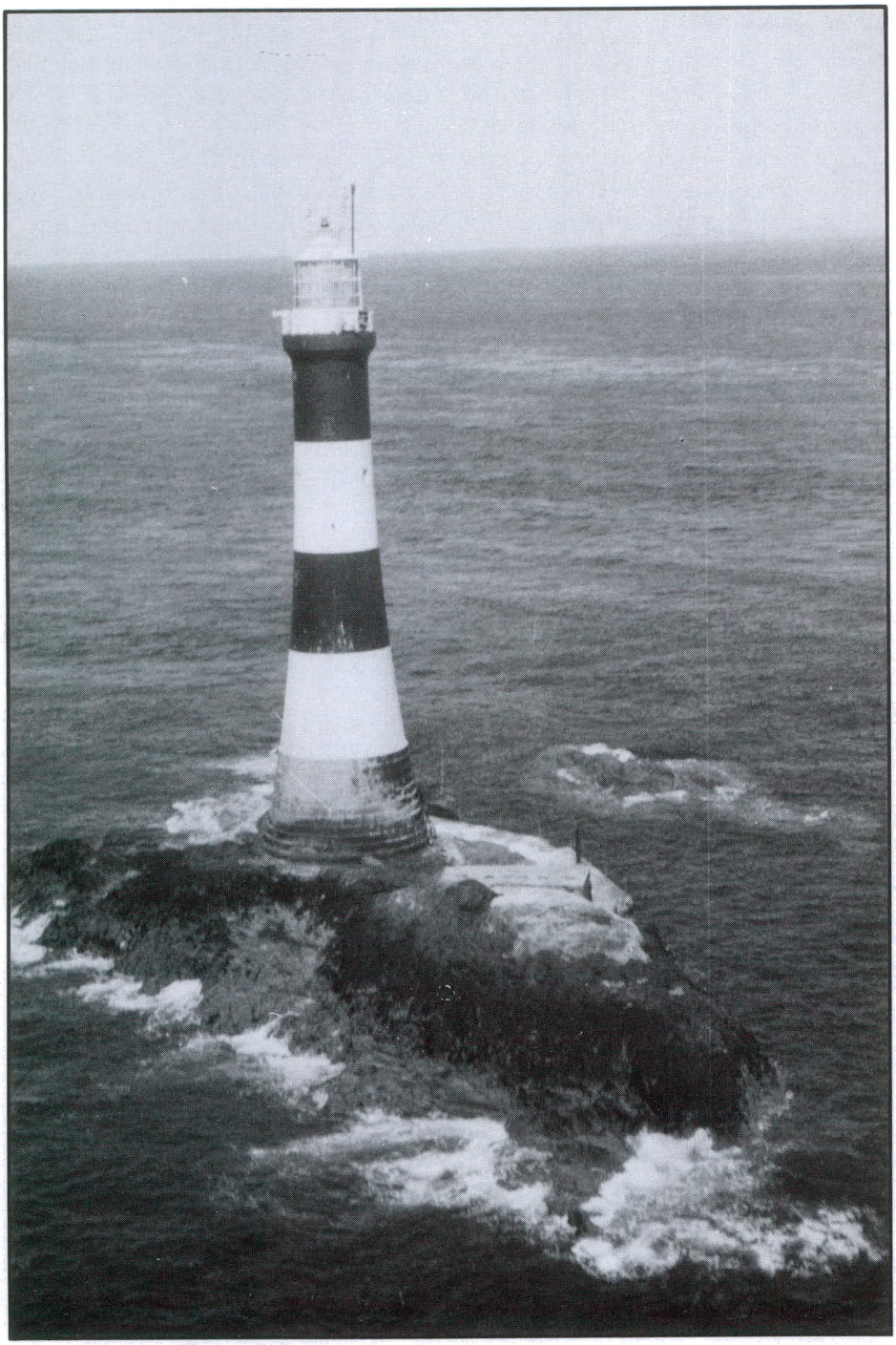
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End of an Era

Smalls Lighthouse

by John B. Mobbs



On April 24th, 1986 the keepers were withdrawn from Britain's most remote lighthouse. The tower has been stripped of all its internal fixtures and furnishings and the aids to navigation converted to automatic operation. And, so, an era ends.

The purpose of this article is to provide the flavor of life in an isolated lighthouse and give an idea of hust how primitive an existence it can be, even in this modern age. The writer is an active English lighthouse keeper who served on the Smalls from 1979 to 1981.

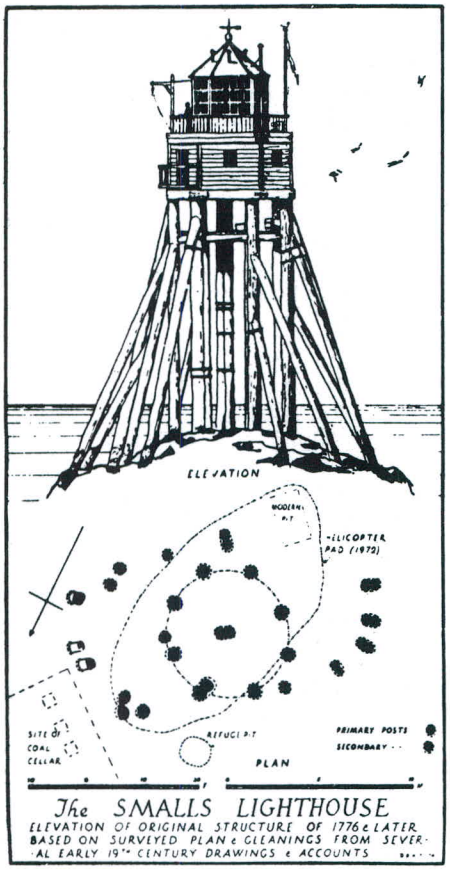
The Smalls stands on a tiny group of rocks 18 miles offshore from the southwest tip of Wales. Until a couple of years ago it was one of three manned lighthouses relieved by helicopter from St. Ann's Lighthouse on the mainland. Now all three have been automated, the personnel removed and the aids electronically monitored from manned St. Ann's light station high on a mainland headland.

Standing 141-feet high, the Smalls Lighthouse is a round stone tower, painted with red and white bands and topped by a white lantern. The structure has a graceful shape and is quite narrow toward the top. Considering the inside dimensions it is aptly named.

The lighthouse, constructed in 1861, replaced a one room wooden structure which occupied the other end of the long thin rock ledge since 1776. The remains of the wooden legs of this rickety old lighthouse

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can still be seen, let into holes laboriously pick axed out of solid rock and then fixed into place with molten lead and tin.

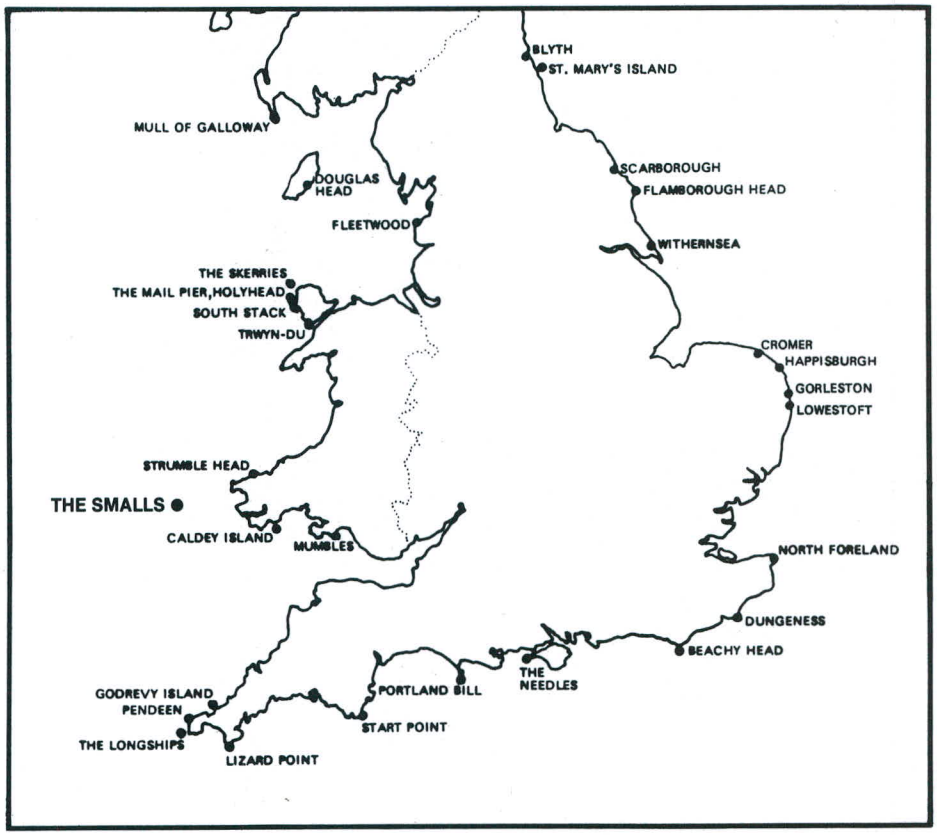


The modern Smalls was originally serviced by small boat but in the 1970s helicopter platforms were built around and above the lanterns of most isolated rock towers. The roof of the lantern was removed and a flat one installed so that the helicopter-pad need not rise to any greater height than absolutely necessary. Four metal rung ladders lead from the walkway around the lantern room (gallery) up through trap doors in the surface of the pad. This ensures that at least one hatch is free for use irrespective of where the helicopter skids or tail rotors are situated. The pad is only 27 feet in diameter so there is little room to spare when a helicopter is sitting on top with its rotors and engines going full blast in case an emergency lift off is necessary. When you step down from the helicopter it is only 2 or 3 feet to the edge of the pad, and those with vertigo quickly clamber down the ladder without looking toward the ground and sea far below.

Actually landing on the pad presents few problems even in high winds as the shape of the tower tends to suck the chopper down onto the pad quite safely. On few occasions reliefs have been accomplished in storm force ten winds (a gale). The problems arise as soon as one attempts to descend the vertical ladders as the wind tugs and batters both gear and clothing and it is often a struggle to clear the pad. Of course the crew going ashore could not leave until all the incoming men and gear were safely below. This meant moving all the boxes of food, stores and personal effects off the helicopter-pad. In later years rope slings were used to lower gear straight from the helicopter-pad through the hatch and down to the gallery.

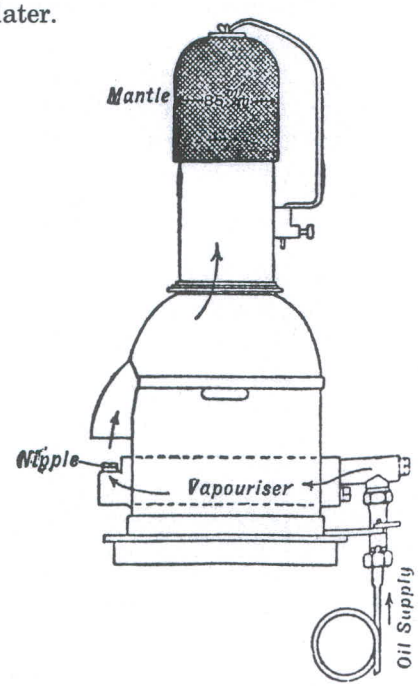
When I was first stationed at the Smalls the system was for one keeper to stand just below the hatch with one foot on a rung of the ladder and the other on the edge of the roof of the lantern. Boxes were then passed down to him and stowed on the roof until the helicopter had departed. Bracing ones back against the ladder it was a fairly rapid, though strenuous, way of clearing the helicopter-pad. However, in a high wind or when the metal was dripping wet it was not an operation to be taken lightly or too casually. The only accident that we ever experienced was the day that a lightweight cardboard box of eggs and loaves of bread proved just too light to stay still in the down draft of the helicopter as it lifted off. The box sailed gaily away on the breeze to feed the ever present gulls.

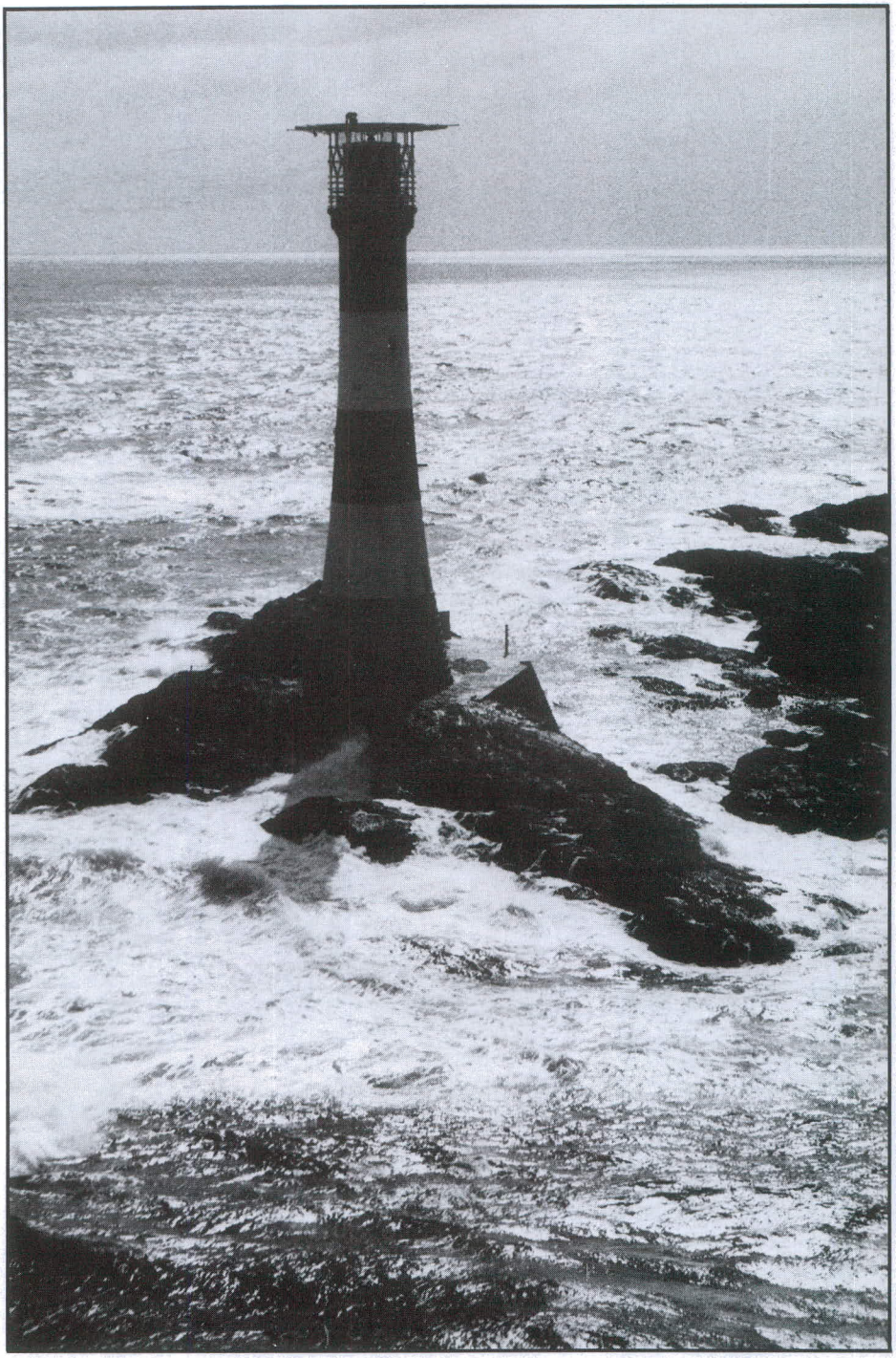
Imagine now, if you will, that it is 1980 and you are the newly arrived keeper. Having arrived safely on the Smalls let me take you on a conducted tour of the station. As we descend through the hatch in the helicopter-pad you notice the emergency navigation light on the roof of the lantern just beneath the helicopter-pad. Then we walk around



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the gallery catwalk and duck through the heavy metal doorway into the lantern room. Most of the lantern room is filled with the immense and beautiful 1st Order Fresnel lens. It appears like a huge bee hive cut glass prisms set in brass frames. In the center of the huge optic is a single 1,500 watt mercury vapor lamp, the size and shape of an American football. The lamp has a rated life of 3000 hours and it gives out an intense light that the lens magnifies and projects beyond the horizon. The lantern room also contains assorted batteries, battery chargers, etc. around the walls. Under the lens turntable are two ½ hp optic drive motors ready for duty and an emergency hand crank in case all electrical power fails. One other important item of station equipment is to be found in the lantern, but I will return to that later.





(Photograph by Christopher Nicholson.)

From the Lantern room we descend a curved metal staircase into the Service room. It is in this room that the keepers used to stand their watch in the days when the lamp was an I.O.V. (Incandescent Oil Vapor) lamp or P.V.B. (Parafin Vapor Burner) lamp. Now that the light is electric and wired to an alarm system there is no longer need for constant attendance, which is a good job too as the Service room, with its solid stone floor, is freezing cold in the winter. Today this room houses the VHF & UHF radio telephones and the UHF landline connection. The Service room also contains the "sublight"—a small arrangement of lenses that projects a beam of light through a small red paned window over a very dangerous submerged reef some 3 miles distant.

Leaving the Service room we descend a flight of curved stone stairs that spirals outside the next three floors. First is the bedroom with three straight bunks; two opposite the door (one above the other) and the third over the only window in the room. Each bunk has sliding curtains and a foam mattress on slats for circulation to prevent mildew.

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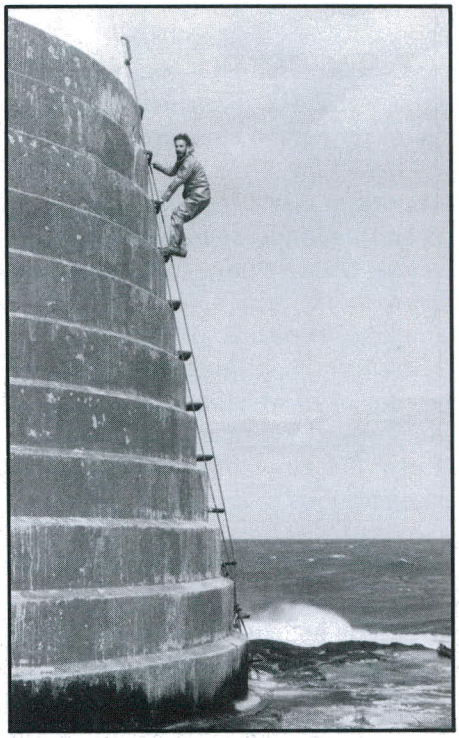
The next floor is the "all in one" room—the kitchen, sitting room, dining room, laundry, T.V. room, office and wash room (strip wash during the middle watch). Two thirds of the potential floor space is taken up by the cutaway of the spiral stairs going up one wall and down the other. This leaves just enough room for a curved seat (for two) beneath one window, a sink with drain board, gas stove and a work counter beneath the other window. A round table takes up half of the remaining floor space and the Principal Keeper's metal framed easy chair is just on the left inside of the inward opening curved wooden door. The T.V. is on a shelf behind the door. The room is a very small space, the meximum open floor space is between the door and the sink—a distance of just three paces. Opposite the entrance door to this space on the other side of the landing is a stores recess. It was once a window but has been painted over and closed up to provide a food store for bread, jam and other food stuffs for immediate consumption, since the Smalls is not graced with a refrigerator.

The next level contains the Accommodation room. A set of bunk beds for visiting mechanics is located in this space. Around the top of the walls are cupboards for canned goods. Below these are work cabinets usually filled with equipment spares and other gear for which there is no other storage space.

The descending stone spiral staircase terminates at a heavy metal fire door. Beyond it is a 14 rung metal vertical ladder that descends into a very congested Engine room. Two huge air compressors, for the fog signal, stand on opposite walls and three small Onan diesel generators are placed around the wall in a semi-circle. The meager output from these engines provides only enough electricity for the navigation lamp, the T.V. and either the water heater or the electric heater. This is the only heat in the station and it is, naturally, in the kitchen at the Principal keeper's feet, underneath the T.V. Actually he really does need it as the icy draft that comes under the door during the winter is quite something! There is a selector switch on the wall which ensures that both the hot water heater and room heater cannot be on simultaneously. That event would trip the generators off the line and kill all electricity in the station, including the main navigation light.

From the Engine room we climb down another vertical metal ladder into the Winch room. Heavy gear and equipment can be lifted into the tower by winch through the two heavy metal doors of this room. On the walls are the levers and dials pertaining to pumping fuel and water from the storage tanks into the upper stories. To pump fuel or water it is necessary to run the air compressor and it is a slow and tedious operation as each flip of the lever only pumps up a couple of gallons and it requires ten minutes between each pump to allow the air bags to deflate and thus permit more fluid to enter the system. The Winch room also has a small recess which contains the station deep freezer. The flush toilet used to be located in this space. As this was the only available space in the building where a freezer could be located it was a case of either/or, and so the toilet was torn out. Today the toilet consists of a "bucket and chuck it" up in the Lantern room—the "one more important item" I referred to earlier. Actually it is an Elsan toilet designed to be used as a chemical loo, but we used a rotation of buckets to collect used washing water which we took up to the lantern and with a disinfectant and a good sluice we managed some semblance of a flush toilet. But woebetide a keeper who failed to establish the wind direction before discarding the contents from the gallery. And, also, woebetide a keeper who neglected to make sure his fellow keepers are not sunbathing or fishing on the rocks below!

Back in the winch room, a tight spiral of stone steps leads down between bare stone walls to the actual entrance door which was used before the helicopter-pad was installed. Just prior to the helicopter-pad the choppers landed on the rocks, but this was only accomplished in calm weather when there was no danger of spray in the engines. Prior to helicopters small boats landed reliefs and stores on the islet during calm weather. During a gale waves sweep right over the rocks and even during moderate breezes a nasty swell can



Principal Keeper Voyle leaving Smalls.
(Christopher Nicholson Photograph.)

drive through the cut between the rocks making the landing of men and stores a very hazardous undertaking. During boat landings all the gear and men had to be immediately moved into the tower. The stores via sling and winch and men by climbing the metal dog steps which are let into the tower like staples in a tree trunk. This was a long haul and one not to be taken carelessly or quickly as the rungs are polished smooth

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(Christopher Nicholson Photograph.)

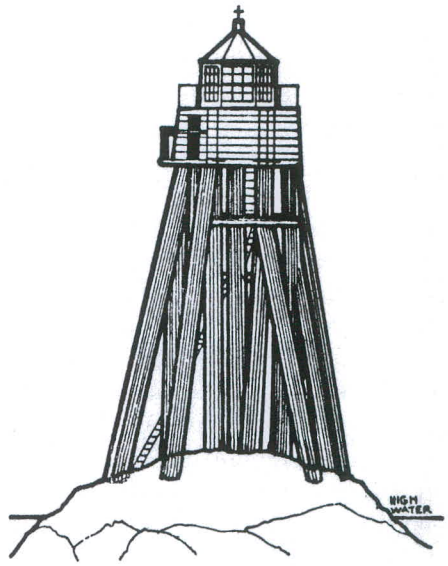
from wear and the elements are often wet from spray or rain. Since the tower curves out quite a bit near the base, one's head is always well forward of one's feet. Going up and down this ladder is more a matter of feeling than seeing, indeed looking down to the shore below is not a comfortable sight!

The small boat landing consists of large blocks of stone situated into the natural rocks of the inlet. Between the new tower and the tree trunk stumps of the old tower are oil and water tanks set in concrete bunkers to protect them from the waves that inundate the rocky island. The helicopters used to land in this area. The highest point on the islet is only 15 feet above high water. And thus ends your tour of the Smalls.

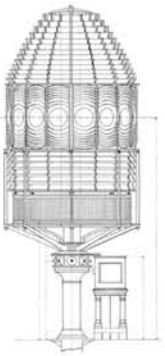
Now it's back inside and batten down the hatches and windows as there is a gale on the way. The kitchen will soon be streaming water from the walls as the cooker, heater and general humidity from the kettles cause condensation like a rain storm. When watching T.V. you need to mop up the puddle beneath your feet every ten minutes. The gale, now howling around the tower, means that you can't open the windows. One might be sucked shut with a gigantic slam while another blows open clobbering someone on the head. If the wind is from the south to west it is common for seas to sweep right past the windows, completely blocking out the daylight for a few seconds. An open window is an invitation that the waves just love! So both the inside glass windows and the exterior metal shutters are kept firmly closed in rough weather. It's rather like being in a dark, dank prison cell, except that the shrieking wind and pounding waves tell you that it's not only the stone walls that are trapping you.

But how joyous it is to fling back the shutters after being cooped up for days on end, to finally be able to go down on the landing and stretch one's legs for the first time in, maybe, ten days, or to climb up on the silent helicopter-pad on a calm clear evening, with millions of stars in a dome overhead and a wheel of spokes of light revolving beneath you and just the distant murmur of the engine exhaust far below to break the still sweet silence. It is times like this that one feels that a 28 day tour of duty is far too short and that to go on leave is to intrude into a calm and ordered existence. But when battened down inside the tower, the relief helicopter cannot arrive a day too soon.

All in all it is a way of life that I love and one I wouldn't change. However, as each tower is automated the opportunity grows less and I, for one, will be very sad to see the day when all the lighthouses are lifeless.



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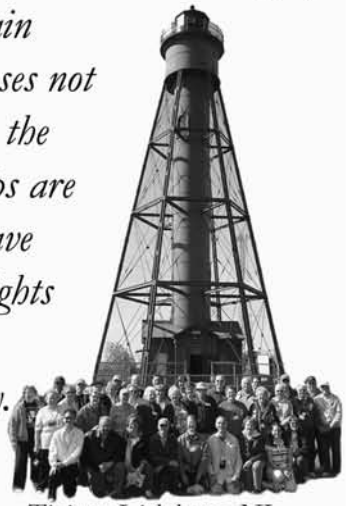
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