

Gary Worrell

From: Gary Worrell [gcw@igx.net]
Sent: 07 January, 2013 12:58
To: 'Gary Worrell'
Subject: Postcard
Attachments: Hello.jpg; Map.GIF; HatterasLight01.jpg; BrodieLight01.jpg

Hello (see attached, look carefully).

About 480 million years ago (before I was born), a collision of two tectonic plates caused the Appalachian Mountains to rise up from below sea level. At their peak, it's estimated that they rose as high as the Alps and Rockies are today.

Since then, the mountains have been eroded by wind and rain to their current state. So where did the mountains go?

The shores of the Gulf of Mexico, and the Central/South East Coast of the US harbor the mountain remnants in the form of a fine sand. The inland rivers carried the bits of sand from the mountains out to the larger bodies of water, where coastal currents carried the sand up and down the coastlines.

Much of the Atlantic Coast sand was deposited off the coast of North Carolina, forming what we call today the "Outer Banks," or what is essentially a giant sandbar (see map, the bottom of the green line is Hatteras Island). Sandbars, especially so far off the coast, are what mariners call "hazards to navigation."

So, in 1797, construction began on the first Cape Hatteras Light, at a cost of \$14,302 to the US taxpayers. This light wasn't designed very well, it was only 112' tall and the color blended into the background, making it difficult to see during the day, and was only visible for 18 miles off the coast.

Beginning in 1845, to improve the visibility of the light, an additional 38 feet were added to the height, the lamp was replaced with a new technology Fresnel Lens (by the way, the "s" in Fresnel is silent, those tricky French), and the structure was painted in colors that provided a high contrast to the background sand.

The first lighthouse was a casualty of the American Civil War, so in 1868, another \$80,000 was allocated (but ended up costing over double the amount at \$167,000) to build the second Cape Hatteras Light. At 193' the second lighthouse would be (and I believe still is) the tallest brick lighthouse structure in the world.

The engineer in charge thought it best to position the second light very close to the location of the first light, to keep from having to change the mariner's navigation

charts. Unfortunately, the engineer was shortsighted, he didn't take into account that the ever shifting sands of the Outer Banks would be a constant threat to the stability of the lighthouse.

Over the years there were many attempts to keep the beach erosion from reaching the structure, and the light was in and out of service a couple of times because it wasn't deemed safe for the lighthouse keepers.

In 1999, when the threat of destruction was eminent, work began to physically move the entire structure and it's supporting buildings about 2900' inland. The monumental effort was a success both for the structure, and the local economy, as people from all over the world came to watch the lighthouse move to its new location.

Today the lighthouse is still a major attraction. The light operation is run by the US Coast Guard, but the tourism is handled by the National Park Service. The stairs were closed for the winter, but I got some good shots from the ground. And, the Fresnel Lens from the first lighthouse has been restored as best as possible, and is on display at the "Graveyard of the Atlantic Museum" on Hatteras Island. A very impressive piece of hardware.

Included is a picture of Brodie Island Lighthouse, also located on the Outer Banks.

Cheers,
G.

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