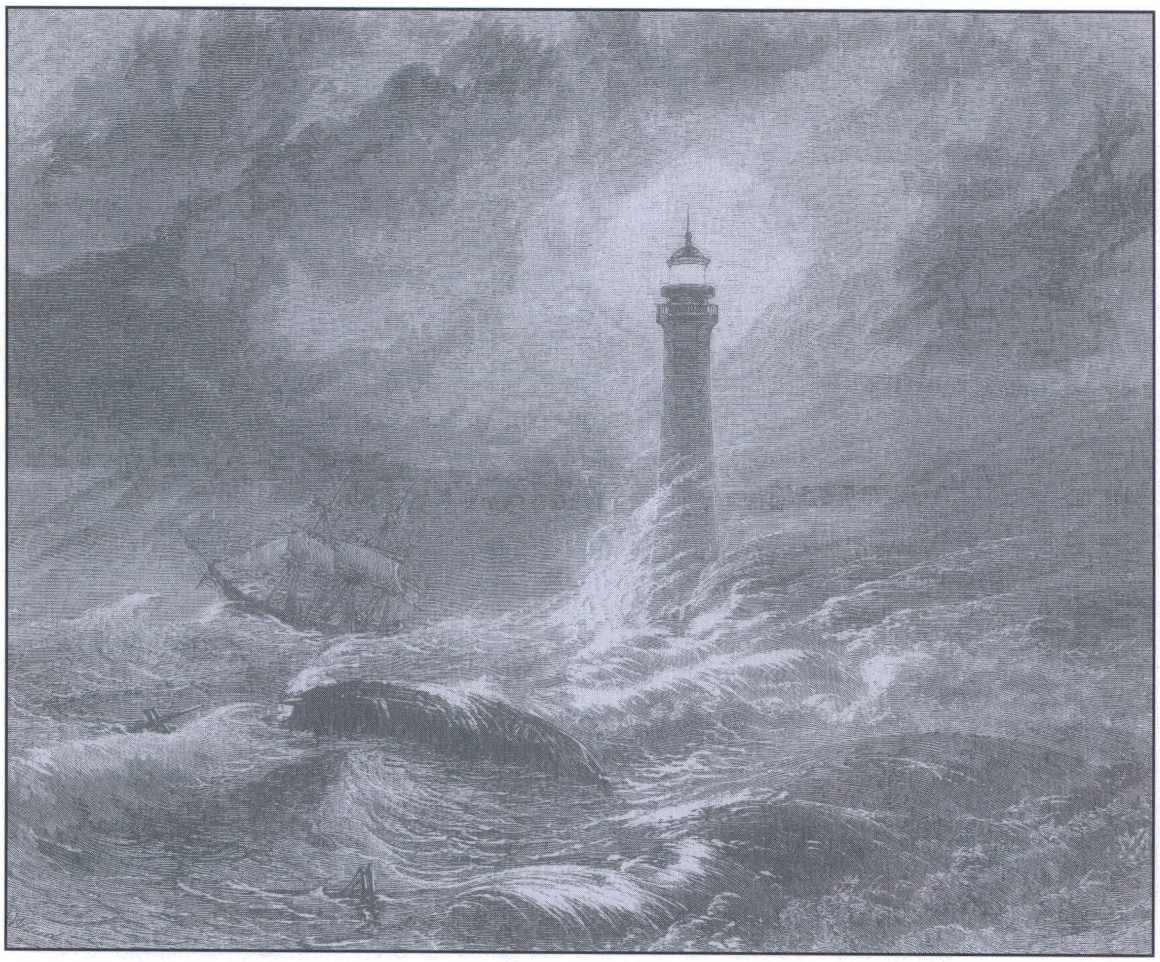
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Dhu Heartach Lighthouse

A Scottish Lighthouse by The Stevensons

By Wayne C. Wheeler

"An ugly reef is this of the Dhu Heartach; no pleasant assemblage of shelves, and pools, and creeks, about which a child might play for a whole summer without weariness, like the Bell Rock or the Skerryvore, but one oval nodule of black trap, sparsely bedabbled with an inconspicuous fungus, and alive in every crevice with a dingy insect between a slatter and a bug. No other life was there but of sea-birds, and of the sea itself, that here ran like a millrace, and growled about the other reef for ever, and ever and again, in the calmest weather, roared and spouted on the rock itself."

Robert Louis Stevenson

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The tiny islet which is the Dhu Heartach (also spelled Dubh Artach, pronounced "Doo Artacc") lies 15 miles southwest from the Isle of Mull, Scotland and is the furthest outcropping of a reef known as the Torren Rocks. Over the years, most mariners, knowing the danger of the Torren Reef and giving it a wide berth, found themselves snared by Dhu Heartach.

A desolate group of rocks, Dhu Heartach lies 20 miles southeast of a similar rock called Skerryvore. The Dhu Heartach consists of the main rock, five detached tide-covered hummocks, and two small sunken rocks. The main rock is an isolated mass of trap, 240 feet in length and 130 feet in width, with a rounded top rising 35 feet above high water. It is surrounded on all sides by deep water. Even slight swells from the west, after breaking on the western slope, divide and sweep around the north and south sides of the rock as separate waves meeting at the eastern side, leaving no spot around the circumference to which a boat can, even with a moderate western swell, safely approach.

A lighthouse was constructed on Skerryvore in 1842 by Alan Stevenson, son of Robert Stevenson, who had constructed the Bell Rock Lighthouse around 1810. The Stevenson family produced a long line of lighthouse engineers employed by the Northern Lighthouse Board (the agency in charge of Scottish lighthouses).

Three of Robert's sons (Alan, David and Thomas) were engineers for the Northern Lighthouse Board. Thomas was father to Robert Louis Stevenson (the black sheep of the family, who chose to be a writer). David produced two children who became engineers (David A. & Charles) and Charles sired D. Alan, the last of the Stevenson lighthouse engineers.

Alan had cut his teeth on the formidable Skerryvore and then it was Thomas and David's turn at Dhu Heartach. Thomas first visited the rock during a routine lighthouse inspection trip in 1864. Realizing that the islet lay smack in the middle of shipping lanes to the Irish Sea as well as to the Firth of Clyde, and was a general danger to navigation of the Minch, he immediately decided that a lighthouse was imperative at this location. In his report to the board David noted, "To homeward bound vessels making the shore, not having [the] Skerryvore [lighthouse, to the north] or the Rhins of Islay [lighthouse, to the south], no warning whatever announced their approach to this treacherous group of rocks, which have proved destructive to many a ship, the only evidence of the wrecks being the drift of lumber thrown ashore on the neighboring coasts of Mull and Iona."

David realized he had his work cut out for him as rollers traveled unimpeded across the Atlantic until they smashed against this rock. Like his brother Alan, who constructed the Skerryvore tower, he would have to bring supplies from Mull, sixteen miles to the northeast. He realized the cost would be tremendous and that his request was competing for funds with several other Scottish lighthouses which were currently under construction. After three years of requesting funds, the Northern Lighthouse Board approved the project.

The primary work place was established at Earraid on the western extremity of the Island of Mull. This location had an abundant supply of granite as well as room to construct a work yard, warehouse and quarters for workers, seamen and eventually the lighthouse keepers. A wharf was erected for shipping materials out to Dhu Heartach. The wharf area at Earraid was fairly well sheltered.

The design of the new tower called for a base 36 feet in diameter, tapering to the parapet course below the lantern with a diameter of 16 feet. This final course of granite was 107 feet above the base. Realizing that a great deal of the time the rock would be awash, the entrance door was originally designed to be 32 feet above the foundation. The interior was divided into six compartments. The project took six years to complete.

The first landing was made on Dhu Heartach in June of 1867. Some preliminary work was carried out that summer, during which 27 landings were made.

Work proceeded slowly as almost every day the crew had to wait for seas to subside before a landing could be made. The delay of landings caused Thomas and his brother David to decide to construct a barracks on the rock. This would eliminate the need to wait for seas to subside to make landings, thus adding greatly to the time spent in construction each season. Additionally, if the seas suddenly turned nasty and the men couldn't be taken off the rock, they would have a source of shelter. By the end of the season the men had constructed the beginning of what would be an ungainly round iron barracks perched on spindly legs. The excavation for the base of the tower was also well along before they had to secure the site in early fall.

Over the winter a steamer was constructed to assist with the work. It was appropriately named *Dhu Heartach*.

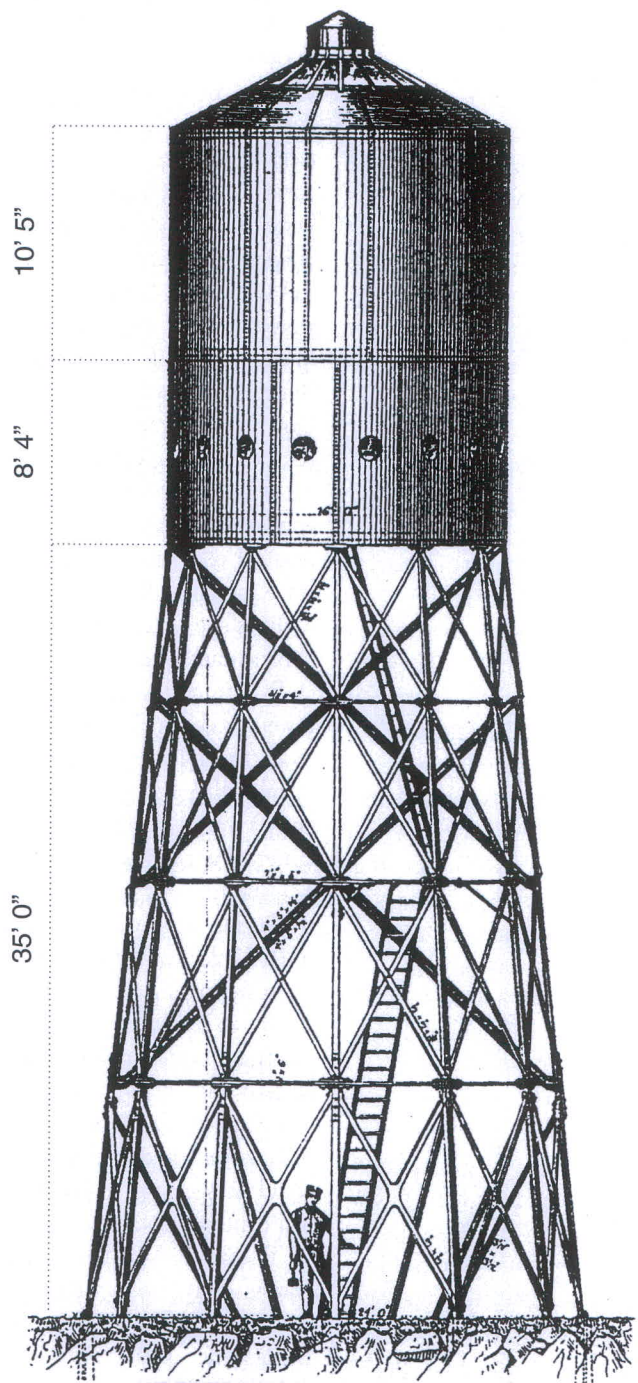
At the beginning of the 1868 season the new vessel and several barges were enlisted to bring out stone and supplies from Mull. The legs of the barracks structure had survived the winter storm with only a section of the ring securing the top of the legs having been carried away. An early attempt to land on Dhu Heartach was made in mid April, but western winds and heavy seas prevented the work from starting until May 4, and even then the men could only remain on the rock for 1 1/2 hours. After only a few landings of limited duration, the work party had to stand off until the harsh weather subsided on June 29. This second season turned out to be a bust. In May only two days of construction were possible; in June, two days; in July, 13 days; in August, 10 days; and in September, 11 days, for a total of 38 days of work.

By the end of September the barracks had been completed and three fourths of the foundation of the tower was excavated.

The barrack walls were made of riveted 1/4 inch thick iron plates. The living section was 18'9" in height and 16 feet in diameter. It was divided into two stories. The brothers did not intend to have men staying in the barracks until it had been tested (unoccupied) by winter storms. However, one of the Stevensons' engineers and a work crew went out to the rock to inspect the barracks on the 20th of August. When they arrived the weather was balmy and after the men landed the steamer returned to the base. A sudden gale sprang up during the night, rendering it impossible to take the crew off on the 21st.

During the first night the men woke to the thundering of huge waves striking the sides of the iron structure. They then realized that they were trapped, not only on the island, but inside the large metal drum. For five days the crew endured the constant pounding of waves on their barracks. The structure wavered on its thin legs as seas washed over the islet. For the better part of that time the

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WORKMEN'S BARRACK ON THE ROCK.

fourteen men trapped inside thought the legs might break off at any moment and hurl their metal casket into the sea.

They later reported that during the height of the storm waves broke over the top of the barracks, 77 feet above high water. And on one occasion the seas struck the bottom of the structure with such force as to "burst up the hatch," which was 35 feet above the rock and 55 feet above high water. Water rushed into the lower level kitchen, drenching the men huddled there. It finally receded, carrying away with it all that was left of their food. It wasn't until the 26th that a landing could be made, and the men released from their prison.

The 1869 season proved to be much more acceptable. The first landing was made on March 29 and the work progressed until October 29, a very long season of good weather for that part of the world. The Stevensons reported that the working season extended over 113 days, exclusive of Sundays.

There was a setback in July, when a severe gale carried away part of the unfinished third course of the tower and destroyed the landing cranes. When the men were able to return to the rock they found that fourteen stones, each weighing two tons, which had been laid in Portland cement and fixed in placed with joggles 35 feet above high water, had been torn up. Eleven of the stones had been completely swept off the rock. It was as if Mother Nature had said, "Not here, you'll not be building anything at this place."

The destruction underscored what the Stevensons suspected about the configuration of the sea bottom and the type of waves that could be expected to sweep the rock from time to time. Years later, in a heavy storm in 1872, the lightning conductor (a copper bar 1 1/2" by 1", set into a channel in the granite on the lee side of the tower, and fastened with counter-sunk screws) was wrenched from the channel as high as 92 feet above high water…and this is on the lee, or protected, side of the tower.

Because of the obviously violent nature of the waves on the construction work that July, the Stevensons decided to redesign the tower so that the entrance was 11 1/2 feet higher than originally designed, or over 64 feet above high water.

By the end of the season the landing cranes had been repaired and five courses of the tower were completed. On shore, five

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dwellings for the keepers and their families were finished and enough stone had been dressed for 17 more courses of the tower.

Thomas's son, Robert Louis Stevenson, visited Earraid that year and described the new village which had been created. "There was now a pier of stone, there were rows of sheds, railways, traveling-cranes, a street of cottages, an iron house for the resident engineer, wooden bothies for the men, a stage where the courses of the tower were put together experimentally, and behind the settlement a great gash in the hillside where granite was quarried. In the bay, the steamer lay at her moorings. All day long there hung about the place the music of clinking tools; and even in the dead of night, the watchman carried his lantern to and fro in the dark settlement, and could light the pipe of any midnight muser. It was above all strange to see Earraid on a Sunday, when the sound of tools ceased and there fell a crystal quiet. All about the green compound men would be sauntering in their Sunday's best, walking with the lax joints of the reposing toiler, thoughtfully smoking, talking small, as if in honor of the stillness, or harkening to the wailing of the gulls. And it was strange to see our Sabbath services, held, as they were, in one of the bothies, with Mr. Brebner reading at a table, and the congregation perched about on the double tier of sleeping bunks; and to hear the singing of the psalms...and the old eligent [elegant] lighthouse prayer."



Robert Louis Stevenson



Below — Dhu Heartach Lighthouse. Note the legs of the former barracks at left. In recent years these pilings were removed and a helicopter pad was installed at the site. Photo courtesy of the Northern Lighthouse Board, Scotland.

The 1870 season was not as mild as the previous one, but a good season nonetheless. The crew at Dhu Heartach lived in the barracks for five months. Night was an unsettling time as they could not see the waves, but could hear them as they swept across the rock islet and through the legs of the structure, occasionally causing it to sway. Robert Louis Stevenson spent some time out at the rock and described it: " When the dark night fell, and the neighbor lights of Skerryvore and Rhuval were quenched in fog, and the men prisoned high up in their iron drum, that then resounded with the lashings of the sprays. Fear sat with them in the sea-beleaguered dwelling; and the color changed in anxious faces when some greater billow struck the barrack, and its pillars quivered and sprang under the blow. It was then that the foreman builder, Mr. Goodwillie, whom I see before me still in his rock-habit of indecipherable rags, would get his fiddle down and strike up human minstrelsy amid the music of the storm. But it was in sunshine only that I saw Dhu Heartach; and it was in sunshine, or the yet lovelier summer afterglow, that the steamer would return to Earraid, ploughing an enchanted sea; the obedient lighters [barges], relieved of their deck cargo, riding in her wake more quietly; and the steersman upon each, as she rose on the long swell, standing tall and dark against the shining west."

By the end of the working season, the tower stood at 48 feet above the rock and two more dwellings had been constructed on the mainland. A contract was made with Dove and Company of Edinburgh to construct the lantern and another with the Chance Bros. of England to furnish a 1st order lens.

During the 1871 season the workmen spent 57 days on the rock. By October 10th, the tower masonry was complete.

In 1872, the men landed on Dhu Heartach on April 23. They fitted up the lantern and installed the lens and fog bell. The focal plane of the lens, 145 feet above high water, produced a white light which could be seen for 18 nautical miles. It was first lighted on November 1, 1872.

The work in the 1873 season consisted of tearing down the temporary barracks. The final cost, in today's dollars, was $7,300,000. Being rather startled at the final accounting, David Stevenson noted in his report,

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"It need hardly be pointed out, that a comparative estimate of the cost of such works cannot afford any useful result, as the circumstances connected with their erection are in all cases so dissimilar, including the extent of shore establishments...rates of wages, prices of material...the works were carried out by day wages, it being impossible to contract for such work, and the isolated nature of the locality compelled the commissioners to provide all the food necessary for the men...and accommodations which added considerably to the cost of the work...When it is considered that Dhu Heartach is of small area, surrounded on all sides by deep water, and exposed to the swell of the Atlantic Ocean, that it is nearly 16 miles from shore, could only be worked on for about 2 1/2 months of the year, we believe that the amount of work executed will bear favorable comparison with other undertakings in less exposed situations; while the fact that that whole has been brought to a successful close without loss of life or damage to property bears ample testimony to the skill which distinguished the personal conduct of the rock work and shipping of this difficult undertaking..."

Dhu Heartach is a rock station, and as such the keepers' families lived ashore. The keepers generally served at the lighthouse for six weeks and then had two weeks ashore with their families. Bad weather often interfered with normal relief schedules. For example, in 1868-69, at the Skerryvore (Scottish) lighthouse, no relief was possible between November 13 and February 2.

Relief runs were made, and supplies furnished, by boatmen permanently attached to the station. The boats were located on the nearest point of land and made four logistic runs a month, two on Sundays so the keepers could attend church services.

Like most rock lighthouses, effecting a landing either to deliver provisions or relieving a keeper could be very difficult. In 1881, a reporter of the *London Times* ventured out to Dhu Heartach and wrote:

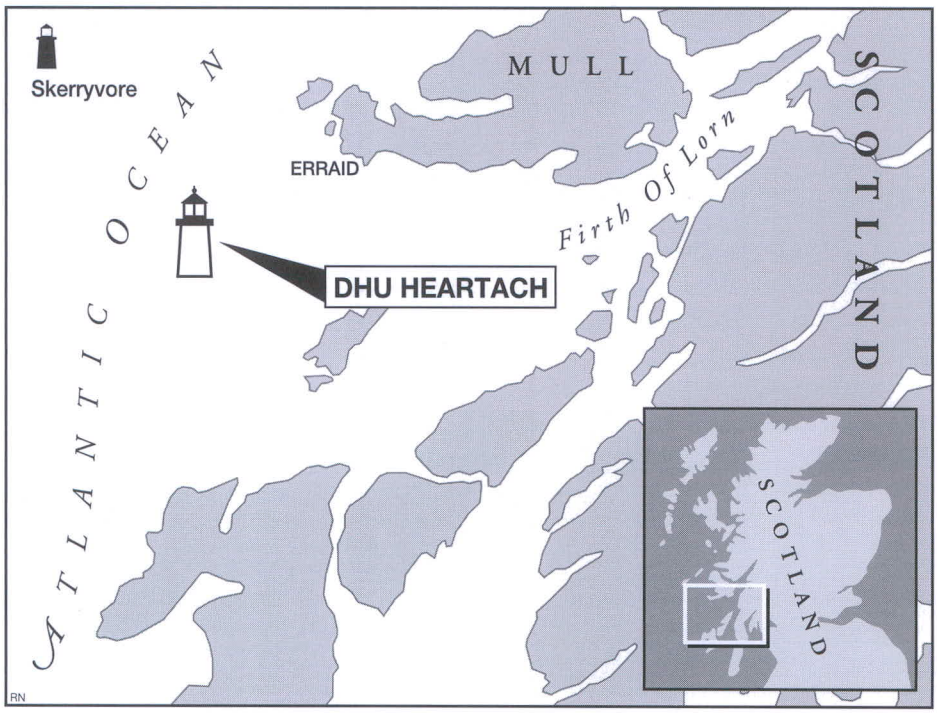
"As we approached the lighthouse we could see the keepers at work on the lee-side getting ready the derrick by which we were to be landed. Up to this time it had been doubtful - so said both the captain and the mate - whether the seas would be calm enough; but when we got under the lee of the island, we were assured that landing was quite practicable, although to our unaccustomed eyes the lumpy seas breaking in white waves did not promise much comfort. When we were within a [1,000 ft.] of the island the little steamer dropped anchor. The long boat was launched, manned by four sailors and steered by Captain Irvin himself, and in this we were rowed to the south-eastern end of the rock. The process of landing is interesting though when experienced for the first time it must appear sensational to those of weak nerves. The boat is not allowed to touch the rock. It is anchored by a long line stretching seaward, so as to allow its stern to swing to within 10 or 12 feet of the rock. The boat is kept in position by two stern lines attached to the rock. The derrick consists simply of a spar, which is rigged up by the lighthouse keepers as often as is required, and from which a stout rope...is suspended. When the boat is in position, the rope, which has a loop at the end of it, is dropped into the stern. You put one foot into the loop, hold tightly below a block, and are first hoisted into the air and then pulled downwards to the rock. There you are clasped into the strong arms of one of the keepers; and before you are released from the friendly grip, you are reassured by a kindly voice bidding you 'Welcome to Dhu-Heartach!'"

The provisions for the men at rock stations were the highest in Scotland. In 1870, the daily allowances per keeper consisted of 1 lb. of butcher meat, 1 lb. bread, 2 oz. oatmeal, 2 oz. barley, 2 oz. butter, 1 quart of beer, vegetables when available, and an allowance of 4 pence per day for sugar, salt and other condiments.

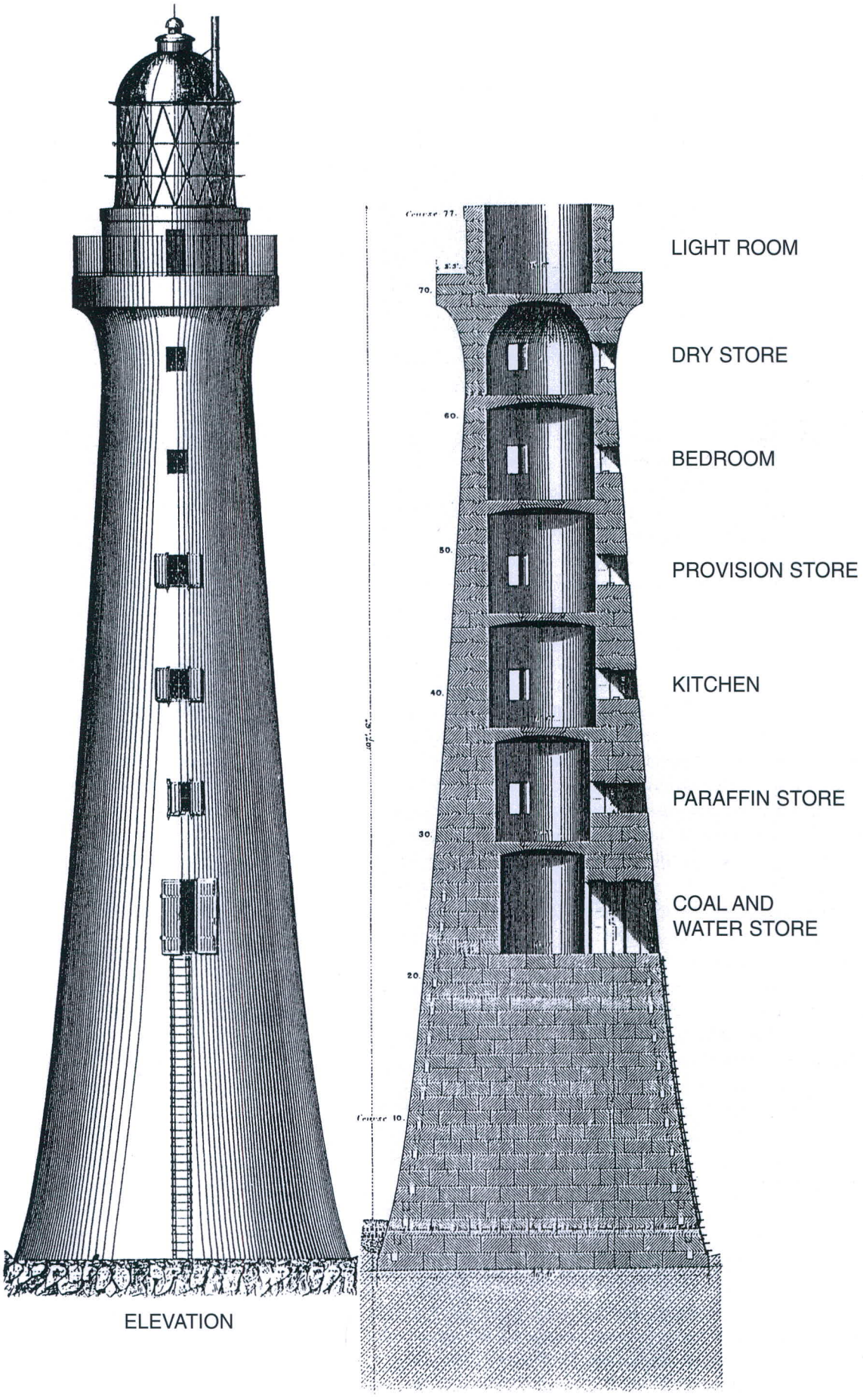
Pay was also higher at the rock stations. In 1870, the annual pay scale ranged from 28£ to 46£ ($2,512 to $4,127). These are incredible sums when compared to American keepers, whose pay ranged from about $320 to $600 a year. During the Gold Rush in California, keepers did receive $1,000 annually. But this rate was reduced to $600 after the Gold Rush waned.

The families of rock stations lived in service provided housing. A small amount of money was subtracted from the keeper's pay for use of the housing. One Dhu Heartach keeper reported that the four families of his station "got on" together. This was important, for the relations between the wives and even the children could affect the atmosphere of a remote station far from town or other dwellings. Although the men certainly had their work in common and often other interests, living in remote areas with few neighbors could be difficult for the wives. Because of the close-knit nature of the rock station families, many children became keepers or married lighthouse keepers.

Dhu Heartach was automated on October 7, 1971, and today continues to send its signal of two flashes every 30 seconds out over the waters of western Scotland.

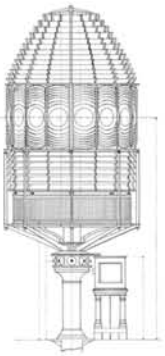


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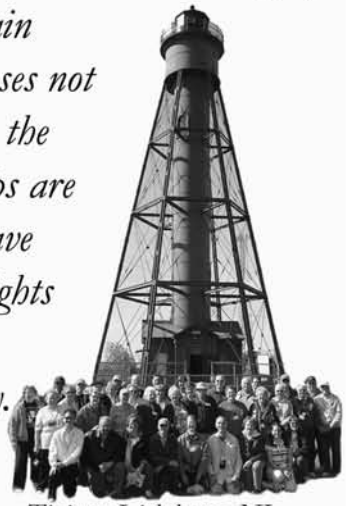
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