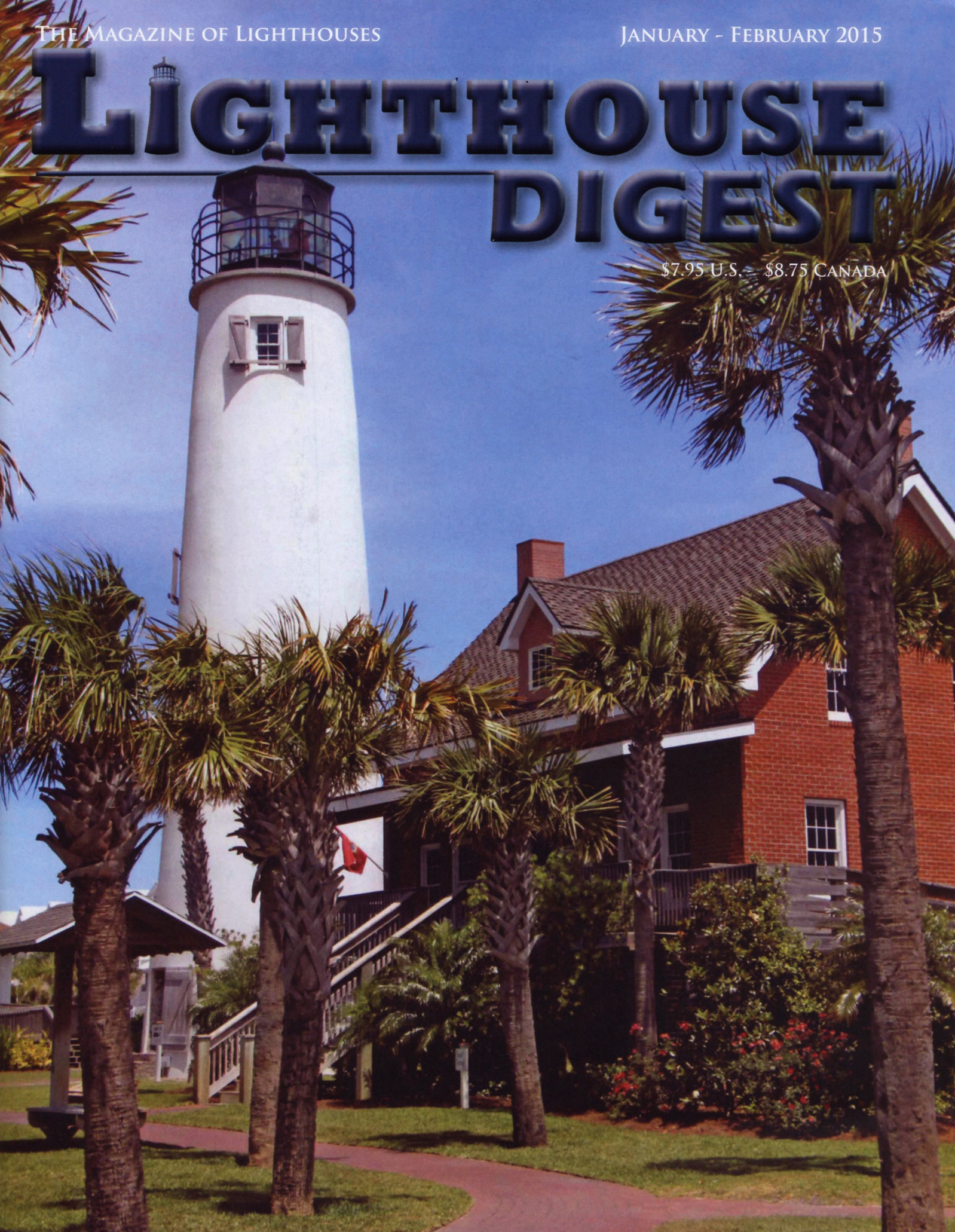


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Megalodon's Lighthouse

By Michael Salvatore and Christopher Weaver (Eco-Photo Explorers)



Florida's Gasparilla Island Lighthouse was once located in Lewes, Delaware, over 1000 miles away.



Gasparilla Island Lighthouse, formerly known as the Boca Grande Rear Range Light, is not much to look at these days. A workmanlike white pyramidal skeletal tower, the light rises 105-feet above the white sand beach on Gasparilla Island in Florida and is showing the rusty signs of age. Corrosion, bleeding orange-red on the white painted tower, is beginning to eat away at the structure, and the entrance doorway is rusted through in several sections. The windows are fogged and the entire tower looks weary and exhausted.

Still, this is a lighthouse with a proud history. And, despite its appearance, Gasparilla Light continues to keep watch over a section of water that carries an unexpected rich treasure.

In the late 1800s, this type of lighthouse structure became popular because the construction costs were roughly half of those built with stone or brick. In addition, because the towers were built with prefabricated sections that were bolted together, these lighthouses could be disassembled and relocated fairly easily.

In 1881, the Phoenix Iron Company of Trenton, New Jersey built a light tower north of Lewes, Delaware known as the Delaware Breakwater Rear Range Light. Its companion light was the Delaware West End Lighthouse until 1902, when it was paired with the Delaware Breakwater East End Lighthouse.

These lights served to help guide vessels into the Delaware Bay and safely past the tip of Cape Henlopen. However, over time the shorelines shifted and the lights eventually became ineffective. The Rear Range Light was discontinued in 1918, and was disassembled and moved to Miami, Florida in 1921 by rail.

Several years later, the tower was sent to Gasparilla Island, reassembled, and given a new name: the Boca Grande Entrance Rear Range Lighthouse. Although the lighthouse was not re-lit until 1932, the doorway to the tower still bears the date of its re-assembly 1927

The purpose of the Boca Grande Entrance Rear Range Light was to help steer mariners into the safe anchorage at Port Boca Grande. It originally housed a 4th order Fresnel lens. As it was in Delaware, the lighthouse was paired with a light sitting atop a 20-foot tower offshore. When the use of this offshore light was discontinued in 2003, the lighthouse was renamed once again to its current moniker, the Gasparilla Island Light.

The lighthouse escaped demolition in 2004 when plans to discontinue the light met with public outcry. It seems as if the modest white tower looking over the waters of the Gulf of Mexico had captured the hearts of local residents and boaters alike. The lighthouse remains operational, with a white light that flashes on for three seconds and off for three seconds with a range of 16 miles, and includes a red light that flashes to the north-northwest indicating a dangerous approach to the harbor.

Above the entrance is the date 1927, the date of the reassembly of the Gasparilla Island Lighthouse after it was moved from Delaware.

The waters of the Gulf of Mexico, like any of the world's seas and oceans, hold many stories and hide many mysteries. Throughout the world, lighthouses are the steadfast sentinels that look over the waters, keeping mariners safe from harm while preserving the secrets of the sea. The Gasparilla Island Light is no different. We came to this general part of Florida to search for one of those mysteries. But we first came to Gasparilla to pay homage to this modest lighthouse, still standing and still keeping watch.

But now it was time to venture below the waves. It was time to dive.

The bottom was a mix of pebbles, loose gravel, mud, and clay, covered in a fine layer of silt and with only an occasional outcropping of coral and seaweed to break the monotony. Visibility was only a few murky feet at best, but when the silt kicked up it dropped to almost zero. The water was warm, almost too warm, at 88 degrees and we found ourselves frequently opening our wetsuits to let in a brief shot of water to cool us down. Despite these marginal conditions, we were excited to be here, anxious to extend our bottom time and transfixed on the purpose of our scuba dives: we were searching for fossilized shark teeth in the waters off Venice, Florida, just north of Gasparilla Island, in the Gulf of Mexico. Specifically, we were looking for Megalodon shark teeth from 20 million years ago.

Our hands skimmed over the bottom, pausing with each rock and outcropping to feel if the telltale shape of a tooth could be discerned. At first, other fossils emerged -- fascinating in their own way but not the immediate subject of our search. Black colored bones from long-lost Dugongs and fossil teeth from mammoths, horses and whales were the largest and easiest to find. We also uncovered large fossilized 3-inch clams, totally intact with both bottom and top shells. Smaller items, such as the fossilized mouth plates and barb tips of a stingray, were next to emerge from the silt.

As we crept and crawled along the bottom, a pack of opportunistic fish followed on our trail, eager to find tiny morsels of food in the clouds of silt that we were creating along the way. They were finding what they wanted; would we find what we wanted?

Suddenly, a tantalizing find - there in the palm of our hand emerging from a scoop of newly dug-up mud, was a tooth. This one, however, was too small to be Megalodon; indeed, it was the fossilized tooth of a Bull Shark.

We kept on digging. And searching. Our eyes tried to peer through the gloom and our fingertips tried to hunt the bottom, all in search of our elusive quarry.

Lifting a moderate sized rock caused a bloom of silt in the water. We dug our hand into the exposed clay. One scoop - nothing. We dug deeper - still nothing. For some reason, we dug a third time, even deeper. And then, as we lifted the mud and clay into the water, and let the fine particulate drift away - there it was! A 3-inch tooth! This was the fossil we had been searching for: a tooth from the long extinct Megalodon Shark. Research has shown that the size of the teeth of these sharks are roughly a tenth of the size of the shark, so this one came from a shark that measured about 30 feet in length. We were thrilled, exhilarated, and eager to continue our search!



Beachcombers can find fossil teeth in shallow water right off the beach.



The beach at Venice Beach.



A diver holds a Megalodon tooth.

Now that we had one, we wanted more.

Although fossil shark teeth can be found in many locations across all of North America, Florida, and in particular the waters south of Tampa, off Venice, and points further south in the Gulf of Mexico are ideal locations to find these fossils. What is now known as the Florida peninsula in North America was once a submerged landmass that only began to slowly emerge from the water about 65 million years ago. However, because of fluctuations in the Earth's climate, Florida was periodically submerged and exposed as the water levels rose and fell with the freezing and thawing of polar ice. By about 2 million years ago, Florida had re-emerged. Presently, Florida consists of a spine of land that runs roughly down the center of the peninsula for about half the state. At its highest, the elevation here is about 300 feet above sea level. The rest of Florida is only a few tens of feet above sea level.

When the spine of Florida rose from the sea, the waters to the south and west (present day Gulf of Mexico) were very shallow. These waters were home to large populations of fish and sharks, including the famed Megalodon Shark.

While many species of sharks lived in these waters, the most notable to inhabit these waters between 2 and 30 million years ago was the Megalodon Shark. This species reached a maximum size of 60-70 feet in length with a mouth approximately 6 feet wide and 6 feet high. Because the shark's skeleton is made of cartilage, the only fossil remains of this shark that divers can find are the teeth, which can measure up to 6 to 7 inches in size. Megalodon teeth resemble those of the Great White

Top right, these waters once saw military test exercises and divers can still find ammunition artifacts on the seabed.

Center right, a fossilized Megalodon tooth from Venice, Florida.

Bottom right: Divers listen intently to a dive briefing.



Shark, but are distinguished by the large dental band that separates the blade of the tooth from the root. Despite recent sensational TV programs claiming to have uncovered evidence of living Megalodons, these sharks are long extinct. Diving for their teeth, and uncovering the fossil remains of these once majestic predators, is the closest we can come to touching these creatures today.

As these marine creatures died, they were quickly covered with sediment. The conditions were perfect for fossilization. So, too, were the land animals, whose remains were quickly washed to the seas by rivers and streams draining from the land to the oceans. Because of the unique geology of Florida, the fossilized remains of these organisms are concentrated in the waters off both coasts of the state. However, since the waters of the Gulf of Mexico tend to stay shallow for great distances, it is easier to search for these fossils on that side of the state. The area south of Tampa towards Venice, because of a unique confluence of rivers and streams, is the epicenter of these fossil beds.

Shark tooth hunting is not just for divers. Beachcombers can find small-fossilized teeth right off the beach in waist deep of water. It is best to use a beach-sifting scoop for this type of activity.

Finding a fossilized tooth of the fearsome Megalodon Shark is exciting. Only a few miles south of Venice, the Gasparilla Island Lighthouse flashes its light every three seconds, a knowing wink as it not only guides mariners to safe harbor but also guards the remains of the most magnificent shark to ever roam the seas: Megalodon.

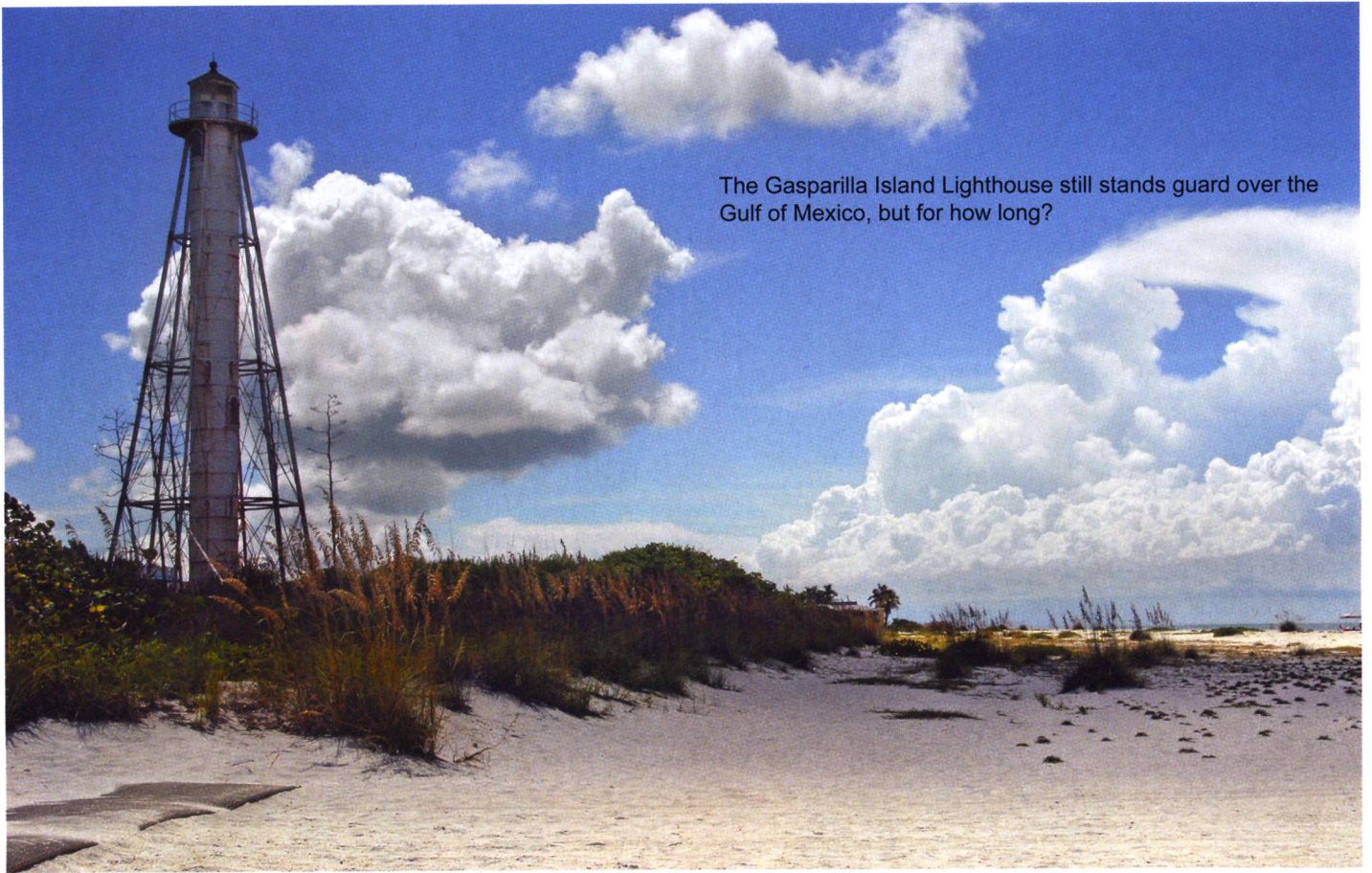
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Top right, author Christopher Weaver holds a Megalodon tooth.

Center right, a Megalodon tooth and an intact fossil of a bivalve shell casting.

Bottom right: Author Michael Salvarezza with some fossils and artifacts recovered from a dive.





The Gasparilla Island Lighthouse still stands guard over the Gulf of Mexico, but for how long?



If the rust and corrosion on the Gasparilla Lighthouse is allowed to continue, the light tower may soon become extinct and go the way of the Megalodon shark.