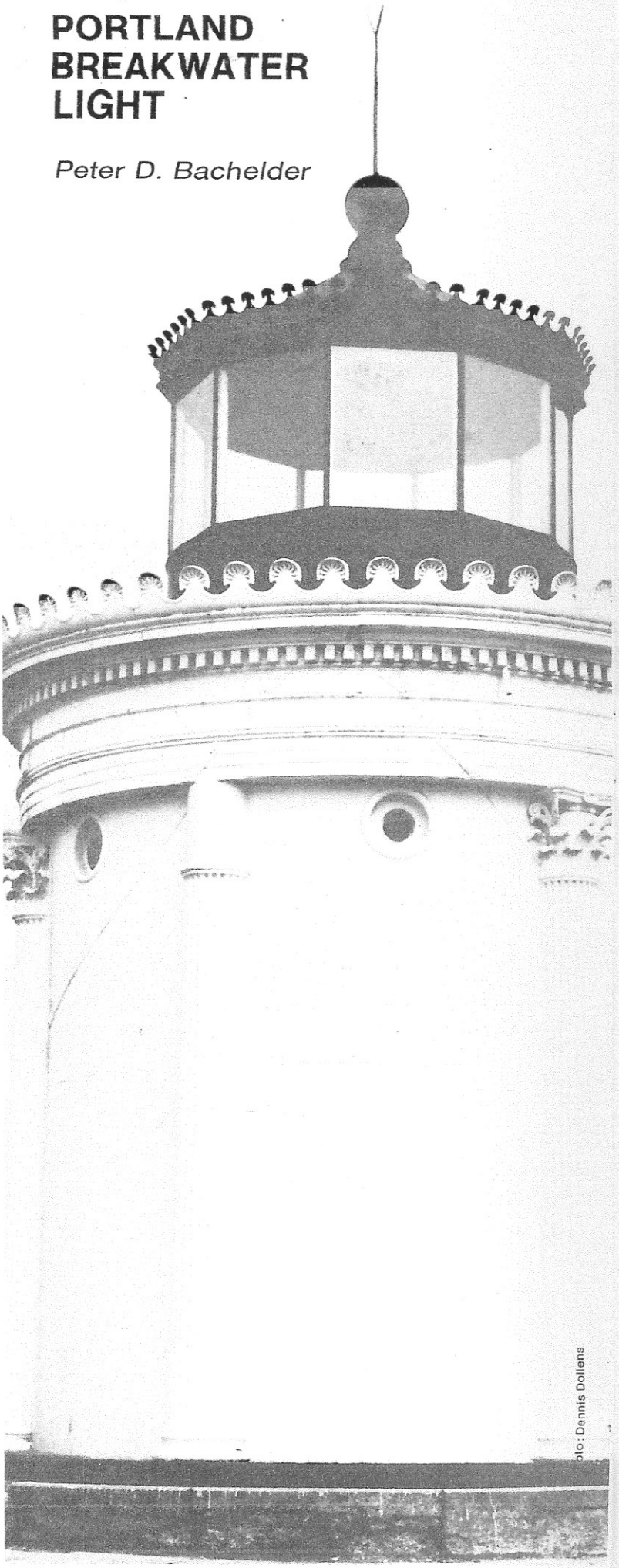
PORTLAND BREAKWATER LIGHT

Peter D. Bachelder



oto: Dennis Dollens

On November 22, 1831 a powerful northeast storm lashed the New England coast, tearing up property and leaving a confused tangle of debris in its wake. At the coastal Maine community of Portland, where the height of the storm's fury coincided with the time of normal high water, the violent winds pushed a monstrous tidal surge into the harbor. Rampaging waves tore ships from their moorings, overflowed wharves, and carried away several buildings. Damage within the harbor alone exceeded fifty thousand dollars.

Local marine interests soon repaired the unforeseen havoc, although those hardest hit could not forget the effects of the storm's fury. Within months, conversations among them that had begun as casual grumblings, turned into outright stern demands for adequate protective measures that would prevent further such losses. Echoes of these cries eventually reached responsive officials in Washington and prompted a November 1832 directive from Secretary of War Lewis Cass to the U.S. Topographic Bureau, calling for a survey of Portland Harbor "with a view to a plan and estimate of the cost of erecting a sea-wall or breakwater".

Before the month had ended, bureau engineer Lt. Col. John Anderson arrived in Portland from Weymouth, Massachusetts to conduct the called-for study. Accompanied only by one Lt. Poole, a cartographer, Anderson tramped and rowed about the harbor, meticulously determining the exact position of each island, ledge and shoal. With craftsmanlike precision, he sounded the nature and shape of the harbor bottom and the channels leading to it. From the data gathered, he submitted a detailed proposal in October 1833 that recommended the placement of a rubble-stone breakwater along Stanford's Ledge, South Portland, which marks the southern side of the inner harbor entrance.

According to the plan, the proposd structure would consist of seven granite sections having a total length of more than 2,500 feet. Such construction would require nearly 46,000 cubic yards of rubble for the body of the work and another 3,500 cubic yards of ashlar stone for the top. The total cost of the effort, according to his best estimates, would amount to $44,417.08. This would include a "pier and beacon on the outer end of the breakwater" that he felt would be necessary to mark the completed work.

Anderson's proposal eventually won Congressional approval, although two years would elapse before an initial $10,000 was made available for the proposed Portland Breakwater, as the new work would come to be know.

Construction of the initial section, 401 yards long, began July 1836 under the watchful eye of resident engineer Freeman Bradford. With an average crew of thirty employed, the task of laying in place the rubble work was more than one-third finished by early December. In a letter to his superior in Boston, Bradford exlained that he could have the partially-built portion completed by the following June if his request for an additional $30,000 to finish it and begin the next four sections — a total of 287 1/2 more yards — could be met.

Prompted by this plea, Congress allotted another $25,000 during 1837 and a subsequent $26,366 the following year. With these funds, the breakwater's foundation soon reached one-third of a mile out along the ledge, and Bradford happily reported in November 1837 that "the portion of the breakwater already constructed has been found efficacious in keeping off the heavy swell that formerly swept over the ledge at high water."

But Portland Breakwater was never completed to the full extent of its original design in 1838, and for several

years thereafter, all requests for harbor improvements along the Atlantic coast were annually denied. When repeated attempts for additional funding failed, work on the granite pier was officially suspended in 1852. At that point, roughly 1,800 linear feet of stonework had been laid, although a 683-foot section on the outer end lacked the final two coping courses, as did a 112-foot segment adjacent to the shore.

Left for so many years in this partially finished condition, the unlighted breakwater evoked bitter complaints from unhappy mariners who viewed the structure more as a navigational hazard than anything else.

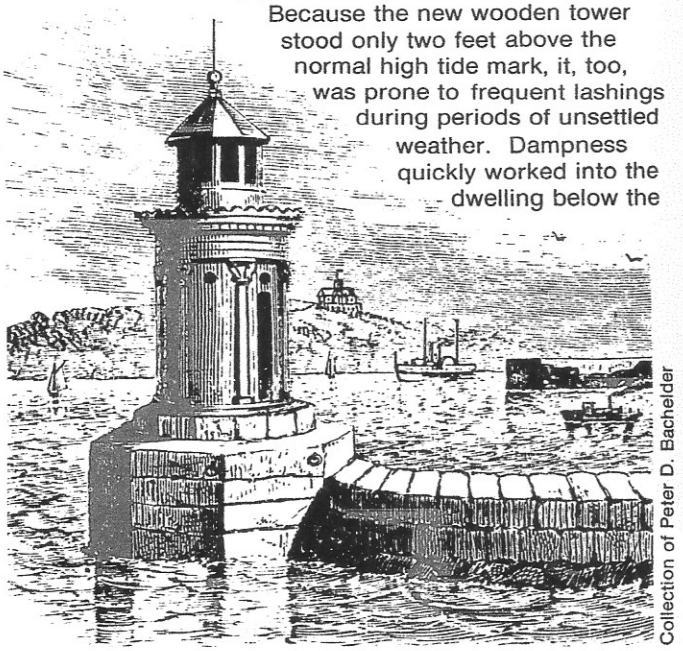
Then in late 1854 the newly-organized U.S. Lighthouse Board gave the go-ahead for its engineers to lay out plans for a Portland Breakwater lighthouse. Conceived and drawn up in January 1855, its details called for an octagonal tower with sloping, wooden sides to surmount two courses of ashlar stone set upon the breakwater's outer end. The structure would support a sixth-order Fresnel lens twenty-five feet above high water. The plans were approved as submitted, construction was authorized on March 18, 1855, and the job was completed within four months.

During the interim, W.A. Dyer accepted the appointment as the Breakwater Light's first keeper at an annual salary of $400. He illuminated a fixed red light atop the tiny white tower for the first time August 1, 1855.

Keeping the new light must have had its enjoyable moments, although there were certain offsetting problems. Because the unfinished portion of the breakwater barely showed above the high tide mark, commuting to and from the station, generally accomplished on foot, was often unpleasant and sometimes downright hazardous. Many times angry waves slapped roughly against the uppermost stones, driving sheets of spray high into the air and thoroughly drenching the entire structure. And while the uneven rock surfaces made walking a concern in even the best of weather, matters got worse during the winter months. Subfreezing temperatures usually kept the wall sheathed in a slick coating of ice. As often as not, gusty winds forced the traversing keeper to crawl on his hands and knees the entire way to and from shore.

Work to complete the unfinished caping of the existing stonework was eventually begun in September 1867 and finished the following year.

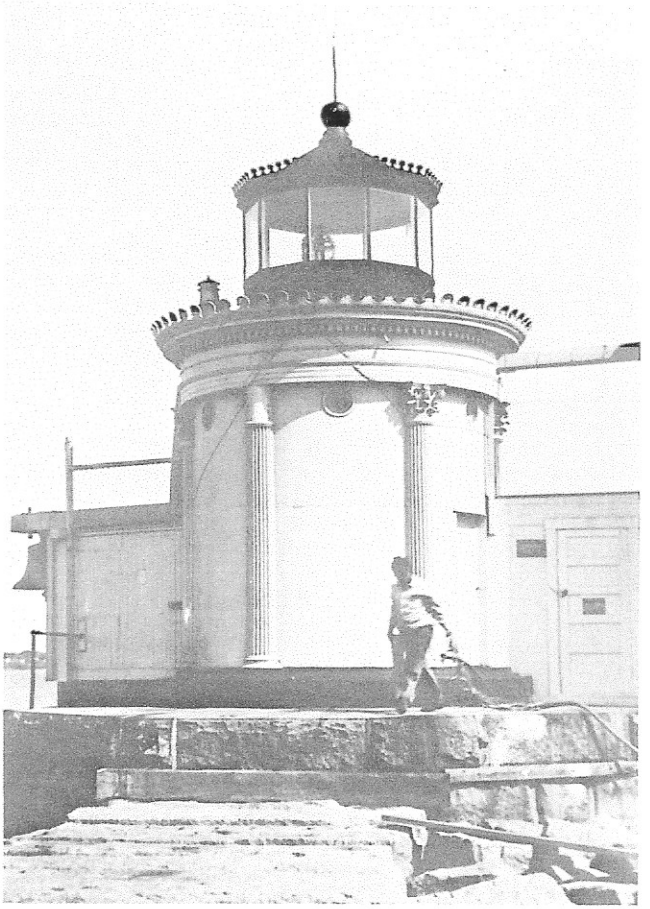
Because the new wooden tower stood only two feet above the normal high tide mark, it, too, was prone to frequent lashings during periods of unsettled weather. Dampness quickly worked into the dwelling below the



Collection of Peter D. Bachelder

Engraving of The Portland Breakwater Lighthouse

Historic American Building Survey



Undated: The Portland Breakwater Lighthouse

light and government inspection teams were soon calling for new clapbards to cover the weatherbeaten structure. Rust, always a problem around salt water, continually raised havoc with the cowl, or revolving metal hood above the lantern cage that allowed proper ventilation for the oil-burning lamps. On nearly every annual check of station equipment, this cowl required either repair or replacement.

In 1872, work on a 400-foot extension to the breakwater began, during which time Lighthouse Board inspectors sought an appropriation for "a permanent tower," since the wooden structure had by this time become, in their words, "decayed and unfit for further service".

The newest section of pier was completed in September 1873, whereupon Congress okayed another $6,000 to erect a brick-lined, cast-iron tower on its outermost end. During the spring of 1875, the wooden lighthouse came down and the newer one, modeled on the 2,200-year old Choragic Monument of Lysicrates in Athens, was placed upon an octagonal concrete base atop the recently completed pier-head. Slightly smaller than its wooden predecessor, the new structure stood twenty-four feet high overall, and measured eleven feet, eight inches in diameter. Ornamenting its cylindrical shape were six iron Corinthian, engaged columns and palmette, above which rested a circular lantern cage holding ten frames of quarter-inch plate glass.

The new Portland Breakwater Light went into operation in June that year under the care of newly appointed keeper Stephen Hubbard, the seventh man to serve at that location.

Changes and improvements to the new light station altered its appearance drastically over the next several years. On August 1, 1878, its fixed red beam became flashing red. A year later a 58-foot section of iron hand-



Photo: Dennis Dollens

The Portland Breakwater Lighthouse

rail was installed along the breakwater adjacent to the tower's entrance, primarily as a safety measure. By 1886, it had been extended the entire 1,990 foot distance from tower to shore.

In March 1889, a two-room wooden keeper's dwelling was connected to the tower. With dimensions of eighteen by twenty feet, it overhung the breakwater on each side, although it survived in good shape for many years. Shortly after the turn of the century, two more rooms and an attic were added to the dwelling, while for general station protection, two hundred tons of rip-rap stone were placed about the pier-head.

The year 1934 brought changes that marked the beginning of Portland Breadwater Light's demise as a functional lighthouse. First, electricity was installed there and at the nearby Spring Point Ledge Light, a mile down the channel. Then in the interest of economy, the government shifted control of the Breakwater Light to the tower at Spring Point via a submarine cable, and the former became unattended.

Over the years, several vessels have come to grief within sight of Portland Breakwater Light. Among these was the 3,576-ton iron steamship *Brooklyn,* which plowed onto a submerged ledge across the channel from the light one dark April night in 1883. At the time of her mishap, the transatlantic steamer had been attempting to leave the harbor with a general freight cargo bound for Liverpool, England. The unyielding rock gored a gaping hole in the vessel's port side nearly amidship.

The *Brooklyn's* mighty hulk soon became a familiar sight along the waterfront, as the combined task of unloading and refloating her consumed nearly three months, and she lay two more in drydock undergoing temporary patching.

By the early 1940s the useful days for the little light station were definitely numbered. In 1941, Chairman of the U.S. Maritime Commission Emory S. Land, searching for an East Coast emergency shipyard site to build Liberty ships, found his answer at Stanford's Point in South Portland. The location Land selected was the long-deserted site of the one-time Cumberland Shipbuilding Company yard, inactive since the conclusion of the First World War.

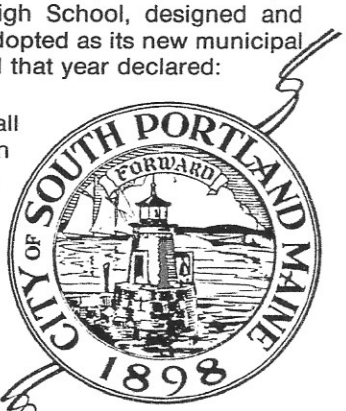
To provide sufficient space for the new facility, workmen installed a cofferdam and relocated the shoreline, shortening the breakwater's length by more than half. On this new landfill the contractors constructed six ways, or inclines, upon which the proposed cargo-carrying vessels would be built and launched.

Less than a year later, the U.S. Navy, with an eye toward putting in a giant repair drydock, took possession of the property adjacent to the shipyard. More fill was brought in and the shoreline altered once more until the Breakwater Light stood less than 100 feet from dry land. A drydock, in three sections, was actually towed to the spot, but the plan for its use was ultimately abandoned. The entire filled-in section was then turned over to the U.S. Maritime Commission.

American involvement in World War II caused Portland Breakwater Light to be extinguished in 1942. As it turned out, the station has never been actively used again. Only a year later it was declared of no further use and officially abandoned.

Although the tiny light had long been a familiar landmark among local mariners, it achieved a far different and a much broader-based level of recognition during its final few years of operation. In 1940, Edwin Turner, a student at South Portland High School, designed and drew what that city officially adopted as its new municipal seal. The ordinance from April that year declared:

> "The common seal . . . shall be engraved with a design consisting of the Portland Breakwater Light in the foreground, the water of the Harbor, with land in the background. . ."



Portland Breakwater Light is currently owned by the Greater Portland Public Development Commission. At the same time, the General Electric Company of New York, which has been operating a heat-transfer products division nearby, holds a lease on the property with an option to purchase the light and adjacent land areas.

Peter D. Bachelder is the Director of Information Services for the Maine Publicity Bureau and author of *Lighthouses of Casco Bay.*