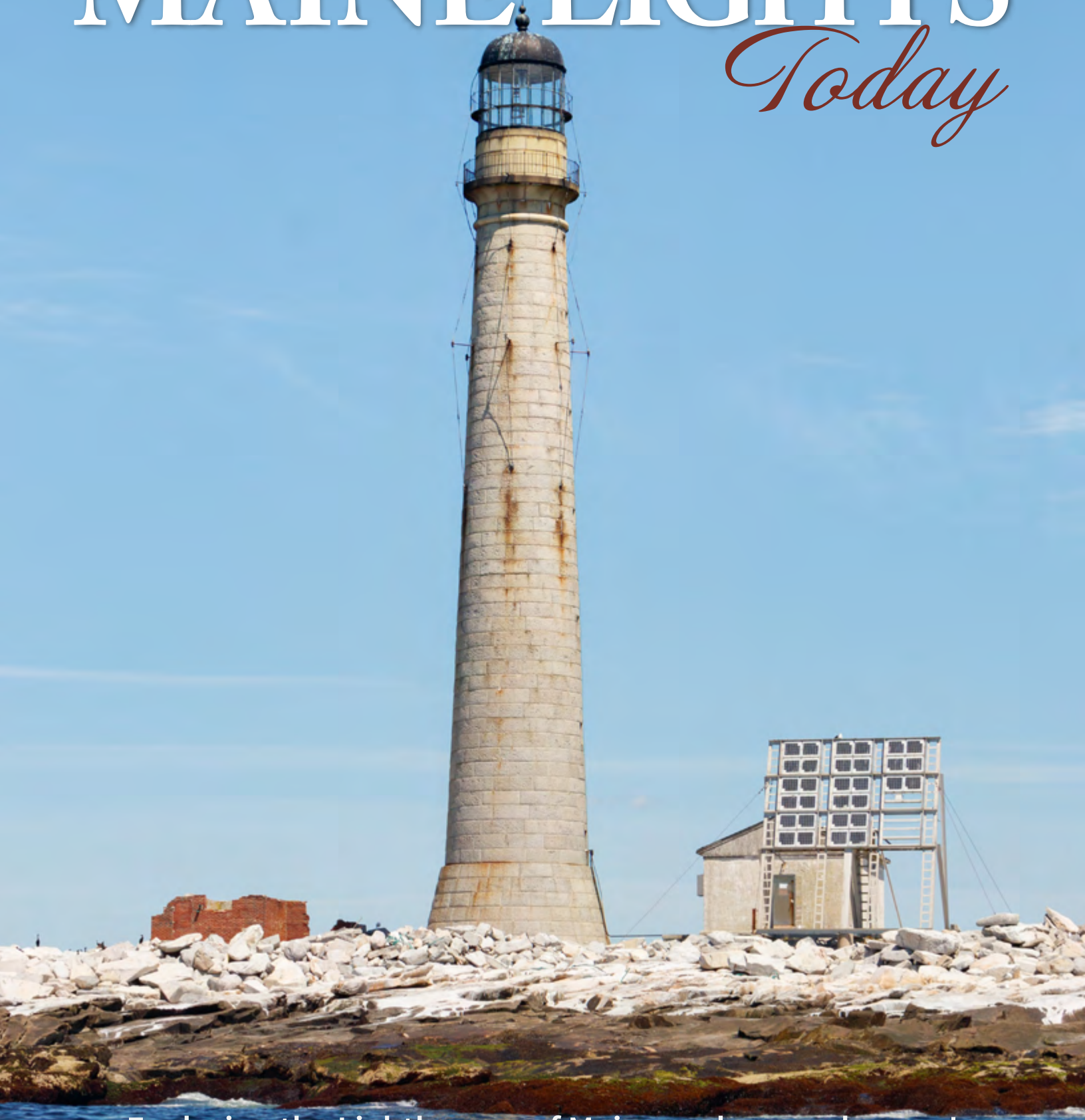
Quoddy's Fresnel Lens | Thanksgiving Boon | New Wave Beacons

November 2019

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From the Editor

Lights Watching Properly

We have reached the point in the year when autumn's colorful personality bids us adieu. In its wake, our focus shifts to the approach of the holiday season and settling in for some lighthouse weather that will no doubt fill the void left by nature's fading majesty.

For bygone lighthouse families, this was always a time of preparation for the long winter ahead – and to look forward to the exciting and joyful holidays. Thanksgiving and Christmas loomed on the calendar's horizon, laden with celebratory promises of festive occasions and a welcomed break from routine.

However, for those keeper and families watching over offshore light stations, there was nothing easy about making traditional preparations for the holidays. In fact, at times, it was not possible. Such was the case at Boon Island Lighthouse in 1910 as Thanksgiving approached.

What struck me most about the Thanksgiving account is how the lighthouse keeper's accepted their situation and were prepared to carry out their duties regardless of whether this special day passed without a traditional celebration or not.

I hope you enjoy this account as much as I did – and the time-honored virtues contained within it. No matter our circumstances, there is always much to be thankful for as we count the blessings around us. The most important of these blessings are our loved ones and friends.

Another story in the November issue – a focus on the splendid third order Fresnel lens in West Quoddy Head Lighthouse, seems very appropriate to ponder with the approach of the holidays. An illuminated Fresnel lens is incomparable from a brilliance perspective, but it also conveys an undeniable sense of warmth for the eyes and heart. Given the emotional warmth that embraces the holidays, it's a fitting to time to admire the heart of a lighthouse like West Quoddy Head.

Thank YOU for your interest in *Maine Lights Today*! We are grateful for you and seek to share with you and others the many joys associated with the history of Maine's lighthouses – yesterday, today and tomorrow.

Happy Thanksgiving!

Bob Trapani, Jr.



Photo by Bob Trapani, Jr.



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Squirrel Point Lighthouse located in Arrowsic along the Kennebec River. Photo by Dominic Trapani

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A November Storm at **Halfway Rock**



USCG Photo

The following account appeared in the December 8, 1888 edition of *The Portland Daily Press*…

"Mr. E. M. Alexander, keeper at Halfway Rock Light, reports that in the late storm the sea ran so high that it tore off the gutter leads and water conductor, the rail running from the light tower to the bell tower – a building 40 feet high, and tore the iron braces from the latter. The sea broke over the rock for eighteen hours, and carried chunks of rock weighing 13 tons from the eastern to the western side."

Nearly eight months later, the following letter to the editor was submitted and printed in the July 27, 1889 edition of *The Portland Daily Press*…

"To the Editor of the Press:

"Among the many precautions taken by the general government of the United States for the protection of the interests of Maine, none is more worthy of mention than the provision for safety of mariners amid the numerous islands and reefs of Casco Bay, among which are the light and fog bell of the Halfway Rock.

"This bold rocky island is situated nine miles from Cape Elizabeth Light and twelve miles from Seguin Light on the edge of the regular ship channel for coasters to and from the Provinces and to the principal ports on the shore of New England.

"It is a place of great importance because a large number of sailing vessels pass it day and night and it is their guard from the very dangerous reefs, shoals and sunken rocks, which are common in that portion of Casco Bay.

"The island is a large mass of rock covering about an acre over which the waves often beat in perfect fury when driven by a strong easterly gale.

"In the storm on November 25, 1888, the strong currents sweeping far up on the tower and rolling over the island lifted a mass of rock weighing probably 10 tons and carried it about 100 feet, leaving it at least 10 feet higher than the place from which it was torn. In the same gale bars of iron, three inches by one and a half, were bent like willow twigs.

"The 'Light,' which is one of the 'third order,' is in a tower 76 feet high and casts its light 15 miles. It revolves with a steady white center and a red flash every 30 seconds.

"A small boathouse with an upper room furnished for the keepers of the 'Light' is attached to the tower on the northwestern site, built of massive oak beams covered with hard pine three inches thick and bolted to the solid rock with great iron bolts.



Photo by Bob Trapani, Jr.

"The tower is round, built of granite about two and one-half feet thick, a specimen of splendid workmanship.

The fog bell, 60 feet west of the tower, weighs about 1,000 pounds, and hangs in a massive wooden frame about 30 feet high. During the dense fogs which sometimes for weeks hides the islands, this bell tolls once every 10 seconds and is moved by a wonderful clockwork attachment, which is wound up every three and a half hours by the brave keepers, who for that purpose often have to climb over the slippery rocks amid the blinding spray and rushing waters.

"In the gale referred to, November 25, 1888, Mr. W. T. Holbrook, one of the bravest and most conscientious men, after several narrow escapes in passing from the tower to the fog bell was obliged to remain in the tower, and for 28 hours could not reach the bell. Had the fog gathered as it sometimes does, who can tell what might have been the loss of life and merchandise since no mortal could reach the fog bell?

"We wonder that with the great care taken by the government for the shipping interests in this part of the country, and her most excellent provisions for the well-being of those employed in her service an iron railing does not connect the tower and fog bell, or an electric attachment by which the bell could always be worked and the risk of life be avoided.

"Mr. Holbrook, whose family resides at Peaks Island, has been the keeper at the 'Halfway Rock' for seven years, and has two trusty assistants, Mr. (Isaac) Morrison from Cumberland and Mr. (J. Harmon) Stover from South Harpswell. Two of them are on the island all the time, one at the close of every two weeks going home for a week, and third taking his place.

"In the night time one is always on the watch, and both men are when it is very stormy.

"The highest praise is due these hardy men for the bravery and fidelity with which they discharge their important duties. Many instances of the interest of the United States government in the commercial interests of this part of her great domain may be seen in Casco Bay."

– N. T. Whitaker



National Archives Photo



USCG Photo

Crabtree Ledge Lighthouse

The following mention about the demise of Crabtree Ledge Lighthouse (also known locally as Hancock Point Lighthouse) appeared in the *Bar Harbor Times* on February 16, 1950…

Hancock Point Lighthouse

"Hancock Point Lighthouse finally gave up the ghost after standing guard at Hancock Point for sixty years. What remained of the structure collapsed last week. The lighthouse located on a ledge in the northern end of Frenchman's Bay, was erected and put into service in 1890, under the presidency of Benjamin Harrison. It was ordered out of commission in 1933 when steamship travel slackened in the waters off the coast. Newbold Noyes of the *Washington Star* bought the lighthouse when the government offered it to the highest bidder. It has been sold twice since then."



U.S. Lighthouse Society Photo

Outsizing Lighthouses



The 600-foot "BW Lynx" (Singapore) tied up at a pier behind Portland Breakwater Lighthouse on September 28, 2019.
Photo By Dominic Trapani



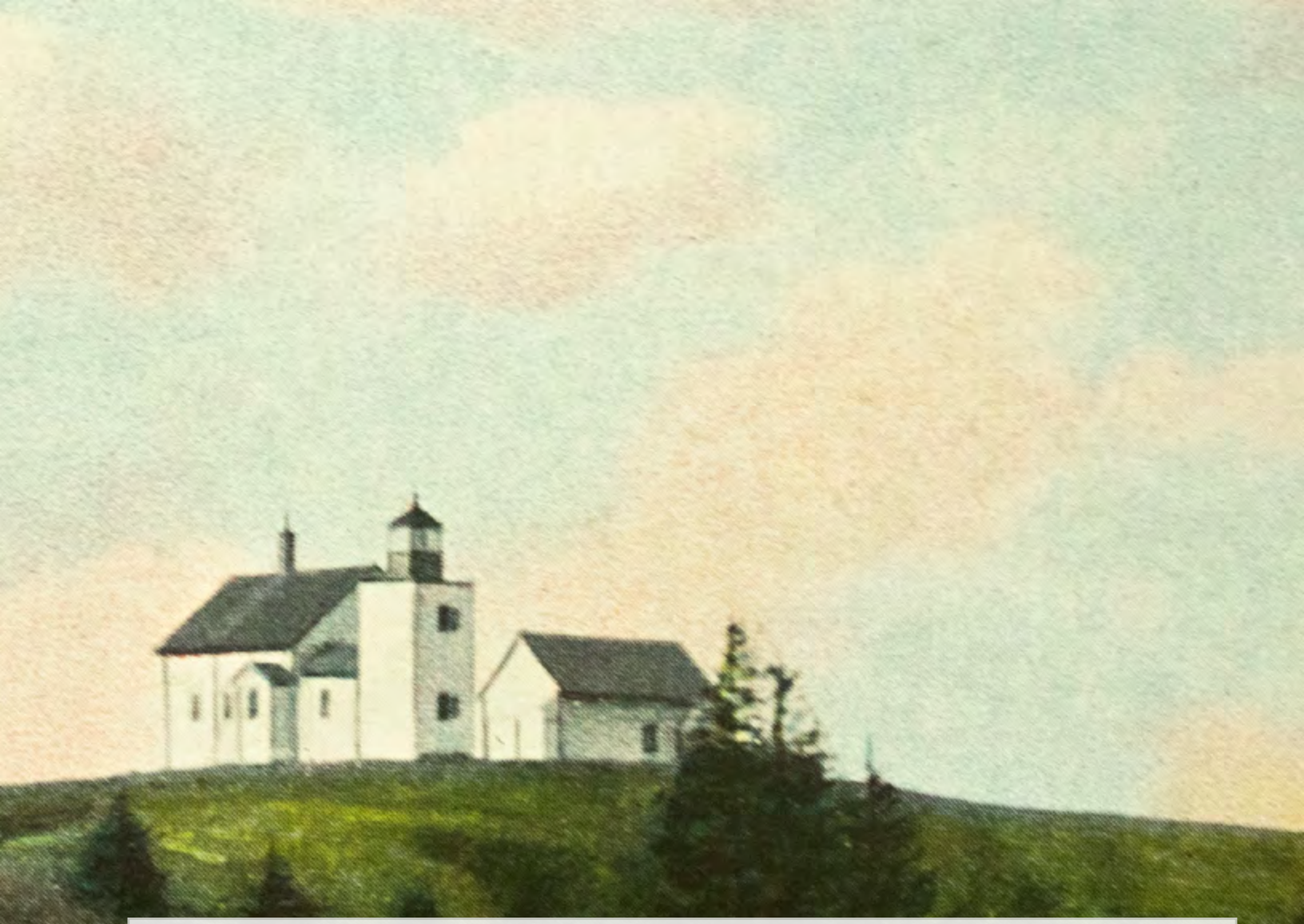
The 952-foot "Sapphire Princess" (Princess Cruise Lines) at anchor outside Rockland Breakwater on September 29, 2019.
Photo By Bob Trapani, Jr.



Keepers of Fort Point Light

Contended with Hotel Guests for a Quarter Century

By Dominic Trapani



Fort Point Lighthouse was first constructed in 1836 as a guide for vessels heading up the Penobscot River to Bangor, a large lumber port at the time. The first lighthouse, and also the second one to follow, were poorly constructed and had to be replaced. This led to the establishment of the third and present lighthouse - a 31-foot brick square tower, in 1857. This station was traditionally considered a highly desirable post for lighthouse keepers, due to its accessible and stunning location.

It was such a good location that in the year 1872, an entrepreneur decided it was a prime spot to build a luxury hotel. According to a brochure for the Fort Point State Park, "the Fort Point Hotel (as it was later known) was built in hopes that the Fort Point area would grow to rival Bar Harbor."

The Fort Point Hotel was originally built as the Wassaumkeag Hotel, and later called the Fort Point House as well as The Woodcliff. The hotel was a first-class resort, presiding upon the promontory behind the lighthouse. With commanding panoramic views of both water and mountains, the venue was home to 125 large guest rooms, large halls, and modern conveniences such as gas and steam heat.

In 1895, three years before the hotel was destroyed by fire, the *Portland Board of Trade Journal* promoted the Fort Point Hotel with a lot of enthusiasm. The journal stated, "By common consent of thousands of summer tourists, Fort Point Hotel, at Stockton Springs, Me., is one of the most pleasantly situated and attractive resorts along the entire coast; its commanding view of Penobscot Bay –

Bob Trapani, Jr. Postcard

one of the finest in the world, of ocean, island, forest, hill, valley, and mountain, with all of the interesting features of each – is grand and imposing, and not surpassed by any scenery known; it is at the same time in the immediate vicinity of charming inland scenery and delightful drives."

"Here mosquitoes, flies and malaria are unknown, and there is almost entire exemption from the oppressive heat experienced in most places during the hot days of summer, for sweeping across the Cape at all times comes a cool and refreshing breeze, bringing vigor and strength to both body and mind."

The journal concluded by noting, "On the Cape there is a valuable mineral spring, and, together with three artesian wells, the house is supplied with an abundance of pure, sparkling drinking water. The facilities for obtaining fresh, pure milk, berries, butter, eggs, and vegetables from the adjacent country, and clams, lobsters, salmon, cod, mackerel, and other varieties of fish from the water, are such as to give the greatest convenience for abundant supply."

The Fort Point Hotel also marketed having the best water on the coast for fishing and sailing, and promoted the fact that there was a large family of seals on Odom's Ledge to the north, which evidently provided amusement to the guests.

However since the hotel was built only 50-feet north of Fort Point Light Station, the close proximity enticed guests to traipse all over the grounds, and at times, disturb the privacy of the lighthouse keeper. During the hotel's twenty-six year run, two keepers and their families were no doubt forced to deal with many intrusions and inconveniences. Keeper Hiram Grant served at Fort Point Light from 1866 to 1882 and Keeper Adelbert Webster from 1882 to 1902.

In their book, *Maine Lighthouses: Documentation of Their Past* by J. Candace Clifford and Mary Louise Clifford, the co-authors stated, "An 1875 inspection report noted that the resort boasted 100 rooms and that excursionists 'travel and walk over the grounds' of the light station, leading the inspector to suggest that it be enclosed by a fence."

Despite the urgings of the lighthouse inspector, the government waited another eight years before acting upon the suggestion. According to the 1883 *Annual Report of*



National Archives Photo



Maine Maritime Museum Photo

the Light-House Board, "A portion of the grounds was enclosed with some nine hundred feet of wire and one thousand feet of picket fencing."

The hotel continued to host affluent guests looking to vacation along the coast until 1898. On the night of June 7, 1898, Fort Point Keeper Adelbert Webster reported that at 10 pm the alarm was given for a fire at the hotel. It was unoccupied except for the landlord and a servant who were preparing the hotel for its summer opening that was to occur on June 18. The fire quickly enveloped the building, and the lighthouse keeper reported the building fell to the ground by 10 minutes of 11 pm. The Lowell Sun reported that the estimated loss was nearly $70,000.

The destructive fire brought to a close a very interesting chapter in the history of Fort Point Lighthouse, and though it was sad to see such a grand building be lost, a sense of tranquility must have been restored to the area around the light station grounds.

United States Light-House Establishment

Instructions to Light-Keepers and Masters of Light-House Vessels

1902 | Chapter 1, Paragraph 4

Keeper's must be courteous and polite to all visitors and show them everything of interest about the station at such times as will not interfere with light-house duties. Keepers must not allow visitors to handle the apparatus or deface light-house property.

No visitor should be admitted to the tower unless attended by a keeper, nor in the watch room or lantern between sunset and sunrise.



A Thanksgiving to Remember at **Boon Island Light**

By Bob Trapani, Jr.

As autumn's vibrant personality gives way to burnt oranges and browns, our thoughts naturally gravitate to the approaching holiday season. Beginning with Thanksgiving, we happily immerse ourselves in a time of heartfelt warmth with family and friends, all the while reflecting on the more important things of life – blessings that money cannot buy.

Whether rich or poor, near or far, and every circumstance in between, we all have things to be thankful for. The same held true for the lighthouse families of the past. Sure, some stations were more isolated, and the separation of family members and friends was an all-too-familiar burden to carry for those who kept the lights, but still, they always attempted to make the best of the situation at-hand.

There may be no finer example of this type of resolve than the Thanksgiving holiday that took place at Boon Island Light in 1910. It is safe to say that Boon Island was no ordinary light station, and it certainly would not have been at the top of anyone's list as a place to celebrate a holiday.

Boon Island on its best day is devoid of all compassion. The wave-swept, barren island exudes a profound sense of desolation – and often times, portends danger that belies understanding. In fact, Boon Island can scarcely be called an island, measuring only 700 feet long, 300 feet wide, and approximately 14 feet above sea level at its highest point.



Photo by Jeremy D'Entremont

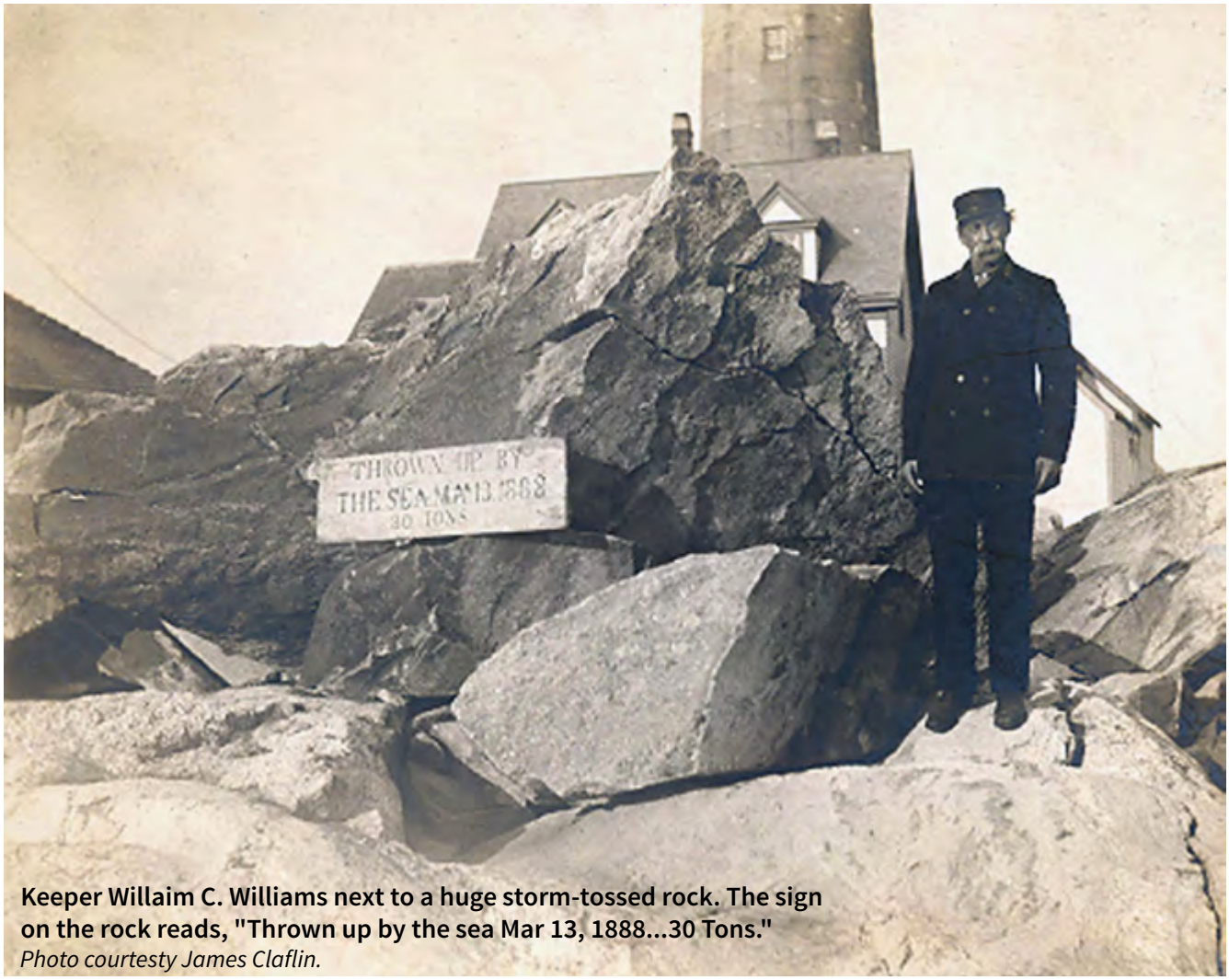
Located seven miles off the southern coast of Maine, the 133-foot Boon Island Lighthouse presides over grim surroundings. When you consider that fall and winter gales can spawn 20 to 30 foot seas in the open ocean around Boon Island, it comes as no surprise that the daily logs of keepers from 1811 to 1978 contained frightful accounts of storms that swept clear across this forsaken outpost.

Storm seas did unfathomable things at this place, and in their wake, destruction and upheaval were the two constants during the light station's days of being staffed. In many ways, the wrath of the tempest is never erased from Boon Island – a fact that would be concealed from eyesight if not for the all-revealing ebb tide.

As the sea recedes twice-daily, its departure discloses the stark image of the island's surrounding ledge being swept clean of all boulders and rocks. Only the scars from scour, friction and collision caused by storm-tossed rocks etch this otherwise amazingly smooth surface.

A quick scan towards the center of the island will explain the rest of the story as massive rocks – some weighing several tons, are routinely strewn about and piled-up haphazardly by the fury of the sea.

Renowned author Samuel Adams Drake captured the bleak essence of Boon Island in his classic 1891 volume, *The Pine Tree Coast,* when he noted, "There is no comfortable



Keeper Willaim C. Williams next to a huge storm-tossed rock. The sign on the rock reads, "Thrown up by the sea Mar 13, 1888...30 Tons."
Photo courtesty James Claflin.

dwelling on that lonely rock, over which storms sweep unchecked. The tower is itself both house and home to the watchmen of the sea, and in great gales a prison from which there is no escape until the return of fine weather."

Holiday warmth would not naturally embrace a forlorn and lonely place like this, but thankfully, the spirit of the season burned bright in the hearts of those who tended to the light during Thanksgiving on November 24, 1910.

For head keeper William C. Williams and his assistants, the unexpected blessings they would encounter on that Thanksgiving holiday more than a century ago was an experience that no doubt remained with them for the rest of their lives.

As the days fall away with the approach of a holiday, most people busy themselves with tasks associated with preparing for a festive occasion. However, for offshore lighthouses, keepers and their families could rarely align their desires of timely preparation with an uncertain reality dictated by wind and sea.

In fact, as late fall yielded to winter each year, leaving Boon Island on a whim by skiff was seldom possible. This meant that keepers had to wisely stock up on provisions, but even with good planning and frugal usage, it was not uncommon for the light station to run low on food and/or supplies.

Such was the case as the Thanksgiving holiday approached in 1910 for keeper William Williams and his assistants (first assistant keeper Mitchell Blackwood and second assistant keeper Charles W. Allen). According to Robert T. Sterling, who authored the book, *Lighthouses of the Maine Coast,* "The holiday was approaching, and as nobody had been ashore for several weeks, they had got down very close to nothing in the hearty line. He (keeper Williams) was standing just inside of the light tower on the evening before Thanksgiving, and wondering what he and the boys

were going to have the next day for the repast."

Sterling went on to note, "Suddenly without any warning he heard a terrific blow struck against the parapet deck. Anxious to find out just what had happened he went outside and there lying on the deck were four pair of black duck dead as a door nail. Thinking that it took more than that to make such a thump, he went around the base of the tower and among the rocks he found four more."

As was the case many times over at lighthouses, birds and waterfowl were often attracted to the bright beams shining forth from a lantern, and would fly directly into the light at top speed. On occasion, these collisions were so violent a bird would break completely through the windowpanes of a lantern. More often, birds would crash into the lantern and fall about the parapet gallery and to the ground below similar to the incident that occurred at Boon Island.



USCG Photo

Robert Sterling, who was a keeper himself at a number of Maine lights, concluded by saying, "The birds were in unusual fine condition and he and the boys had some Thanksgiving dinner, for which they were only too glad to give thanks to the Creator for remembering them at such a time."

On December 31, 1910, the *Portsmouth Herald* printed a story about this event following the lighthouse tender Myrtle arriving in Portland and delivering the news. The story, entitled, "How They Dined at Boon Island," stated that the ducks "made about as fine a Thanksgiving dinner as has ever been served at Boon Island."

What makes this story so inspirational is the insight to the character exhibited by the keepers in the face of looming holiday disappointment. Keeper Williams noted, with no fanfare, the Thanksgiving holiday or not, him and his men were on duty, with the head keeper himself standing watch the night before Thanksgiving.

Though I'm certain the keepers desired a grand Thanksgiving meal, it goes without saying that had the ducks not appeared, the crew would have carried out their duties in dedicated fashion and celebrated the holiday with the best the human spirit has to offer under less than ideal conditions.

Therein lies the true meaning of Thanksgiving Day – counting our many blessings from the hand of the Creator and giving thanks for our loving families, friends and all those wonderful things in our lives that money cannot buy.

Happy Thanksgiving!



Photo by Bob Trapani, Jr.

A Gazetteer of the United States – Maine

by John Hayward, 1843

Note to Light-Houses:

There are four fog bells on the coast of Maine – at West Quoddy Head, Whitehead, Seguin, and at Cape Elizabeth.

On a coast of more than 200 miles of such extensive navigation as Maine possesses, the number of light-houses is too small, and of those which are erected, many of them appear to be injudiciously arranged. Of the 31 lights on this coast, three only are distinctive or revolving. From Manhegan (sic) island seven fixed lights are visible at one view; from which circumstance, losses of life and property often occur.



White Head Light Station
National Archives Photo

Penobscot Bay

By Dominic Trapani

O' Penobscot I can see at just a glance,
There is much to your great expanse,
For you are the largest of the bays,
To explore all of you would take days,

Standing guard at your western gate is the Owls Head Light,
Perched high above the sea it is a beautiful sight,
Behold the magnificence of the light as it shines,
There is nary a sight like it in my opine,

See the Camden Hills and their great mystique,
Megunticook with her high peak,
And Battie sloping gently into the harbor,
Crafted beautifully by a master sculptor,

At your head O' Penobscot lies the river,
The great Narrows Bridge stands up hither,
Fort Knox used to guard you with the sound of thunder,
While ships sailed up to Bangor to gather lumber,

The big islands separate your east and west,
Vinalhaven, to the charm of your village I can attest,
Boat building on the shores of North Haven,
And Isleboro with her summer population,

Look eastward and gaze upon Isle au Haut the tallest of islands,
Champlain, Rocky, and Sawyer make up the highlands,
While the harbor lies nestled on her northern shore,
Built upon rugged beauty you haven't seen before,

Welcoming ships through your eastern passage is Saddleback Light,
Warning ships of this dangerous ledge night after night,
Through stillness and through squall,
It has withstood it all,

O' Penobscot, filled with islands so numerous,
And waters that are so prosperous,
It is here my heart will always yearn to stay,
Along the beautiful shores of Penobscot Bay.



Owls Head Lighthouse
Photo by Dominic Trapani



Saddleback Ledge Lighthouse
Photo by Dominic Trapani



The Fresnel Lens:
West Quoddy Head Light's Crystalline Treasure

By Bob Trapani, Jr.



Photo by Bob Trapani, Jr.

The stately appearance of a lighthouse is something to behold. Such majesty is magnified even further when a sentinel is still wearing its "crown" of crystalline in the form of a Fresnel lens. The late Ken Black, founder of the Maine Lighthouse Museum in Rockland, was fond of saying when referring to Fresnel lenses, "We call the lenses the jewels, the gems." Indeed!

In his article entitled, "The Jewel in the Sand – Manufacturing Lighthouse Lenses," which appeared in the spring 2000 issue of the United States Lighthouse Society's *Keeper's Log,* author Thomas A. Tag stated, "There are few things made by man that are more impressive or beautiful than a Fresnel lens. This crystal cage of glass sparkles in the sun splitting the light into tiny rainbows of glorious iridescent color like a precious diamond, and at night it sends forth its magnificent spokes of light to warn the mariner."

Tag went on to note, "Yet, all of this beauty comes from a mundane source, ordinary beach sand, with a few other ingredients, a process that was itself a bit of magic wrought by the hand of ancient craftsmen."

The Fresnel lens was invented by Augustin Jean Fresnel, a French engineer and physicist, in 1822. The enduring legacy of Fresnel's revolutionary achievement in the science of light cannot be adequately measured. The untold numbers of lives saved and ships/cargo protected worldwide due to the lifesaving beams shining forth from his lens is incalculable. Augustin Fresnel's design captured more useful light and sent it further out to sea than anything contrived prior – and frankly, the scientific principals upon which he developed the lens nearly two centuries ago still have not been supplanted today.

The United States was slow to utilize this unmatched advancement in illumination at the outset, but that all changed when Congress placed responsibility for our nation's aids to navigation system under the control of the newly created U.S. Light-House Board in 1852.

Beginning in 1852, the Board made a concerted effort to outfit every lighthouse in the United States with a Fresnel lens. The process took some years to realize due to factors such as supply and demand as well as the expensive cost



The 1857 West Quoddy Head Lighthouse, Lubec.
Photo by Bob Trapani, Jr.



Photo by Bob Trapani, Jr.

of the lenses and their associated apparatus, but by 1859, the goal was largely achieved. In the process, our nation's network of lighthouses and other aids to navigation was well on its way to becoming the finest in the world.

George Weiss explained what made a Fresnel lens so unique and effective in his 1926 book, *The Lighthouse Service: Its History, Activities and Organization*. According to Weiss, "The Fresnel apparatus consists of a polyzonal lens enclosing the lamp, which is placed at the central focus. The lens is built up of glass prisms in panels, the central portions of which are dioptric, or refracting only, and the upper and lower portions both reflecting and refracting, or catadioptric."

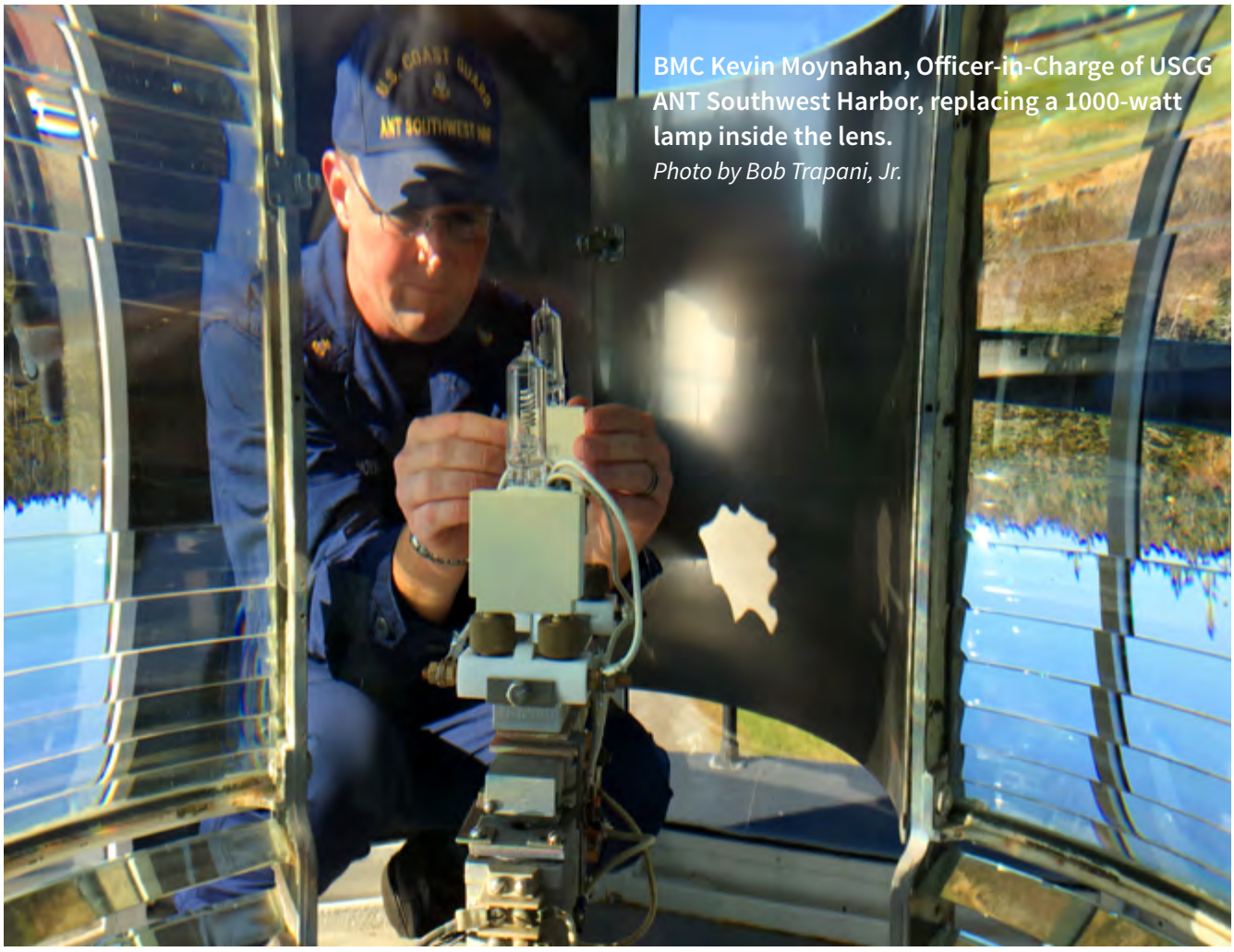
Weiss concluded, stating, "The advantages of this system lie in the greater brilliancy, owing to the fact that a large proportion of the light given out by the source is concentrated by the prisms into beams useful to the mariner, and the consequent economy in the consumption of oil or other illuminant used."

However, as time marched on and electric was introduced at lighthouses, many of the Fresnel lenses were eventually removed in favor of rotating aero beacons with durable motors such as the DCB-36 and DCB-24. This transition gained momentum in the years following World War II. Today, only eight Fresnel lenses grace the lanterns of Maine's lighthouses.

One of these eight lenses can be found at West Quoddy Head Lighthouse in Lubec. The splendid red and white striped lighthouse, which stands sentinel at the eastern-most spot on United States mainland, is outfitted with a third order Fresnel lens.

The lens stands over five feet tall and is truly breathtaking in its beauty. Not a person sees it that isn't awed at its sparkling presence. West Quoddy Head's lens was installed in 1858 and has remained in service ever since.

This third order lens has embraced light sources of sperm whale oil, lard oil, kerosene and electricity – and



BMC Kevin Moynahan, Officer-in-Charge of USCG ANT Southwest Harbor, replacing a 1000-watt lamp inside the lens.
Photo by Bob Trapani, Jr.



EM1 Max Ringstad cleaning inside the lantern.
Photo by Bob Trapani, Jr.



EM1 Derek Stewart adjusting the lampchanger.
Photo by Bob Trapani, Jr.



EM1 Mike Giacalone cleaning the Fresnel lens.
Photo by Bob Trapani, Jr.



EM1 Michael Denning working on the lampchanger.
Photo by Bob Trapani, Jr.

has transitioned from onsite keepers caring for the light to automated operation in 1988. Through it all, the one constant has been the uninterrupted service of this priceless work of art which harkens back to another time, all the while still pointing the way to our 21st century tomorrows yet to come.

The modern day keepers of the lights – lighthouse technicians from the United States Coast Guard Aids to Navigation Team Southwest Harbor, consider it an honor to be able to maintain a bright optic inside this prismatic treasure. Technicians make regular visits to West Quoddy Head Lighthouse, ensuring the lamps and all their associated equipment are maintained in tip-top shape and operating correctly.

And in keeping with the tradition of bygone lighthouse keepers, Coast Guard technicians will also periodically take the time to wipe clean the Fresnel lens from top to bottom, inside and out – removing dust and fingerprints from the prisms to achieve the best "shine" possible.

Ken Black once said, "When you see these things all brightly polished - bearing in mind that years ago, that was one of the lighthouse keeper's principal jobs, to keep it looking like a gem - they're absolutely gorgeous."

Today, volunteers from the West Quoddy Head Light Keepers Association and State of Maine park rangers team-up on the care of the historic site, while cherishing the opportunity to help protect the lens and show it off with great pride during public tours of the tower.

The Fresnel lens itself is priceless – but so too is the experience of seeing in-person the lens concentrate and magnify light as it sends a guiding beam seaward both day and night. The utility of the lens remains paramount in helping to safely guide mariners to and fro on the water, but the allure of the crystalline beehive beckoning visitors to come nearer and admire its boundless beauty, is just as important.

May this unique experience continue to illuminate the hearts and minds of those near and far on the horizons of tomorrow! As Bruce Watson noted in the August 1999 *Smithsonian Magazine*, "The lens is visible proof that unlike the sea, light can be mastered by human ingenuity."



Personnel from U.S. Coast Guard Aids to Navigation Team Southwest Harbor maintains the light and foghorn at West Quoddy Head.
Photo by Kimberly Ashby



Photo by Bob Trapani, Jr.

West Quoddy Head Light Fresnel Lens QUICK FACTS

Lens height: 62.05 inches

Height of lower reflector: 10.94 inches

Height of central refractor: 25.98 inches

Height of upper reflector: 23.35 inches

Inside Diameter: 39.6 inches

Weight of assembly: 1,986 lbs.

Focal length: 19.69”

Useful range: Up to 18 nautical miles

Light characteristic today: Two white flashes every 15 seconds

Light source today: 1000-watt lamp (electric), CG-2P (Coast Guard two-place) lampchanger

Coast Guard unit responsible for maintaining light: USCG Aids to Team Southwest Harbor

Number of third order Fresnel lenses in U.S. lighthouses in 1884: 49

Number of third order Fresnel lenses in U.S. lighthouses in 1926: 64

Number of third order Fresnel lenses in U.S. lighthouses in 1945: 68

Original cost of a third order Fresnel lens: Between $1,475 to $3,650 (per Arnold Burges Johnson, Chief Clerk, U.S. Light-House Board, 1890)

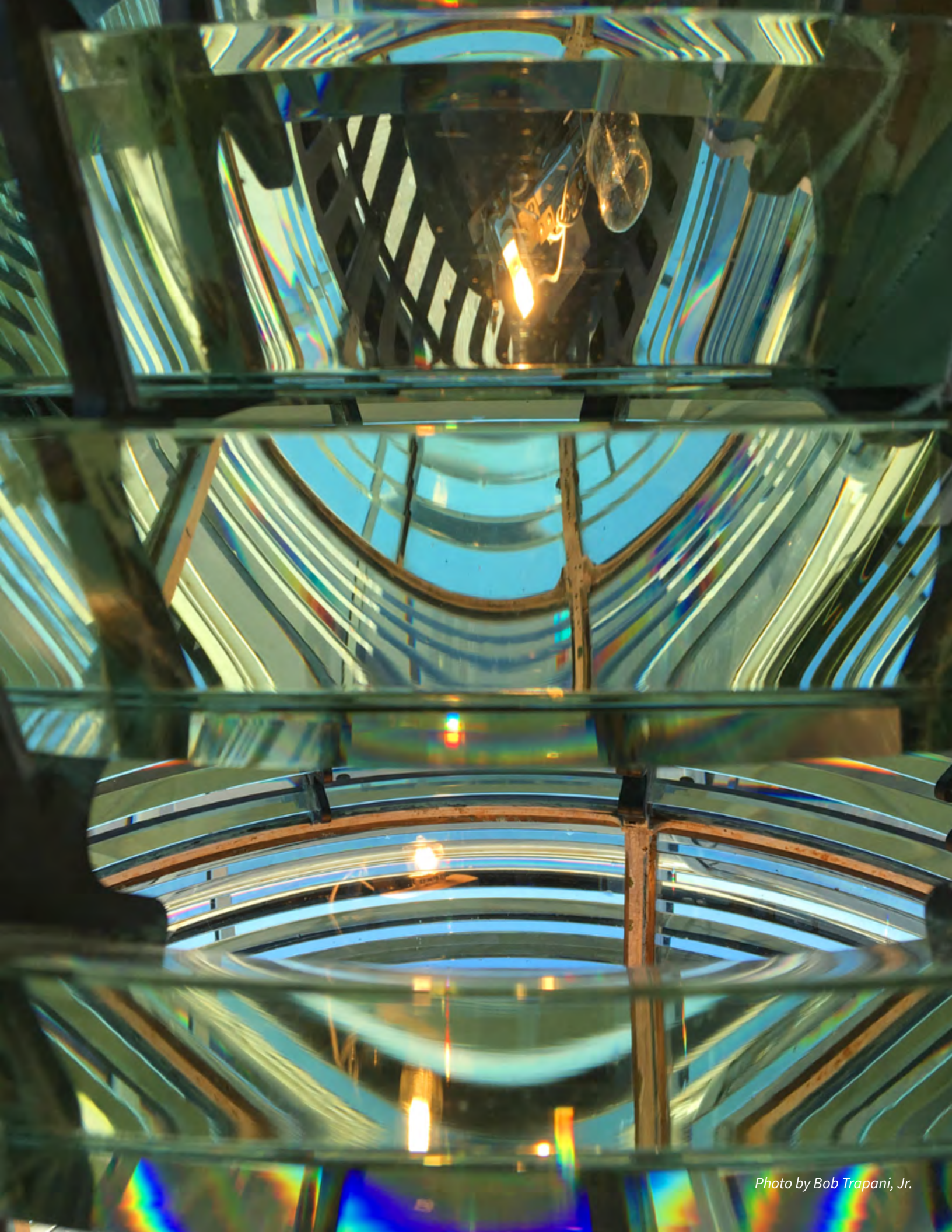
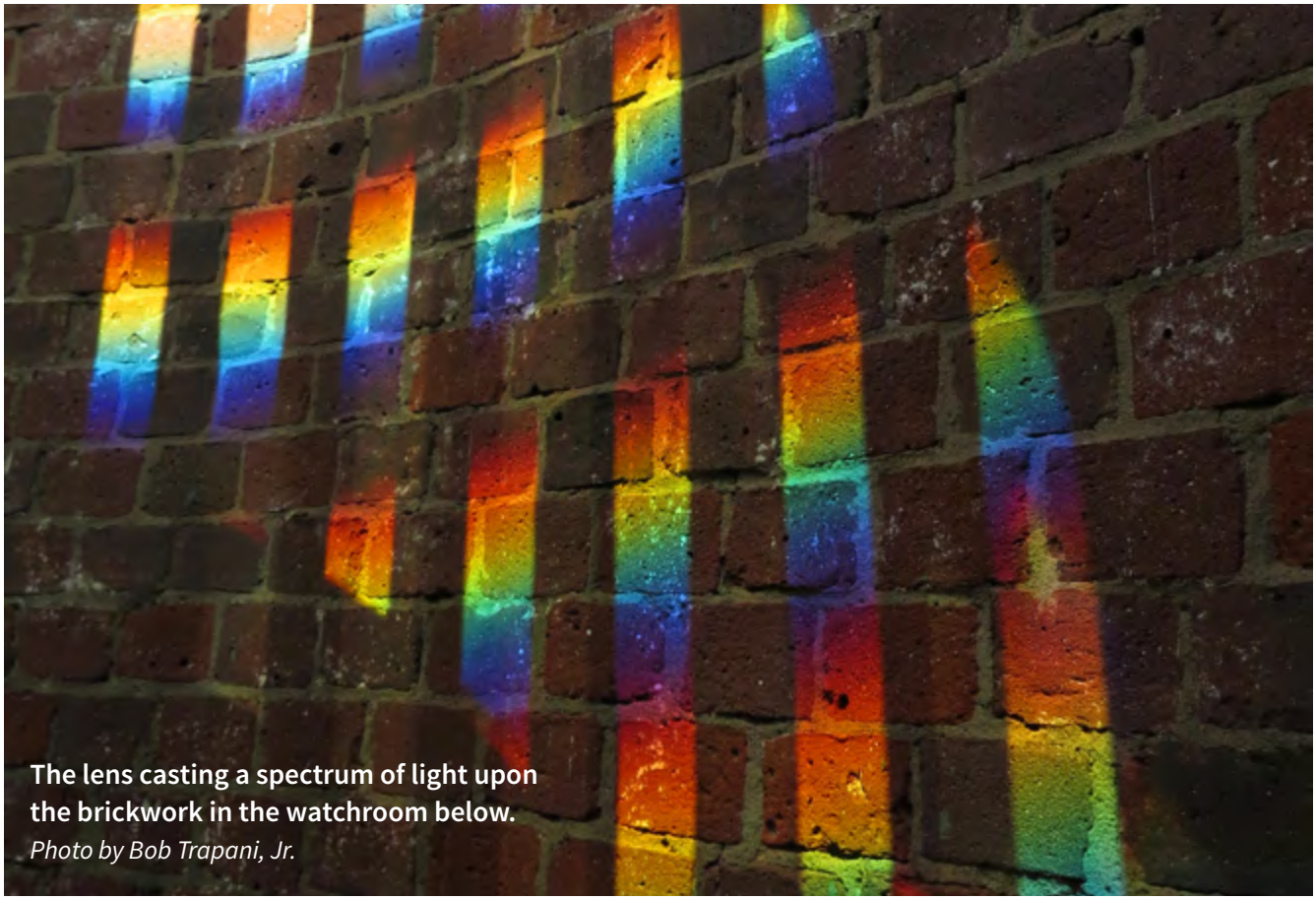


Photo by Bob Trapani, Jr.



The lens casting a spectrum of light upon the brickwork in the watchroom below.
Photo by Bob Trapani, Jr.



The original name plate of the company that manufactured the Fresnel lens.
Photo by Bob Trapani, Jr.



Photo by Bob Trapani, Jr.



Photo by Bob Trapani, Jr.

Lantern Pane Accident at **Matinicus Rock**

The following mention about the keepers of Matinicus Rock Lighthouse appeared in the *Guardians of Our Coast* column, Rockland Courier-Gazette, April 17, 1937...

"W. E. Thompson and family returned to this station, before their vacation period was concluded, owing to an emergency call.

"A recent Sunday being a wonderfully mild day for the work, it was decided to replace a cracked pane of glass in the tower. It so happened that when the First Assistant was lifting it to pass down to the men, the large pane broke, giving him a severe cut on the right side of his face.

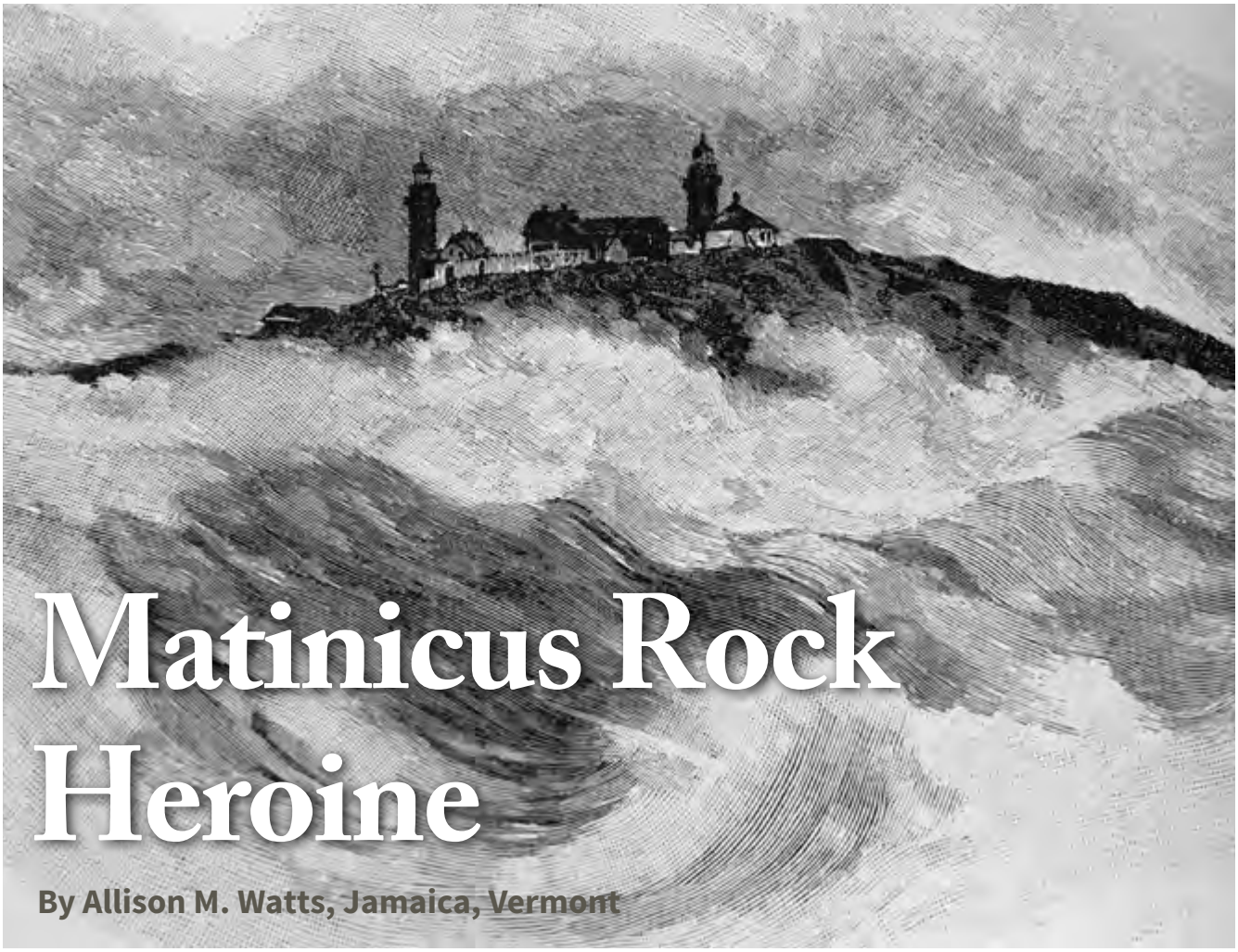
"By extreme presence of mind, Mr. Ball refrained from dropping the glass, which action would have resulted in severe injuries to Mr. Fletcher and also to Mr. Beale, who was helping the men. There was a great deal of nervous excitement from then on for a while.

"One radio transmitting and receiving set proved its worth. In less than two hours, one of the Kicakpoo's boats arrived with Dr. North. He certainly was needed badly, for Mr. Ball had lost a great quantity of blood. He had to have four stitches taken, and of course, had to go ashore to receive daily medical treatment.

"Mr. and Mrs. Ball went to Millbridge the next day, and for nearly three weeks, Mr. Ball was treated by Dr. Larson, the government physician at Machias. We were all happy to welcome them back and to learn that the cut was healing nicely"



Photo Courtesy Bob Trapani, Jr.



Matinicus Rock Heroine

By Allison M. Watts, Jamaica, Vermont

Engraving by M. Haider

The following poem was published in the *Rockland Courier-Gazette* during November 1942...

More than four score years ago
In a long continued blow,
Abbie Burgess, seventeen –
Braver maiden ne'er seen –
Kept the light upon the Rock
When her father left his flock,
Invalid wife and children there
On that windswept islet bare
To secure supplies ashore,
Could return to them no more
Till a month had passed away,
But on every winter day
Abbie did her father's job
Heart with loyalty a throb
Every dark and stormy night
Kept the lantern shining bright,
Nursed her mother ill in bed,
Kept the children warm and fed
Though their store of food ran low
And the January blow
Swept the sea all o'er the Rock
With repeated heavy shock
Threatening with its howling breath
All inside the house with death –
Heroine of the ocean brave,
Conqueress of the wind and wave,
When today we see that light
Sending out its radiance bright
Let us think of her stout heart
How she nobly played her part.



Harpers Young People 1882



LEDs are the New Wave of **Beacons for Lighthouses**

By Bob Trapani, Jr.

Photo by Bob Trapani, Jr.

Climb to the top of a Maine lighthouse and one is bound to be astounded by the breathtaking beauty of the surrounding seascape. However, as time marches on and a wave of change rolls in with the tide, spectacular views are not the only fascination to behold atop a lighthouse.

In recent years, the United States Coast Guard has slowly been transitioning from outdated legacy optics to the intriguing technology of light emitting diode (LED) beacons. These futuristic-looking lights are nothing short of amazing when it comes to operational efficiency and longevity.

The most common LED found in lighthouses today is a VLB-44 beacon, which has been manufactured by Vega Industries in New Zealand (Vega Industries was sold to Carmanah Technologies / Sabik Marine in 2017). Whether the optic consists of one, two, four or eight tiers, the beacon never fails to pack a brilliant burst of light for guiding mariners to and fro. The installation of LEDs is also substantially reducing the solar footprint at light stations, and in doing so, enhancing the historic integrity of a site and the natural environment that embraces it.

If you have never seen one of these new LED beacons in a lighthouse, then your curiosity is sure to be piqued. Children will find the appearance of these 21st century beacons absolutely fascinating. The look of the LED could not be starker in contrast to the legacy beacons that we have grown accustomed to.

Gone are all moving parts that were once a requirement with incandescent beacons. In fact, there are no filament lamps, electronic components such as lampchangers, wiring kits, or flashers to replace. The VLB-44 beacon is completely self-contained, requires nearly no maintenance, and has an amazing life span of ten years.

For over two centuries the winds of change have blown unrelentingly across the seascape of our lighthouse heritage. Back in 1926, a volume entitled, *The Lighthouse Service: Its History, Activities and Organization* by George Weiss noted, "A constant effort is made to improve the mechanics of existing aids and to find new and more efficient aids to navigation."



(L to R) EM1 Michael Denning and EM1 Alberto Valdez installing a VLB-44 8-tier LED at Mount Desert Rock Light in August 2018.
Photo by Bob Trapani, Jr.

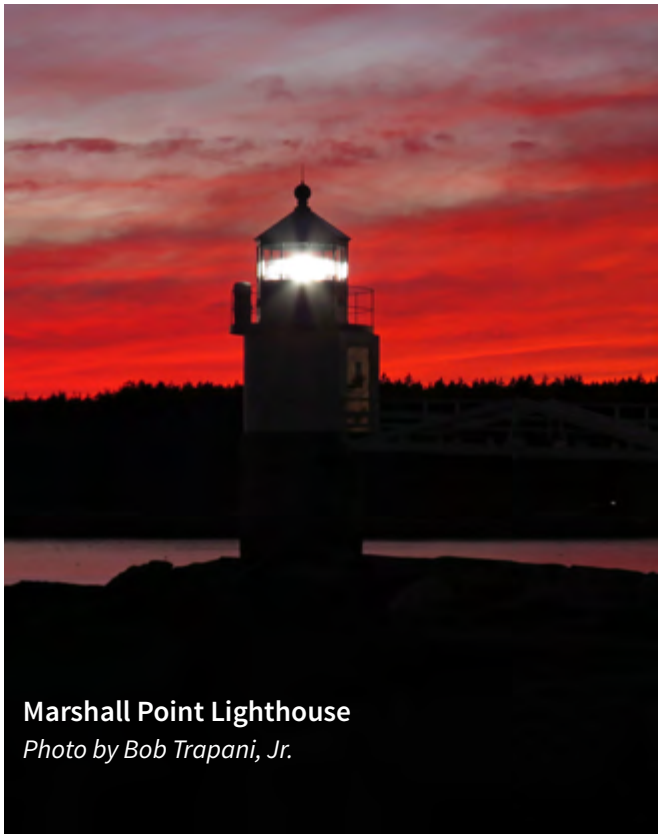


SN Erin Kinne cleans the VLB-44 8-tier LED at Marshall Point Light.
Photo by Bob Trapani, Jr.

In the wake of each evolutionary step, change has yielded new advances in light and sound technology that has enabled aging lighthouses to be carried forward into the future through the achievement of greater efficiency and economies.

In almost prophetic fashion, the November 1930 edition of the *Lighthouse Service Bulletin* stated, "Not only has the character of aids undergone change, but types of aids entirely unknown previously have been developed and placed in service." It is safe to say that the scientific development of the LED beacon is thus in keeping with time-honored tradition.

Whether light emitting diode technology is the final frontier in the ongoing history of lighthouses remains to be seen, but one thing is for sure - it is "time to shine" in more ways than one for LEDs – and the present never looked cooler!



Marshall Point Lighthouse
Photo by Bob Trapani, Jr.

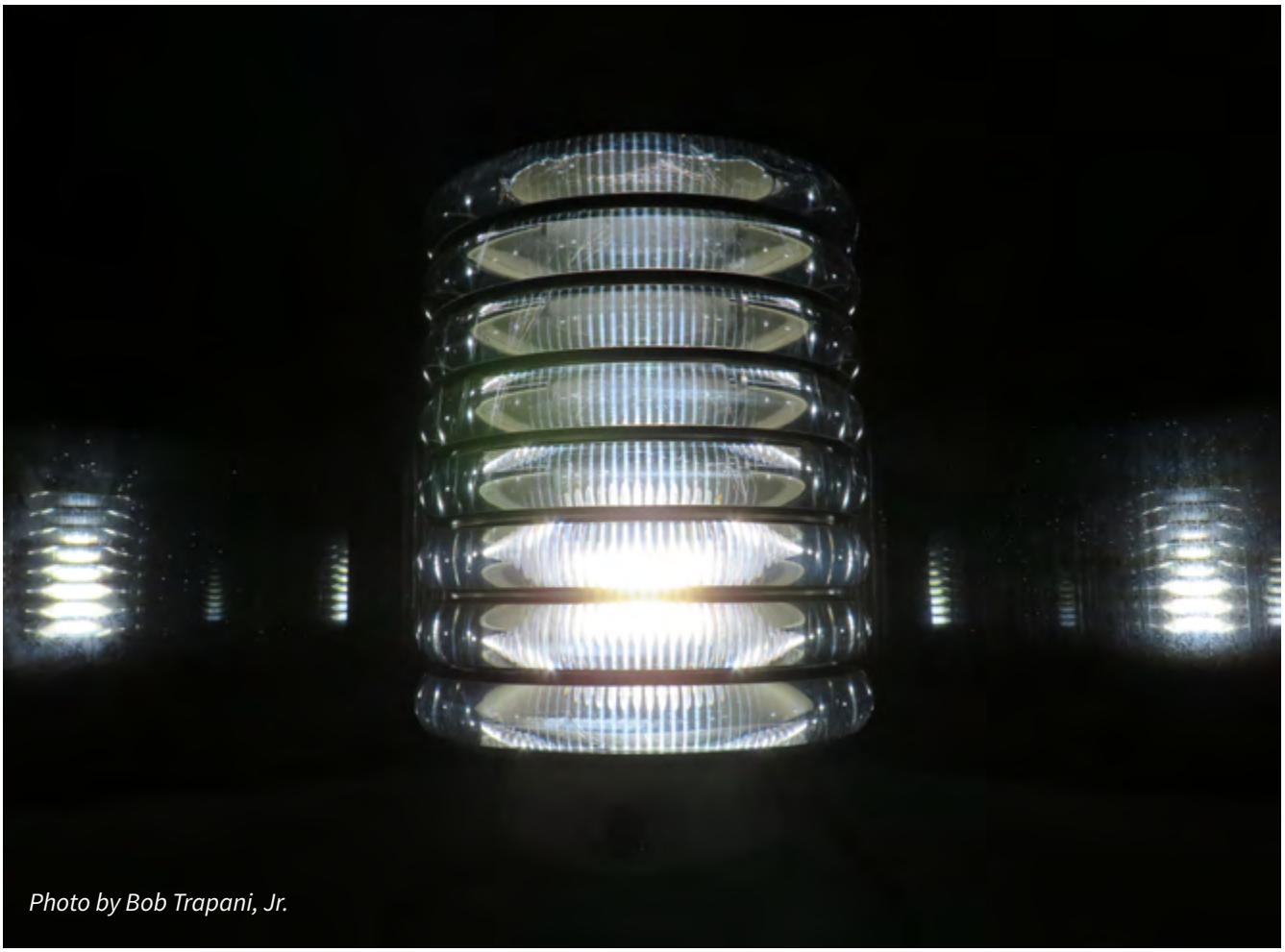


Photo by Bob Trapani, Jr.

Letter from Boon Island Keeper



Boon Island Lighthouse
Maine Maritime Museum Photo

While serving at Boon Island Lighthouse in 1932, keeper Clinton L. "Buster" Dalzell received word from the United States Lighthouse Service that he had been transferred to Seguin Island Light.

Shortly before departing Boon Island, keeper Dalzell penned the following letter to the *Rockland Courier-Gazette* on March 12, 1932.

"Quite a storm on here (Boon Island) Saturday, the spray is going all over the island. The rocks break the seas and then the wind picks it up and its watch your step, this way for a shower. This makes seven days of wind and sea, when a good warm fire and the radio are quite comfortable, thank you. Sorry to say that I have to leave just on the eve of starting the new electric light at this station. Must dig down for a match and light the lamp a while longer, but that's the way it goes. Here today, gone tomorrow."

In retrospect, the letter's concluding words – "Here today, gone tomorrow," not only captured the brevity of keeper Dalzell's tenure at Boon Island, but sadly, as fate would have it, eventually his life too.

Nearly three years later, while serving as an assistant keeper at Egg Rock Lighthouse in Maine, Keeper Dalzell would lose his life due to a drowning accident.

"One February day in 1935, the 28-year-old Dalzell left Egg Rock for the mainland to pick up some batteries for the motor of a boat he had just built," says New England lighthouse author and historian Jeremy D'Entremont. "Some time later, when the principal keeper, J. B. Pinkham, telephoned the home that was Dalzell's destination, he learned that Dalzell had never arrived. The police and the Coast Guard were alerted and a search ensued. Pinkham headed out in his own boat, and he found Dalzell's overturned boat more than a mile from the lighthouse."

"D'Entremont concludes, saying, "The search continued for a few days, but it wasn't until several weeks later that a fishing trawler recovered Dalzell's body. His third child was born three weeks after his death."

The accident that claimed keeper Dalzell's life was a sad reminder of the dangers associated with the job of a keeper, especially at offshore light stations. Dalzell served at Heron Neck, Matinicus Rock, Boon Island, Seguin Island and Egg Rock light stations during his time in the U.S. Lighthouse Service.



Egg Rock Lighthouse
USCG Photo



Keeper Clinton L. "Buster" Dalzell
US Lighthouse Society Photo

Did You Know?

The number of remaining Maine lighthouses: 66

The number of lost Maine lighthouses: 3
(Avery Rock, Crabtree Ledge and St. Croix River)

The number of Maine lighthouses (Federally built) with a working light: 57
(55 lights maintained by the U.S. Coast Guard and 2 lights - Bear Island and Portland Breakwater, which are maintained as private aids to navigation)

The number of decommissioned Maine lighthouses: 9
(Blue Hill Bay, Cape Elizabeth west tower, Indian Island, Matinicus Rock north tower, Narraguagus, Nash Island, Pumpkin Island, Tenants Harbor and Winter Harbor)



Fort Popham Light, Kennebec River
Courtesy Bob Trapani, Jr.

HTHOUSES

The number of Maine lighthouses with an historic Fresnel lens as its light: 8 (Bass Harbor Head, Browns Head, Cape Neddick, Fort Point, Owls Head, Pemaquid Point, Seguin Island and West Quoddy Head)

The number of Maine lighthouses with an active fog horn: 37

The number of lost Maine fog signal stations: 1 (Fort Popham)

The tallest lighthouse in Maine: Boon Island, 133-feet

The highest light displayed in Maine: Seguin Island, 186-feet above sea level

The shortest lighthouse in Maine: Portland Breakwater (Bug Light), 19.5 feet

The oldest lighthouse in Maine: Portland Head, 1791

The last lighthouse built in Maine: Whitlocks Mill, 1910

The last lighthouse to be automated in Maine: Goat Island, 1990

Compiled by Bob Trapani, Jr.



Pumpkin Island Light
Photo by Bob Trapani, Jr.



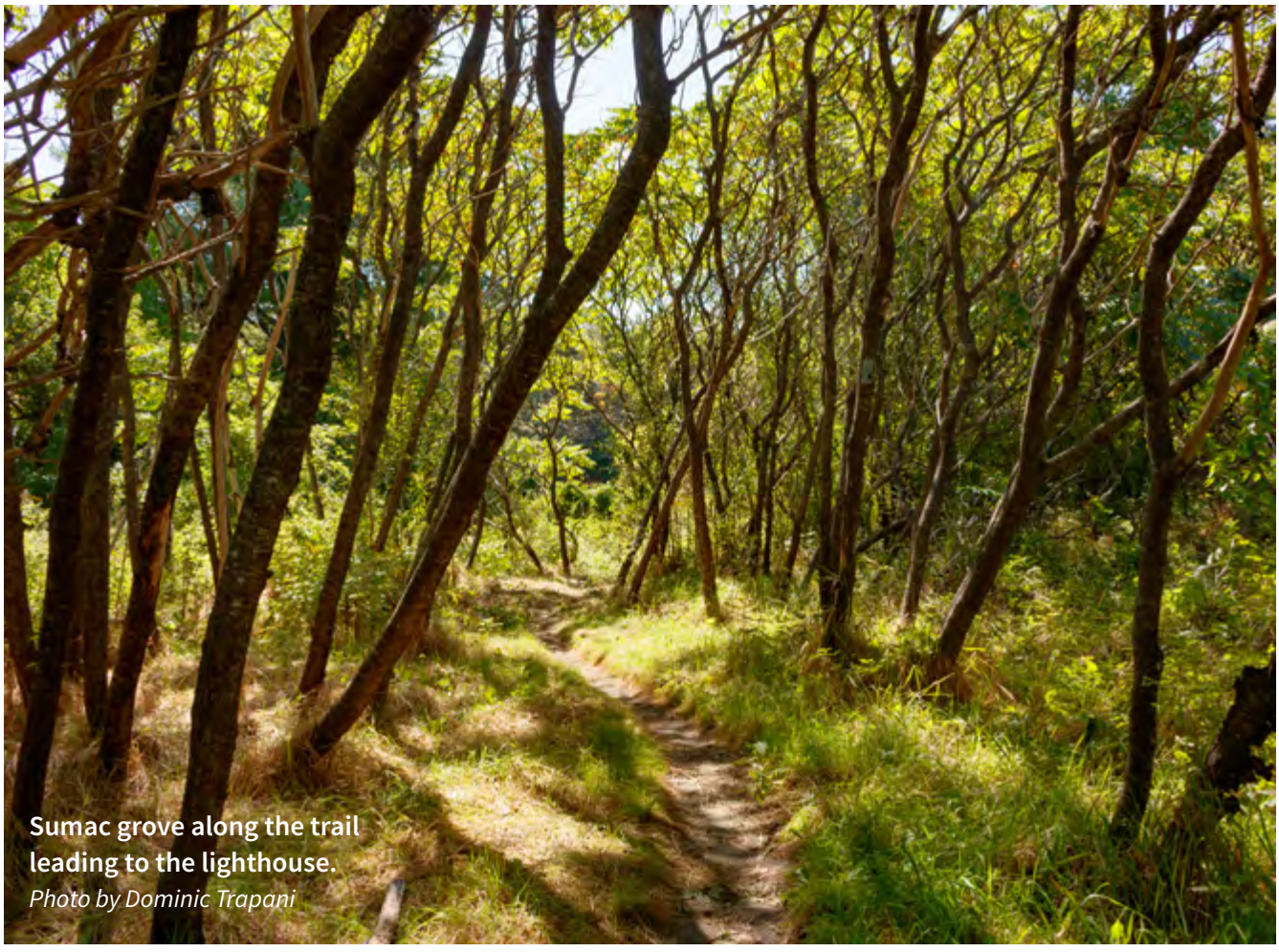
Whitlocks Mill LIghthouse
Photo by Bob Trapani, Jr.

Hike to Squirrel Point Lighthouse

By Dominic Trapani

Visiting a lighthouse is an activity enjoyed equally by residents and tourists who seek to immerse themselves in the splendor of a locale. At many lighthouse sites in Maine, visitors can easily park their vehicle and take a short walk to reach the light station. There are a few exceptions however. To reach some lighthouses, a mini adventure is required. One such lighthouse is Squirrel Point, which is located approximately halfway between the mouth of the Kennebec River at Popham Beach and the city of Bath, some 6.5 miles upriver.

Are you ready for a really cool walk to this charming spot?



Sumac grove along the trail leading to the lighthouse.
Photo by Dominic Trapani



Photo by Dominic Trapani

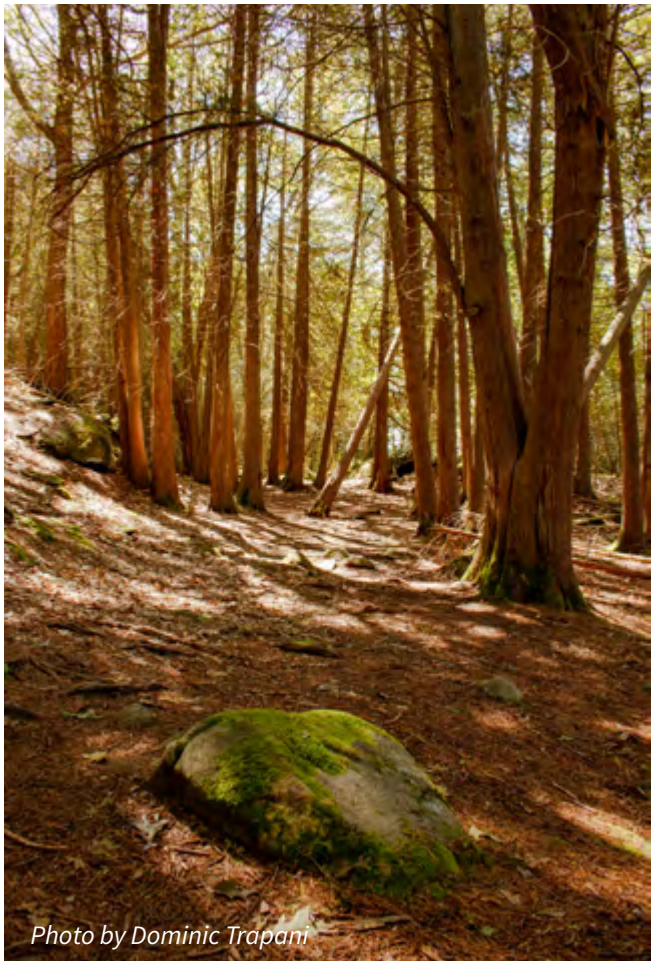


Photo by Dominic Trapani

You will begin your journey from a parking area, located at the end of Bald Head Rd in Arrowsic. From here you will take the path at the end of the parking lot, which leads you down a hill and past a small gate. As you continue down the winding trail, you'll encounter old stone walls, and a grove of Sumac trees that lend quite a sense of place to this trail. I personally find this group of Sumac trees to be one of the most fascinating parts of the walk, especially during summer when the green leaves form a canopy over the worn foot path.

Continuing downhill will lead you to a wooden footbridge that enables access across the narrow tidal marsh. After crossing the bridge, the trail quickly becomes riddled with tree roots that protrude up and span the path, so be sure to keep an eye out for them when walking! Eventually, the trail splits– the left trail will lead you to Bald Head, and the one straight ahead will lead you to Squirrel Point Lighthouse. It is during this stretch of your hike that you will encounter large clusters of ferns scattered across the forest floor. On a sunny morning, the way the light filters through the trees and shines on portions of these fern clusters can be quite enthralling.



The trail to the lighthouse is well marked.
Photo by Dominic Trapani

Persevering, you will traverse up and down a few small hills during the final stretch of the two-thirds-mile trail. As you descend the last slope, you will find yourself in the backyard of the light station. A kiosk is located here, which will provide you with a quick history of the light, as well as inform you about ongoing plans to restore the entire light station.

As you walk across the light station grounds, the landscape opens up to reveal the beautiful scene that embraces the riverbanks of the Kennebec. A diminutive wooden lighthouse, nestled within sumac bushes, is perched on the banks of the historic river, rushing to meet the Atlantic. It's a sight to behold – one that beckons you to linger for a while.

The beautiful hike along the well-maintained trail to Squirrel Point Lighthouse is truly one of the best land-based lighthouse adventures you can experience on the Maine coast. So be sure to add it to your to-do list and make a visit to this sentinel that stands watch off the beaten path!

Learn More...
www.squirrelpoint.org

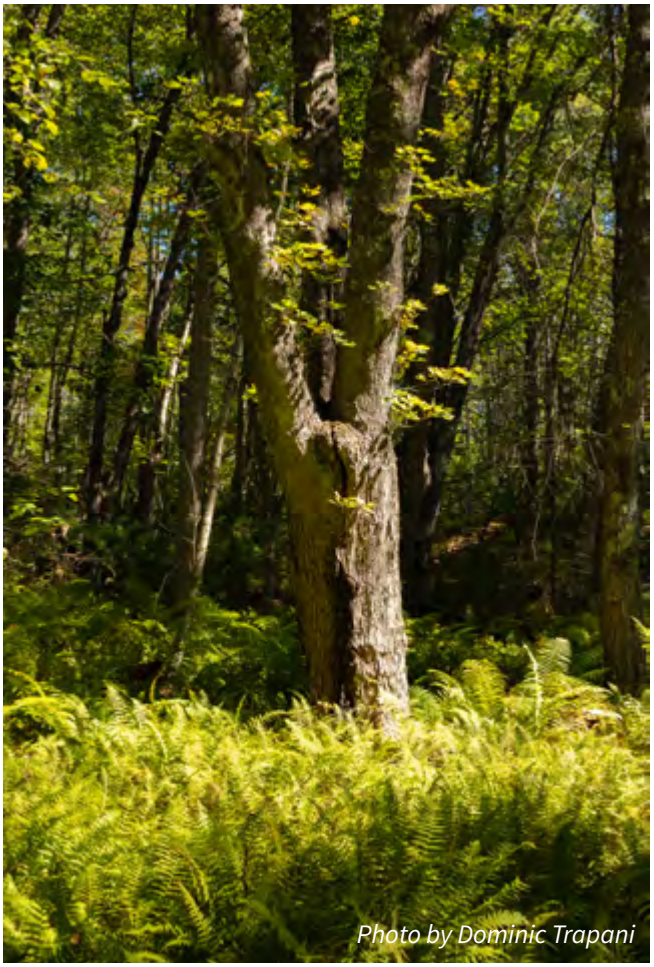

Photo by Dominic Trapani


Photo by Dominic Trapani

A Treasure-trove of History Shines at the Maine Lighthouse Museum

By Bob Trapani, Jr.

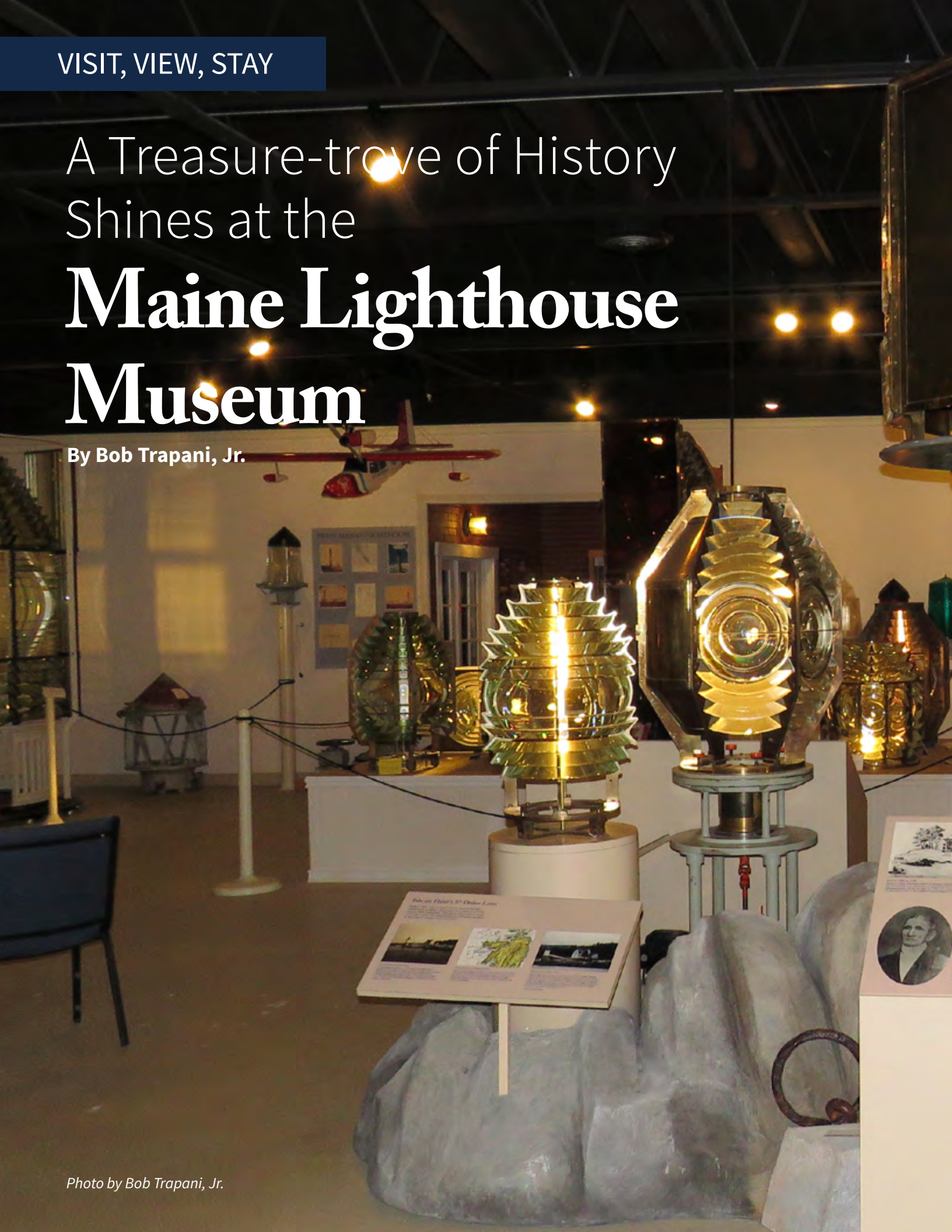


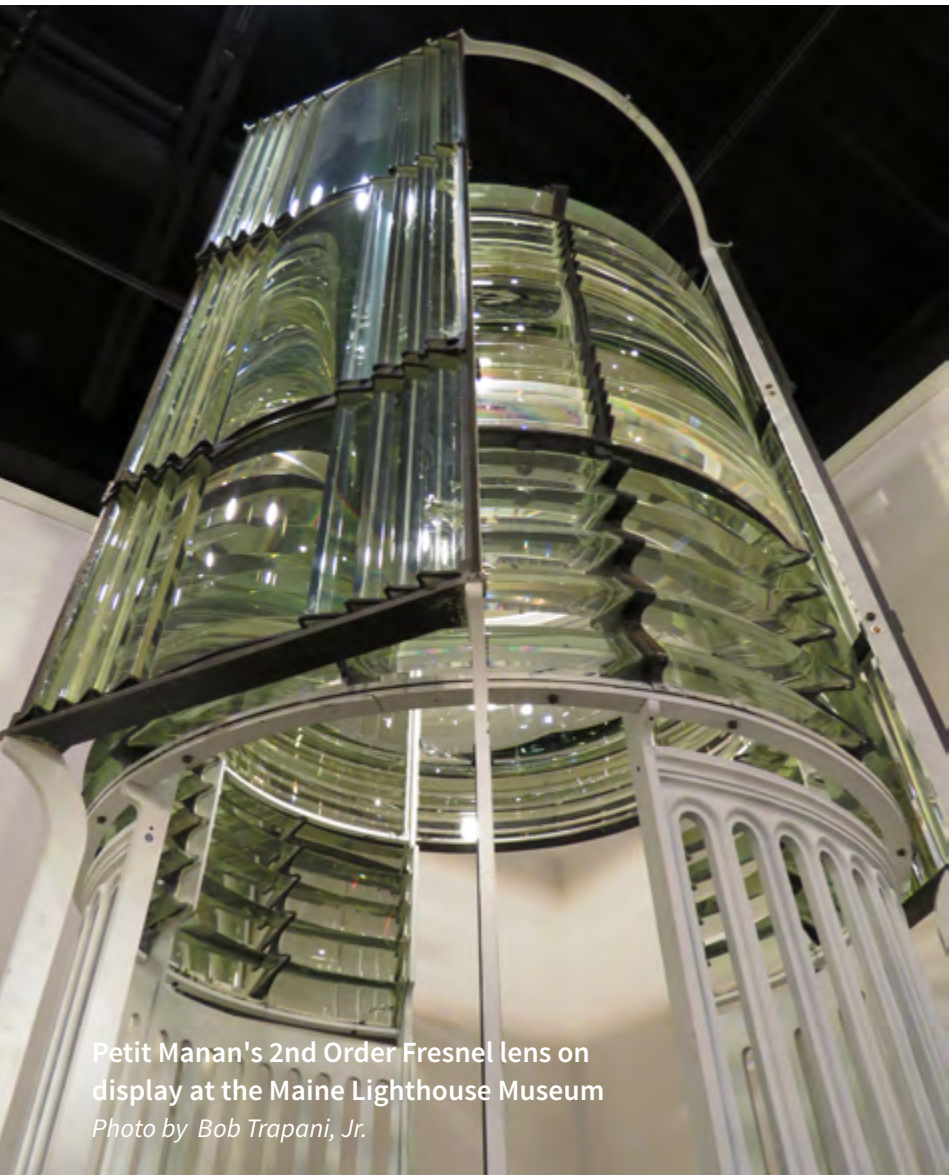
Photo by Bob Trapani, Jr.



Since the first Maine lighthouse was established at Portland Head in 1791, the beacons and horns that enabled the state's coastal guardians to guide the seafarer have constantly evolved.

With so much change occurring at the lights during the two-plus centuries since the construction of Portland Head, it may make you wonder where some of this fascinating equipment has gone over the years. Well, wonder no more. Instead, make it a point to visit the Maine Lighthouse Museum in Rockland, which is home to one of the finest collection of lighthouse lenses and artifacts in the United States.

A visit to this amazing place is more than simply fun and educational – it is also an enlightening experience that literally wows people with countless glimmers of light. Of all the artifacts that pay tribute to our nation's lighthouse history, the gorgeous Fresnel lens with its polished prisms and brass is quite possibly the most important – and surely the most breathtaking.



Petit Manan's 2nd Order Fresnel lens on display at the Maine Lighthouse Museum
Photo by Bob Trapani, Jr.

The public will not find a larger exhibit of Fresnel lenses – once the "heart" of every lighthouse, than the collection that is on display at the Maine Lighthouse Museum. This "sea of lights" with its alluring glow and stunning beauty must be experienced firsthand to fully appreciate such timeless works of art.

In her book, *A Short, Bright Flash,* author Theresa Levitt eloquently stated, "Perhaps the most visible role of the Fresnel lens in the twenty-first century remains its status as an icon. Even as the U.S. decommissions many of its lighthouses, the lenses become museum centerpieces, a favorite of viewers just as they had been in the days of the universal exhibitions. They seem to evoke a bygone world of danger and romance, when getting on a ship meant complete isolation and the light from a Fresnel lens was the first sign of land."

With unsurpassed brilliance to astound the visitor inside the Maine Lighthouse Museum, one might think the exhibits begin and end with the lights, but think again. The lights also "point the way" to some of the most inspiring human interest stories in lightkeeping lore, for if the Fresnel lens was the "heart" of a lighthouse, the keepers and their families were surely the soul.

Keeping the lights shining and the fog-horns sounding was no easy task, especially during times of stormy weather, but there were other challenges to deal with as well, including isolation, loneliness and a lack of modern conveniences. It took a special person who was dedicated and resourceful to keep the lights burning bright - a legacy that comes to life at the Museum.

If you have climbed some of Maine's light-houses before and that experience has left you wanting to learn or experience more about the romance and mystery of the lights, then seek out the many beckoning gleams of history on exhibit at the Maine Lighthouse Museum!

Learn More...
www.mainelighthousemuseum.org



The Maine Lighthouse Museum has the largest collection of Fresnel lenses on display in the country.
Photo by Bob Trapani, Jr.

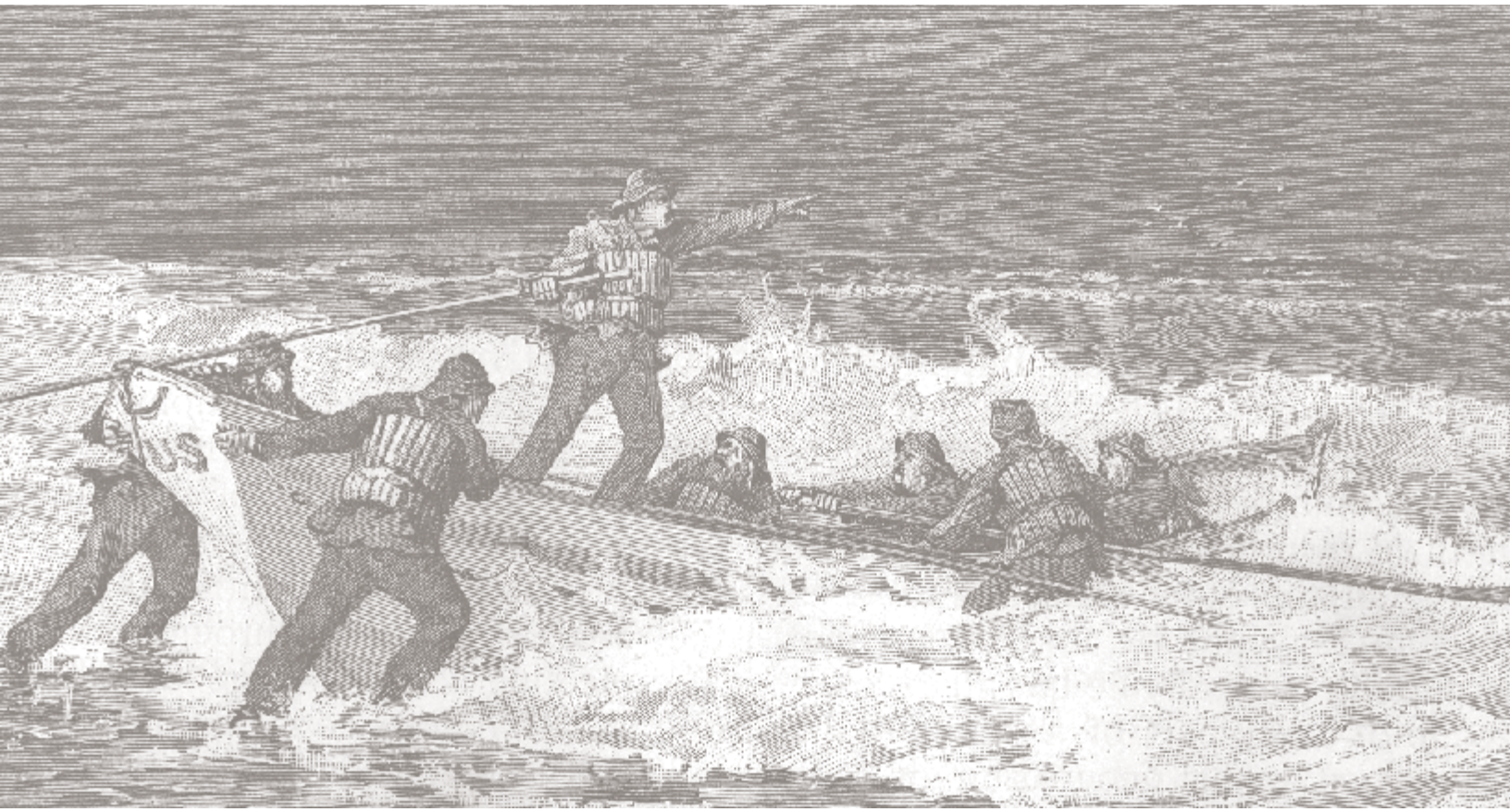
From the Annals of the

United States Life-Saving Service

The United States Life-Saving Service (USLSS), which was officially formed in 1878 and later merged with other services to form the United States Coast Guard in 1915, was one of the finest organizations in our nation's maritime history. The courageous lifesaving station keepers and surfmen knew the nearby lighthouse keepers well, and on occasion, had an opportunity to work with them in some facet, whether it was to render aid to mariners in distress or lending a helping hand to the lightkeepers.

USLSS annual reports also have other lighthouse connections, including accounts of ships grounding or wrecking due to mistaking one lighthouse for another.

In this issue, we are featuring an account involving the Hunniwell's Life-Saving Station and the Pond Island Lighthouse.



Though not mentioned by name in this United States Life-Saving Service account involving the sloop, *Alice*, Charles S. Brown, who served at Pond Island Lighthouse from 1878 to 1889, was the keeper who spotted the vessel in trouble and subsequently waved his hat to get the attention of the nearby lifesavers.

January 9, 1885

"The sloop *Alice*, of Bath, Maine, while on her way from Hunniwell's Point, at the mouth of the Kennebec River, to Portland, Maine, with a load of furniture, encountered strong southwesterly winds as she passed out of the river, and when between Pond and Seguin islands, at 9 o'clock in the morning, carried away her mast and became completely disabled.

"The accident occurred about two miles southeast of the Hunniwell's Beach Station (First District). The life-saving crew had seen her pass out, and anticipated from the looks of the weather that she would have trouble. She was hidden behind Pond Island when the mast went by the board, and the first intimation they had of the accident was given by the light-keeper on the island waving his hat for their assistance.

"In half an hour, after a hard pull, the crew arrived alongside. They found but one man on the sloop. Two of the surfmen were, therefore, put on board to clear away the wreck and get the mast ready for re-stepping, while the rest took the sloop in tow and pulled leeward to the most convenient shelter, in Herman Harbor, five or six miles distant, in the mouth of the Sheepscot River, where they arrived safely at about 11 o'clock.

"The crew then proceeded to re-step the mast and secure it, and after putting the sloop in good order again, and in readiness to resume her voyage when the weather permitted, left for the station, which was reached at half-past 3 in the afternoon."



Photo courtesy Bob Trapani, Jr.

Keeper of the Light

Source: *Rockland Courier Gazette*, **Saturday, June 22, 1940**

"Guardians of the Coast, eternal watch dogs of the sea,

"Keepers of the lonely outposts, where ships and men may be,

"Serving all and slighting none, they strain their every nerve

"Through hours of lonely solitude, humanity to serve.

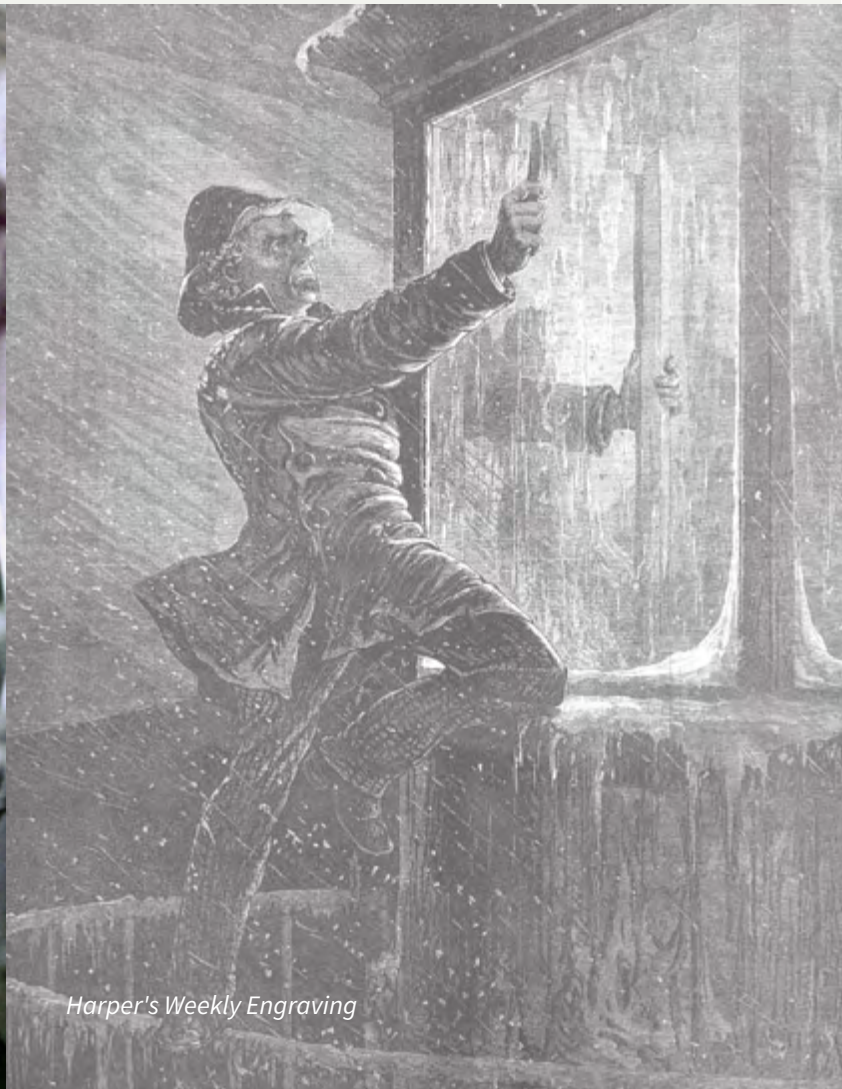
"No life could be more noble, than that of the faithful lightkeeper. His threshold is washed by the white-crested mountains of water blown from the open sea; his window panes are coated with frozen brine from the wintery blasts; his ear drums are hardened to the shrieking blasts of the siren; his eyes are never tired from the brilliant flashes of light above his head; his heart never grows weary.

"He finds contentment in the peaceful surroundings where only the shriek of the herring gull will break the silence of the early mourn. Dedicating his life to humanity, he enjoys the comforts of the little tower and he is ready to face the worst to help those in distress."

– Capt. Walter Scott



American Lighthouse Foundation Photo



Harper's Weekly Engraving

MOMENTS IN MAINE - Photo of the Month

Curtis Island Light

Fine Art Print by Dominic Trapani



Curtis Island Lighthouse Moonrise

Our featured fine art print for November is Curtis Island Lighthouse, perfectly captured with the full moon rising over the island. Ready to frame, this print is sized at 18”x12” and will be signed by the artist.

$50
+shipping

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West Quoddy Head Lighthouse

Photo by Bob Trapani, Jr.