

Whaleback Lighthouse



By Robert G. Bachand



he March 2, 1827 appropriation of \$1,500 was woefully inadequate. How could a lighthouse be constructed on Whale's Back Ledge, Portsmouth, NH, asked Fifth Auditor and Superintendent of Lighthouses Stephen Pleasonton,¹ when others in the area of "the lowest grade," had cost no less than \$5,000? Further he noted, "to the southward of New Jersey, from five to eight thousand may be estimated as the cost."

¹Stephen Pleasonton headed the Light House Establishment from 1820 to 1852.

During the early stages of planning, a lightship had been considered for marking the ledge at the northeast entrance of Portsmouth Harbor, but the idea was then dismissed as being even more costly than erecting a lighthouse. After some deliberation, Congress made an additional \$8,000 available for construction of the lighthouse. Yet, even with the increase, the funds proved to be inadequate. When the bids for its construction were received, the lowest submission was \$20,306!

In March of 1829, Congress increased the appropriation by another \$10,500, and the contract for erecting the lighthouse was awarded to the lowest bidders,

Daniel Haselton and Jonathan Barker. An 1809 law requiring the government to accept the lowest bid, with little regard for the ability or experience of the contractor(s), would haunt the Light House Establishment on a number of occasions. In the case of Whale's Back Lighthouse, the builders' lack of experience and their poor workmanship became apparent almost immediately.

Plans for erecting the tower called for leveling the ledge, and securing the lower tier of stones to the ledge with stone dowels. In laying the base for the thirty-two foot stone tower, the builders exceeded the contract's specifications by using large and long copper bolts in place

of stone dowels. They failed, however, to level the site and they used small stones to fill crevices in the ledge. These stones easily washed out, and, with their loss, the structure was gradually undermined.

From the beginning, the station's first keeper, Samuel E. Hascall, found that the inside of the lighthouse was inundated each time the structure was battered by waves. Most of the leaks were sealed in 1937 with the placement of wood sheathing on the structure's seaward side, but erosion proved to be the lighthouse's greatest and most persistent problem.

Engineers examined the foundation in August of 1835, and their estimate for shoring it up, and erecting a protective breakwall, was \$16,000 to \$20,000. Repeated requests for funding the project were made to Congress, but when \$3,000 was made available some two years later, it was too little and too late in the season to make repairs. Fearing that the tower was in imminent danger of toppling over, Stephen Pleasonton wrote "if the Light House is destroyed, the blame will neither fall on me nor Superintendent, Mr. Drown" (Portsmouth's Collector of Customs and Superintendent of Lights, Daniel P. Drown).

On July 7, 1838, Congress authorized an additional appropriation of \$17,000, but as far as could be determined, the funds were never expended. In October of that same year, Colonel Sylvanus Thayer (founder of the Military Academy at West Point) and Alexander Parris (a Boston civil engineer) inspected the site. They jointly recommended that rather than make the repairs and construct a breakwall, it would be better to tear down the old station and rebuild; the estimated cost was \$60,000 to \$70,000. It would be another 34 years before the lighthouse was rebuilt.

On September 19, 1839, Keeper Hascall, who had served nine years at Whale's Rock, submitted his resignation. At about the same time, the lighthouse had become more unstable and it was being considered for discontinuance. Thus, when Keeper Hascall's replacement John L. Locke was named to the post, he was only appointed as temporary keeper. "It is exceedingly dangerous for a

Keeper and his family to inhabit that Light-house," wrote Portsmouth's Superintendent Drown. "Under these circumstances, unless the new Keeper, Mr. Locke, is perfectly willing to encounter the risk, I would respectfully recommend that the Light be discontinued until a new building can be erected." In spite of the risks, the Secretary of Treasury felt that Whale's Rock had to continue operating. Conceding to the danger, however, he recommended that the keeper be permitted to abandon the lighthouse, "whenever a storm shall render it dangerous for him to remain."

John Locke had accepted the risk when he was transferred as keeper of White Island Lighthouse to Whale's Back. He was to report at his new station on October 1, but seven days later, he had not yet shown up. Keeper Hascall called on Superintendent Drown and

after having vented his frustration, he agreed to remain one more day. On the following day, there was still no sign of Locke, and Drown appointed Zachariah Chickering temporary keeper. Later that day, when Chickering had made his way out to the lighthouse, he found that Locke himself had just arrived. For his efforts, Chickering was paid \$1.64.

Superintendent Drown visited the lighthouse on October 28, 1839, and found that Locke was not there. In his place, the keeper had, on his own, appointed a man to keep the light. Keeper Locke was reprimanded and was ordered back to the station, but a few weeks later, it was learned that he had spent only two nights at the lighthouse. He was discharged and Zachariah Chickering was appointed in his place.



The second Whaleback structure, constructed in 1847, replaced the original tower of 1829. The above tower was replaced by the present tower in 1870-71. National Archives photo circa 1860's.

Locke protested his dismissal to anyone who would listen. With the help of his friends, he inundated Washington with letters in his behalf. Producing a letter from his physician, Locke claimed that his absence had been due to an illness, but, at the time, he had not bothered to notify Superintendent Drown of his problem. Swept up into the controversy, President Van Buren directed the Secretary of Treasury to report the matter; at the conclusion of the investigation, the dismissal stood.

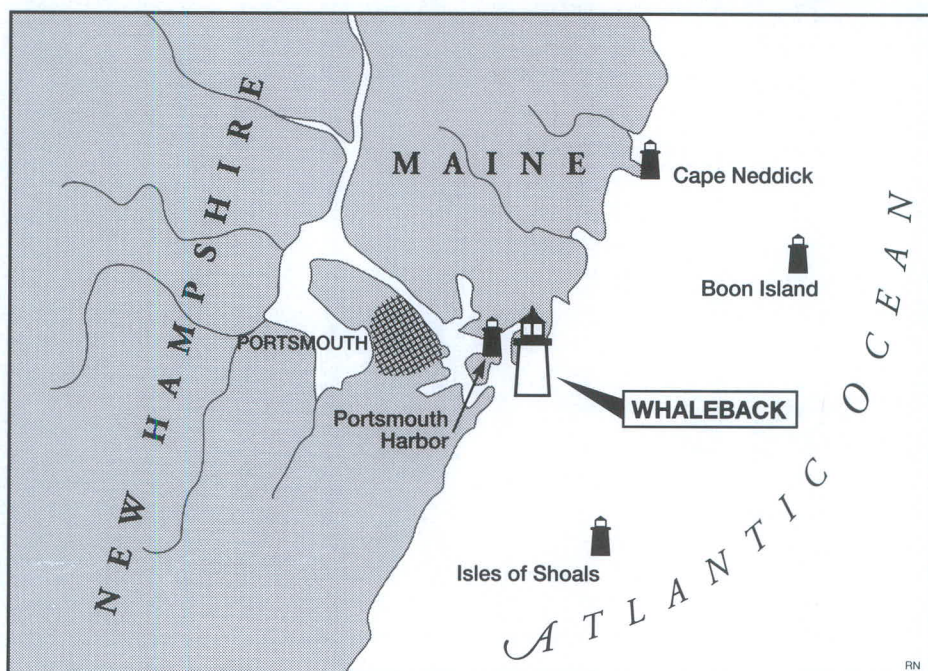
In 1842, I.W.P. Lewis, a civil engineer, was commissioned to examine and report on the condition of lighthouses along the coast of Maine, New Hampshire and Massachusetts. Upon his arrival at Whale's Back Lighthouse, he found workmen securing the foundation with heavy iron bands and straps. Describing the structure's pier as "rudely and fraudulently constructed," Lewis noted that the lighthouse had been in a constant state of repair since its completion in 1831. He related how heavy swells shook the entire lighthouse "in the most alarming manner. The keeper," he wrote, "asserted that the vibration was so great as to move the chairs and tables about the floor."

Over the next few years, a protective breakwall was constructed, and the iron bands were readjusted and replaced, but nothing could be done to insure the structures survival. Following particularly violent March 1868 storms, deep cracks developed in the tower and foundation. In addition, all of the supportive iron bands were broken and rocks were partially forced out from the upper portions of the pier. The Lighthouse Service ordered temporary repairs and an urgent request was made to Congress for a new lighthouse. On July 15, 1870, an appropriation of \$70,000 was approved.

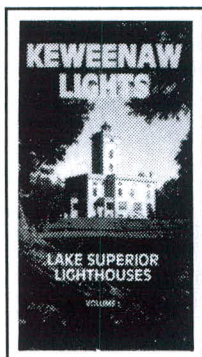
The site for the new lighthouse, adjacent to the old structure, was not an easy place to work. Except for brief periods at low tide, the ledge was covered with water, and, exposed as it was to the full force of the Atlantic, there were days in which waves prevented any work at all. Despite the difficulties, however, the rock surface was properly prepared and by mid-1871, the base, consisting of



The 1871 Whaleback tower with a fog signal building, left; the fog signal horns are located at the top of the smoke stack. Note the keeper in a basket alongside the tower, probably repointing the stone. A dory hangs from davits at left. Hazel Sargent photo.



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Whaleback lighthouse tower in 1975, looking from the south. The old fog signal building has been removed. U.S. Coast Guard photo.

large granite blocks, was erected to a height of twenty feet above the low-water mark. Completed on the following year, the tower's focal plane stood at sixty-eight feet above sea level.

The original tower's illuminating apparatus had consisted of patent lamps and reflectors. In 1845, the station was listed as displaying two lights, one eight feet above the other; they were said to appear as a single light at a distance of six miles. As part of overall improvements in the nation's navigational aids, Whale's Back was refitted in 1855 with a fourth-order Fresnel lens. It displayed a

fixed white light, varied by a flash every on-and-a-half minutes. In 1872, the new tower was also fitted with a fourth-order Fresnel lens. It is likely, though it could not be determined, that the lighting apparatus was merely transferred from the old tower.

After erecting the new tower, the original structure was retained to house the station's fog signal. Standing side-by-side, the lower portion of the V-shaped space between them was filled by the old tower's base. In 1888, a March storm tore away the base, leaving the funnel-shape to catch the full strength of the

ocean waves. Using heavy pine timbers and planking, a 20-foot bulkhead was erected and backfilled with dry masonry from the demolished base. Work was nearly complete when yet another storm struck and carried everything away, including a construction derrick. "It is believed," read the 1889 *Report of the Light House Board*, "that the timely completion of the bulkhead saved the station from serious damage, if not, indeed, from disaster." Repairs were made and the station was then declared in excellent condition.



A lobster boat passing the north side of Whaleback in the 1980s. Photo by Author.

Appropriation:	lighthouse	March 2, 1827	\$1,500
Appropriation:	lighthouse	May 23, 1828	\$8,000
Appropriation:	lighthouse	March 2, 1829	\$10,500
Appropriation:	lighthouse	March 18, 1830	\$1,500
Appropriation:	cost overrun (copper dowels in place of stone dowels)	April 15, 1834	\$778.25
Appropriation:	pier construction	March 3, 1837	\$3,000
Appropriation:	pier construction	July 7, 1838	\$17,000
Appropriation:	rebuild lh & protect	March 3, 1847	\$25,000
Appropriation:	fog bell	March 3, 1859	\$1,000
Appropriation:	rebuild lh	July 15, 1870	\$70,000
Appropriation:	keeper's dwelling	March 3, 1871	\$2,000
Appropriation:	steam fog signal	March 3, 1877	\$5,000
Appropriation:	repairs	April 30, 1878	\$15,000
Ceded to United States from State of Maine:		February 22, 1827	
Established:		1831	
First keeper:		Samuel E. Hascall, appointed July 13, 1830	
Illuminating apparatus (IA): 1830 patent lamps and reflectors provided by Winslow Lewis, \$800			
IA:	(1838) 15 lamps, 15 inch reflectors, fixed white light		
IA:	(1845) 15 lamps, 15 inch reflectors. Two lights, one 8 feet above the other.		
IA:	(1849) 15 lamps, 15 inch reflectors. Two lights, one 10 feet above the other.		
IA:	1855 refitted with 4th order Fresnel lens. White light, fixed varied with flash. Interval 1.30 min.		
IA:	1872 4th order Fresnel lens. Fixed light varied with flash.		
IA:	1898 refitted with 4th order revolving.		
Illuminant:	1911 refitted for oil vapor lamp, IOV		
IA:	(1963) Group flash white light, 10s. 50,000 candlepower (cp)		
IA:	(1964) Group flash white light, 10s. 3,500,000 cp		
Illuminant:	1938 refitted for electrical service, 150 watt p-25 lamp, c-5 filament, frosted. 50,000 cp.		
IA:	(1968) Group flash, white light, 10s. 600,000 cp		
IA:	(1989) Flash (2) white light 10s.		
Fog signal:	1863 bell rung by machine		
Fog signal:	(1873) bell rung by machine 4 times per min.		
Fog signal:	1878 third class Daboll trumpet operated by duplicate caloric engines.		
Fog signal:	1899 Hornsby-Akroyd oil engine & Clayton air compressor.		
Fog signal:	1902 first-class Daboll trumpet, two vertical, 2- horsepower oil engines.		
Fog signal:	1938 refitted with triplex air chime fog horn, oil engine driven air compressor.		
Fog signal:	(1963) horn, diaphragm chime. Two blasts every 30s.		
Fog signal:	(1989) horn two blasts every 30s.		
Height above sea level: (1872) 65 feet			
Automated:		(1964)	

Summary of important facts and events at Whaleback Lighthouse

The station's first fog signal had consisted of a machine-operated bell. In 1878, Whale's Back was equipped with a third class Daboll trumpet, that operated by duplicate caloric engines. On the night of October 10, 1901, the schooner *Onward* stranded in heavy weather, a short distance from the lighthouse. On that same night, the keeper of Jerry's Point life-saving station ($\frac{3}{4}$ mile northwest of Whale's Back), reported that his patrolman heard the trumpet. A little less than 2 miles to the southwest of the lighthouse, however, at Wallis Sands life-saving station, the keeper did not hear it. A month earlier, the captain of a tug had complained that while towing two barges in a heavy snow storm, he had spotted the tower several minutes before he'd heard the signal. With at least another twenty vessel captains expressing dissatisfaction with the trumpet, the signal was upgraded in 1902 to a first class Daboll trumpet.

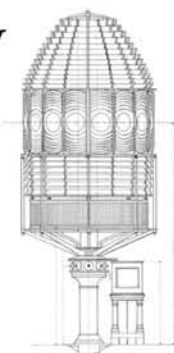
In February of 1904, Captain Adolph Sundberg of the tug *Piedmont*, charged that the station's fog signal had not been blowing during a thick fog. Responding to the charges, Keeper A.S. Amee related that the signal had indeed been operating. "The signal is all right in every way," he wrote, "and we can run it, and do run it when it is thick enough to be used, but we can't make ears hear it!"

The station's last civilian keeper, Arnold B. White, was enlisted into the Coast Guard on June 20, 1941. He remained at Whale's Rock for an additional six months, and was then relieved by Bosn Mate 1st Class Maynard Farnsworth. The station continued to be manned until 1964, when it was automated.

Whaleback Lighthouse can be seen standing one-quarter mile off Fort Foster, in Kittery, Maine. The fort can be reached by following Route 236 off Interstate 95, to Route 103 North. One-half mile past Fort McClay State Park, bear right at the fork, and one mile farther, turn right over the bridge to Gerrish Island. Once across, turn right and follow Pocahontas Road to the end.



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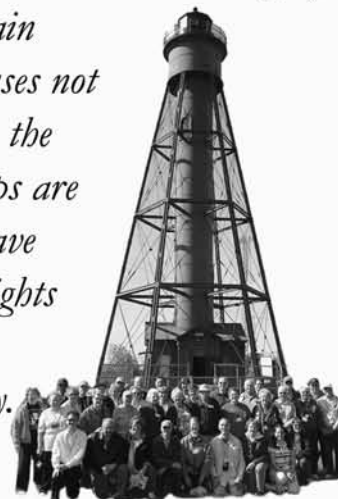
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