulus polyphemus*, has been around for 200 million years. It is called a "living fossil," an animal that has stayed basically the same as it was in prehistoric times. Its ancient ancestors, the trilobites, are preserved in rocks 400 millions years old. Its closest living relatives are spiders and scorpions.

Two of its eyes, tiny dots on either side of a ridge at the front of its shell, can only detect light and dark. Another pair, its compound eyes, look like insect eyes. They see multiple images, like a kaleidoscope.

Garbage Collector

The horseshoe crab crawls through the mudflats, shoveling up worms and clams with the front of its shell. As it moves, it mixes oxygen into the black mud that is buried just below the surface. A garbage collector of the estuary, the horseshoe crab also devours the remains of dead animals. It uses its long telson or tail to right itself when it gets stranded on its back. Long ago, Indians used its tail for a spear tip and its shell for a boat bailer.

Medical Marvel

Today, the horseshoe crab is prized for its blue blood. Medical researchers use it to identify disease-causing bacteria, called endotoxins, in human blood. It has been useful in diagnosing meningitis, a deadly disease that attacks the brain and spinal column.

Horseshoe crabs in Great Bay mate May through July. If you visit then you might see a large horseshoe crab dragging one or two smaller ones up onto shore. The large one is an adult female, probably at least 10 years old, and the smaller ones are adult males, at least 9 years old. On shore, the females will lay eggs in several holes and the males will follow to fertilize them.

You can often find horseshoe crab shells along the shore of Great Bay. The animals didn't necessarily die. The empty shells are from young horseshoe crabs that crawled out of their old shells to grow into their new shells underneath. Adult horseshoe crabs do not shed or molt their shells.