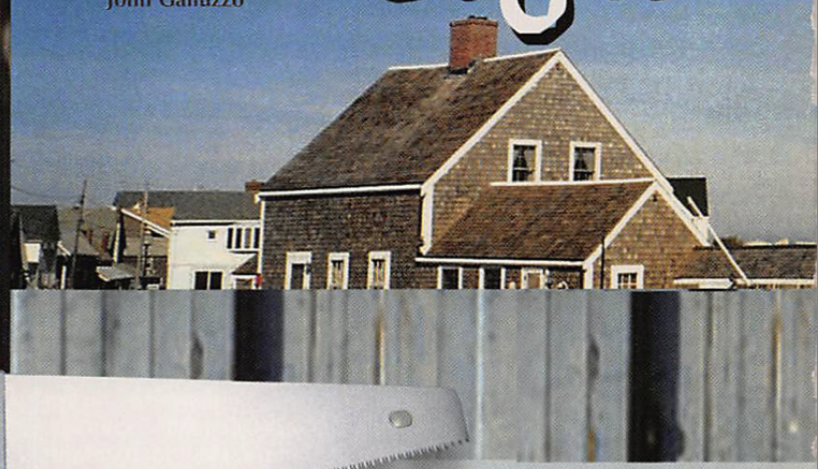
Keeping the Light

Story and Photos by John Galluzzo





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Maybe it would be easier on preservationists if lighthouses had never been built near the ocean, but that would have meant a whole lot more shipwrecks along American coastlines. Instead, partly because of their proximity to the sea and the salt-sprayed air, lighthouses demand a lot of attention and upkeep.

Scituate Lighthouse had its own set of problems this past winter, problems that would have occurred anywhere in New England, from the Berkshires to the coast. Last winter's deep freeze not only sent chills up and down the lighthouse's circular stairwell, but caused a freeze-thaw cycle that allowed moisture to crawl into the outer course of bricks that rim the top 15 feet of the tower below the lantern room, causing noticeable spalling of the brick faces on all eight sides of the octagonal tower. The moisture would seep in during periods of thawing and then freeze when the temperature dropped, causing outer portions of the bricks to pop off. What looked like a tower in need of a new paint job upon closer inspection was a tower with a potential stability problem.

"We first noticed it in January," said Paul Miles, preservationist for the Scituate Historical Society. "Then when we looked again in spring, it had gotten much worse."

The historical society, administrators and preservation agents for the Town-owned lighthouse since 1968, sought funds from Town Meeting in May for emergency repairs. With a guarantee of $51,000 from the town, Miles and historical society president David Ball, a Cedar Point resident and author of To the Point: The Story of Scituate Lighthouse and Cedar Point, brought in consultants to study the tower and the potential dangers. Gary Tondorf-Dick, an architect also working on the Grand Army Hall restoration; Macleod Consulting of Belmont, structural engineers who gave the initial analysis of the potential dangers of the stability of the water tank inside Lawson Tower; and Dana Green of Yankee Wood Products, a veteran of dozens of preservation projects at the society's 10 historic properties all weighed in on the subject.

Scituate Lighthouse Quick Facts

Located: Cedar Point, Scituate Harbor, Scituate, Massachusetts.
Tower Height: 50 feet
Light: Flashing white light every 15 seconds
Established 1811
Deactivated: 1850-1852 and 1880-1994
Open: Grounds open, tower is occasionally opened by Scituate Historical Society.
FMI call 781-545-1083

Historical tidbit:
During the War of 1812 soldiers from a British warship landed near the lighthouse. The two teenage daughters of the keeper were alone at the lighthouse. They began playing a fife and drum. The British thought it was the sounds of the local militia and they hastily retreated. The two girls went down in history as "The Army of Two."





According to Ball, the initial sense of urgency somewhat abated after early structural tests.

"We were very concerned how rapidly degradation of the upper tower section was taking place. The Society had core samples taken to determine the structural integrity of the tower and fortunately only the outer bricks needed to be replaced."

The team decided to take core samples in four spots around the tower, finding that the brick portion of the structure (built in 1827, atop 25 feet of cut granite blocks) was laid out in five courses, or, to be precise, withes. The samples showed that in some spots the tower held two withes of brick on the inside and outside and a central zone filled with rubble, a common construction method for the time that probably reflected a bit of governmental cost-cutting.

Even the bricks themselves - ballast bricks, of marginally good quality, used as ballast in sailing ships - were not the best possible, as the society found out when repairing the keepers' cottage chimney last year. Tests then allowed for a pencil to easily punch its way into the softness of the bricks.

Estimating that 60 percent of the bricks surrounding the eight sides might need replacement, the society put out a bid package seeking expert masons, ultimately hiring ESI Waterproofing and Masonry Restoration, Inc., of Boston to do the job. Initial stripping of the paint on one of the octagonal faces - layers and layers and layers of it ("It's never been stripped, as far as we know," said Miles) - raised concern that the tower might need an entire facelift. Miles and Ball went back to the Board of Selectmen requesting another $74,000, which was approved. All $125,000 for the project to date has come from the MBTA as part of its Greenbush mitigation agreement with the town.

Replacing the bricks 100 percent around, though, might pose a problem. Every nine layers of bricks there is a header course of bricks, meaning that the bricks were inserted lengthwise instead of width-wise. West Quoddy Head Lighthouse in Maine, which went through a similar restoration, has an every-seven-layer header course.

Regardless, Miles feels confident that the problem will be handled as systematically as every other problem the society has faced with its preservation projects around town.

"The brick issue will be handled this fall," he said. "We'll strip one face at a time, which will reduce the weight-bearing surface on the octagonal face being worked on by 25 percent not enough to put the tower in any danger." The only potential danger could come with a howling nor'easter, but Miles says that the stripping and replacement phases of the project should be completed before winter hits.

"Then the staging will come down, and the tower will look ugly for the winter," he said, noting that the society would wait until spring to put on a new coat of epoxy-based paint. Historically the tower has been repainted every three or four years. The society hopes that with this new choice of paint it will not have to be redone for as many as 10-20 years. Photographers will want to grab their cameras and snap away this winter, as photos of the tower during the coming months will always mark a specific moment in time, a short window when the tower's outer layers were removed and its raw components were exposed for all to see.

Tackling a separate problem concurrently, the society will be installing a dehumidifier for operation during the winter months to try to decrease the amount of moisture that builds up in the tower.

For Ball, the historical identity the tower offers the town cannot be qualified. "Scituate residents love the lighthouse," he said. "Some however may not even be aware that Scituate Light is the oldest complete lighthouse facility in the country, and that makes it even more special."

