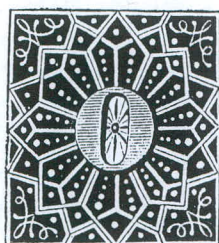


The Isle of May Scotland's first Lighthouse

by Wayne Wheeler



In a bitterly cold morning in January 1791 Henry Dowie, Assistant Keeper of the Isle of May Lighthouse, descended the stairs from

roof of the structure at the end of his watch. He had been assigned the last watch of the night, roughly from 2 a.m. until sun up. He had spent a rigorous night tending the open coal fire. In fact he could remember few nights as miserable as this one had been. The bitter cold and strong wind demanded that he shovel 400 pounds of coal an hour into the coal grate. The shifting wind caused him to constantly move about the open roof to keep from being scorched by the flames. But it was done, and he was ready for some hot tea and bed.

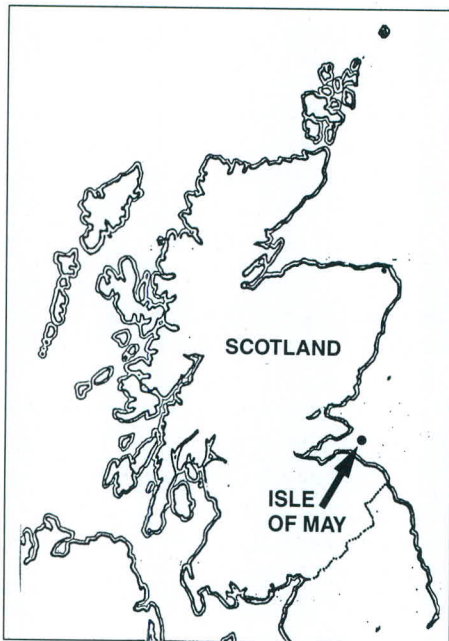
Keeper Dowie was about to enter his quarters on the second floor of the lighthouse when he paused. Funny, he thought, there are no sounds from head keeper Anderson's quarters on the ground floor. Certainly the keeper, whom he relieved at 2 a.m., would be fast asleep...but his 6 children were usually making enough racket to wake the dead. He should know as he often had a hard time getting to sleep after a late watch, what with the children yelling and laughing and carrying on...yet, nothing, not a peep.



Henry descended the remaining spiral stairs, which were built into a corner of the square building, and rapped on the heavy wooden door of Anderson's apartment. Nothing, no answer ... no sound. Slowly he pushed open the door and entered the room. There on the large bed in the corner lay Keeper Anderson, his wife and two small children. In the other corner were three more of the

children sprawled on another bed. All looked fast asleep, but very still. He shook the nearest child and a limp arm swung off the bed and Henry realized that she, and the others were dead. All dead! What death be in this place?, he thought. He recoiled and backed toward the door when he heard the faintest sucking sound. He listened and walked over to the large bed and stared down at keeper Anderson and his wife and, again he heard the sound. Slowly he rolled Mrs. Anderson over and under her body suckling her breast was their youngest child. Quickly he bundled the child up and left the tragic scene.

Keeper Anderson, his wife and 5 of their children had been asphyxiated by coal gas, carbon dioxide, which had seeped into the room through a slightly open window located over coal slag that was piled against the house. The surviving child was reared by a Miss Scott who held the patent for the Isle of May and the lighthouse and collected the dues paid by ships that sailed into the Firth of Forth to the river Clyde and the ports of that river. The child grew up to marry her saviour, Henry Dowie, and emigrate to the United States.



The oldest lighthouse on the Scottish coast, one of the oldest in Britain, and the only Scottish lighthouse ever to be privately owned is situated off the east coast on the Isle of May. The Isle of May, "moored" at the entrance to the Firth of Forth, is five miles from the mainland. The 140 acre island has a rocky coastline and a steep 150 foot high cliff on the west side that gradually slopes east to the sea. Its history dates back to the time when monastic settlements were established on small off-shore islands. Benedictine monks peacefully occupied the island of May until the 15th century when a Royal Act disbanded the settlement. Over the ensuing years marauding invaders and weather took their toll on the buildings.

The Firth of Forth is a large estuary leading to the heart of Scotland. This naturally protected waterway grew in importance as Scotland and England's

mercantile trade expanded. At the approach to the estuary, on the north side, lurks the dangerous Carr Rock which has claimed a great many ships over the years. And further north, between the Firths of Forth and Tay lies the Bell Rock, even more dangerous than the Carr. The 2,000 foot long Bell Rock only bares 6 feet of jagged spine twice a day at low tide.

About 1550 a group of representatives from the major Scottish towns, known as the Convention of Scottish Burghs, was formed to look after the rights of their citizens, to protect them from encroachment from the Church, Crown or Barons...whichever was encroaching at a particular moment. In March of 1625, as James VI lay dying, the Burghs heard the first proposal for lighting the entrance of the estuary because "...thai had sustenit sum los in thair ships and guid...and considdering that the hous of Balcomie was ane convenient plaice for setting ane licht at the said land for preventing of such incovenients in tyme cuming..." Although King James had granted a few patents for lighthouses along the English coast nothing came of this request. With the dawning of the 17th century the seas became busier as trade increased and the Scots discovered the rich fishing grounds off their coast. Marine traffic increased even more when the Dutch began fishing along the Scottish coast.

In 1630 King Charles asked his Privy Council in Scotland what they thought about erecting lights on the coast, funding same and if interested parties might, "pay suche a dewtie to" maintain the lights. The lords convened with the Convention of Burghs, ship masters and

captains to discuss the matter in general and the request by Alexander Cunningham of Barns to erect a light or 'fire bitt' on the Isle of May.

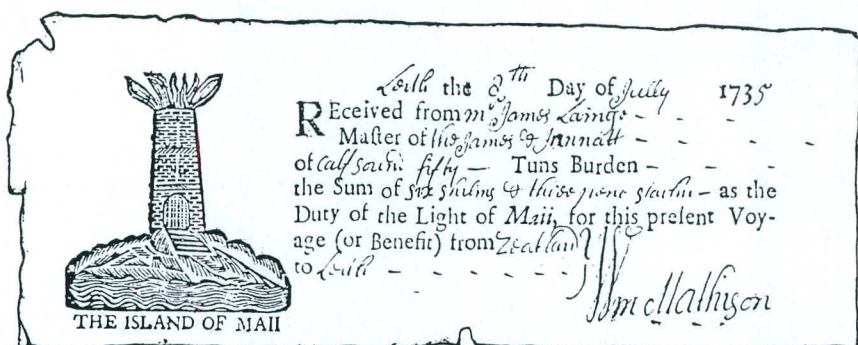
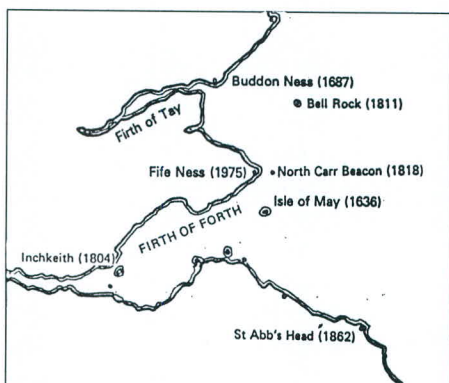
There was disagreement on establishing lights along the coast and although the majority were for a light on the Isle of May, nothing came of the matter until 1635 when Alexander Cunningham, who now owned May, and Charles Geddes persuaded the king to give them a patent to erect the lighthouse. Their testimony was supported by the master of a local vessel who estimated that 600,000 PS* worth of ships and cargo had been lost for want of a light on the Isle of May. He testified that the previous Winter he has not dared to enter the estuary and was forced to sail north with great danger (the Bell Rock



The coat of arms of the Royal Burgh of Lossiemouth and Branderburgh. On the waves of the sea in base, issuant from the dexter the foremost of a galley, and, on a representation of the promontory called Holyman Head issuant from the sinister, Saint Gerardine holding in his sinister hand a pastoral staff and in his dexter a lanthorn irradiated.

lurks 12 miles to the north of the entrance to the estuary). Another Captain thought that there should also be "ane light on the Skairhead" and another on

*PS—Pounds Sterling



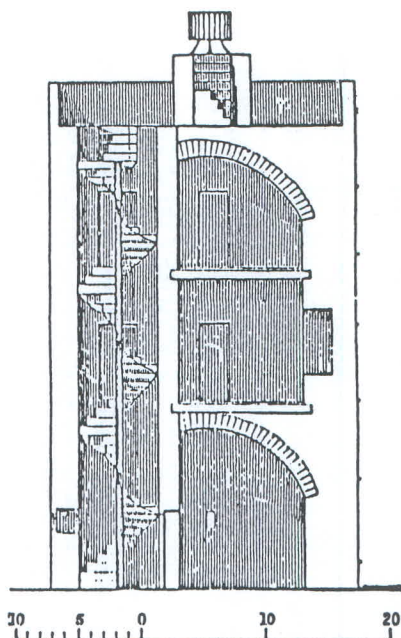
A receipt for "light dues" for using the Isle of May Lighthouse.

the "Inchekeathe." When the skippers were asked how far they thought a light could be seen from May one retorted "a kenning" (14 miles), another thought "in a dark nicht twenty miles, in a stormy nicht four miles and in a sawye nicht not at all."

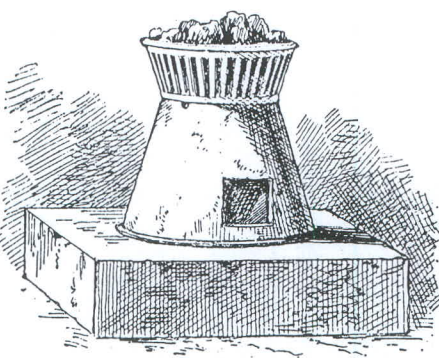
In 1636 the king gave the petitioners the power to erect the lighthouse, maintain it for 14 years and collect a 'reasonable and constant dewtie upon the tunnel and last of all merchandise transported that way as you sall finde to be necessary.' The king further decreed that all ships passing the light shall pay 2 shillings per ton if Scot and 4 shillings if foreign. The Customs Officers at each port along the Clyde collected the dues. Of course the king got his share too. Because he granted the petition the partners were to pay the Crown 1000 PS annually. The king also decreed that no other lighthouse was to be erected within said firth "under the pain of incurring our highest wrath and greatest displeasure."

The square lighthouse, completed in 1636, was constructed of rubble stone and was originally 40 feet high and 24 feet on a side. The interior consisted of three large rooms, one over the other with the ground and top rooms having vaulted ceilings. The roof of the structure was covered with slate and surrounded by a low parapet. In the center of the roof was a stone platform surmounted by the circular coal grate 33" in diameter and 21" deep. Access to all floors of the lighthouse was by a circular staircase built into the southwest corner of the structure. The grate consumed, at a minimum, 200 tons of coal annually. Although no record of the cost of the lighthouse survives there is official correspondence that indicates Cunningham had been put to "great charges and expense" in the construction. It has been estimated that the lighthouse cost 12,000 PS Scots or about 1,000 PS, a considerable sum in those days.

The day the lighthouse was completed Alexander Cunningham drowned when a brief storm blew up as he was returning to the mainland. The accident was considered mysterious and many rumors circulated concerning the tragedy.



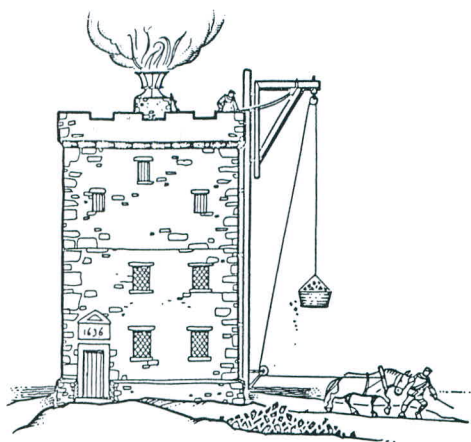
About ten years later some old women of nearby Crail confessed that, with the help of the devil, they had brought about his demise because, "This star light which Cunningham had set upon the water had made the heavenly stars jealous because his fire equalled theirs."



From the beginning, and for many years afterward, the Isle of May lighthouse was tended by one keeper. It was his duty to keep a coal fire blazing in the steel grate 365 days a year. The coal was delivered by boat which approached the island as close as the captain thought safe. The coal was then dumped into the water. The keeper waited until low water and retrieved as much as he could before retreating before the tide. He was then required to carry the coal on his back up the rock strewn hill to the lighthouse. The large grate and cold winds around the Isle of May required 200 to 400 tons of coal a year,

usually closed to 400. Coal was the preferred fuel for lighthouses of England and Europe. And Scottish coal was considered to be of the highest quality (and was exported to Ireland and other countries for lighthouses). The number of coal fired lighthouses in Scotland and England increased from 1 out of 1 before 1600, to 12 of 15 in 1770 and 21 out of 27 in 1760. Before 1780 mariners preferred a coal fire for a seamount as they could see a properly tended fire at a great distance and it was easily distinguishable from the light in the window of a house. The coal grates of France were situated so that the grates were even with the parapet and only the flame (and smoke) above the grate could be seen. In England and Scotland the grates were elevated so that the mariner might see the fire in the basket or grate as well as that above the grate. After 1780 advancements with parabolic reflectors and the development of the Argand lamp slowly caused coal fires to be phased out.

In 1786 the Northern Lighthouse Board was created to oversee Scottish lighthouses. The new board wanted to know how lighthouses worked and just how much various lights cost to operate. This wasn't all that easy as there were only about 135 lighthouses in the entire world in that era and most were coal fired. One of the first acts of the board was to inspect the lighthouses of Scotland and in that year they sent an inspection party to the Isle of May. Although it was still a privately maintained light, it remained so at the pleasure of the board and was responsible, in some aspects, to the board. The inspection team found George Anderson, who was to perish with most of his family 5 years later, in charge. They noted that he and his family lived alone on the island and that he received 7 PS and 30 bushels of meal a year for his efforts. That effort included hauling 300 to 400 tons of wet coal a year from the low water mark to the lighthouse and then hoisting it up to the roof as needed. To supplement his meager income Keeper Anderson often went fishing and, thus, the light wasn't always showing. The inspection committee found the coal of poor quality and in poor condition (due to being submerged in salt water until



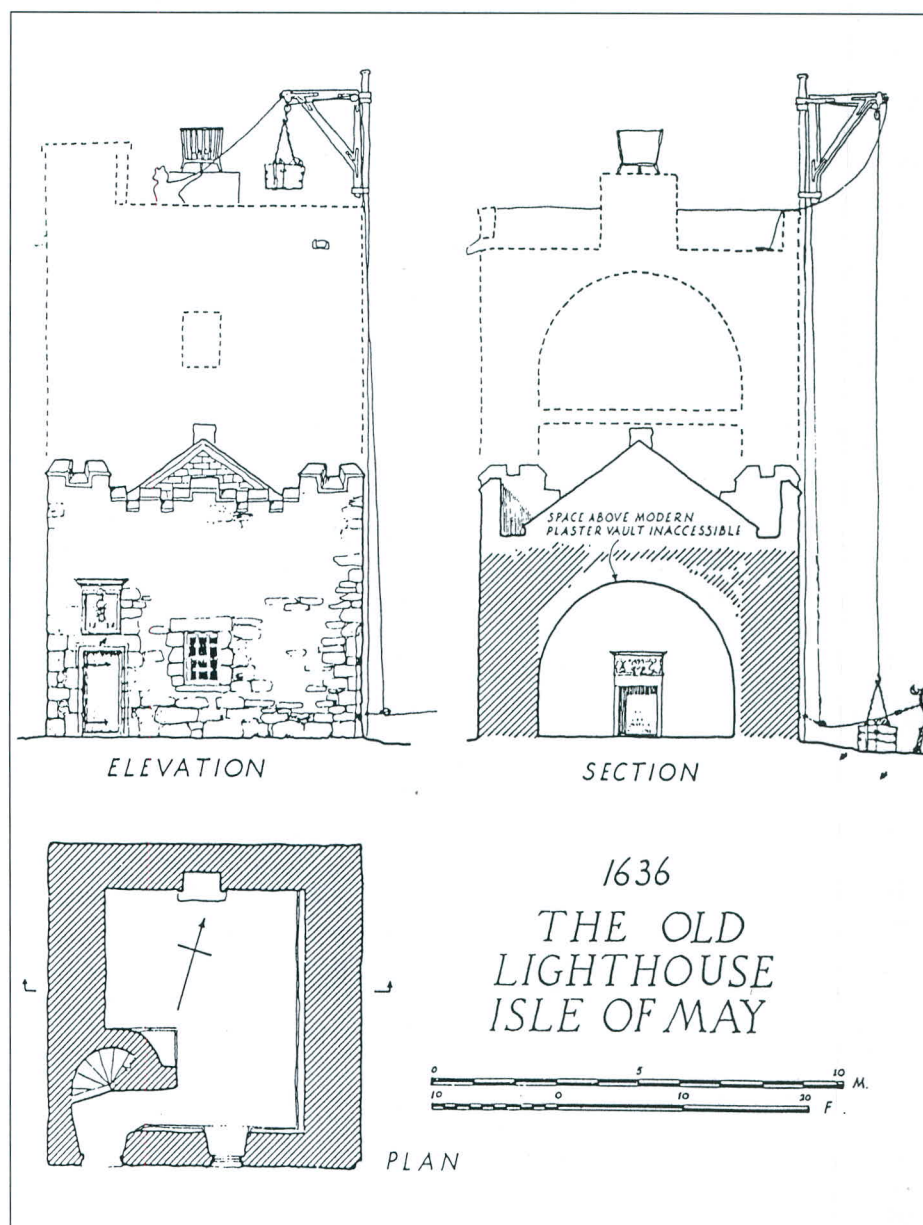
retrieved by the keeper). They recommended to Miss Scott, the owner of the patent during that period: (1) She purchase a better grade of coal, from West Wemyss in Fife, and that it be transported by a vessel not larger than 20 tons which would allow the coal to be landed on shore in lieu of being dumped in the water, (2) that the coal be covered until used (3) that a crane be erected on the parapet of the lighthouse to enable the keeper to more easily lift the coal, (4) that two chimneys on the lighthouse obstructing the light be lowered, (5) that a larger grate be installed, (6) that a better mode of moving the coal from the shore to the station be found and finally that an umbrella be constructed over the coal grate. As a result of these recommendations a second keeper was appointed, the grate was enlarged, a horse was provided to move the coal from the landing site to the lighthouse and she bought a better quality of coal. The rest of the suggestions were not carried out.

The horse was a vast improvement as far as the keeper was concerned. After sufficient coal was carried to the tower base by the horse the keeper hitched it to the pulley-basket apparatus. He then walked the horse away from the tower and the basket was hauled to the parapet and unloaded by the second keeper. The Board next appealed to the Chamber of Commerce to pressure the patentee to enclose the fire of the lighthouse. Apparently an attempt was made to install a crude lantern but it was removed "as it smoked the glas sae much as to render the light useless."

In 1796 the local Chamber of Commerce requested that the coal fire light be replaced by a reflector system. The patentee hired a third keeper but maintained the coal light. In 1799 accounts for the lighthouse show that 1,600 PS in dues were collected against an expenditure of 549 PS. The expenses were (roughly): 180 PS to the collectors, 227 PS for 366 tons of coal (including 83 PS for freight), 69 PS for wages (total) for **three** keepers, 28 PS for unloading the coal and pilotage, 34 PS for hay and beans for the horse, ropes, blocks, etc. and 11 PS for the upkeep of Anderson's surviving child.

The Isle of May was to be one of the last coal fires in England and from 1780 on mariners voiced complaints about

the coal fire at May, although the grate capacity was double that of other coal fired lights and the fire was reported to be well tended. On December 19, 1810 the naval frigates *Nymph* and *Pallas*, with a total of 600 men, sank on the Dunbar near the entrance of the Firth of Forth. Although only nine men were lost, the two vessels, valued at 100,000 PS were total wrecks. The blame for the wreck was laid to the light on the Isle of May. The ships' captains stated that because the light was obscured by smoke they mistook a fire at a nearby lime kiln for the light at May. As a result of this tragedy negotiations began between the Northern Lighthouse Board (responsible for Scottish lighthouses) and the patentee. The board agreed to



purchase the island, lighthouse and rights to the dues for 60,000 PS and the deed was carried out in 1814. A new lighthouse with an Argand lamp and parabolic reflector optic was constructed in 1816, thus ending the 180 years of a coal fire at the Isle of May.

Robert Stevenson, grandfather of Robert Lewis Stevenson and one of the great lighthouse engineers of all time, constructed a new lighthouse on the Isle of May in 1816. Stevenson had planned on razing the old tower because it would obscure the light from his tower toward the east. However, Sir Walter Scott who visited the site during the construction of the new tower, begged him to retain what he could of the historic structure, he pleaded for him to "ruin it a la picturesque." Stevenson agreed and removed only the top 20 feet of the old lighthouse. He installed a new parapet and pitched roof. Today the altered structure remains with the original frieze over the exterior door declaring 1636 and the panel over the interior fireplace carved with Alexander Cunningham's initials and the family shakefork symbol.

Since the construction of Stevenson's tower numerous changes have occurred on the Isle of May and to the aids to navigation surrounding the famous Firth of Forth.

A fixed first order Fresnel lens was installed in 1836 and in 1844 a second light tower and attendant buildings were constructed about 500 yards east of Stevenson's structure. The "low" light from this tower, in conjunction with the higher main light, provided a leading light or range which, when properly aligned, allowed the mariner to steer safely past the dangerous North Carr Rock seven miles north of the island. When the North Carr lightship was established in 1887 the 'low light' was discontinued.

In 1885 the station was vastly improved. With the installation of electrical power, three additional keepers and quarters for their families, were needed. The Northern Lighthouse Board constructed housing, an engine and boiler house, coal storage shed and work shop. Two 4½ ton generators capable of producing 8,800 watts were installed. The



Above—Stevenson's 1816 Isle of May lighthouse. Photo courtesy of the Northern Lighthouse Board (Scotland).

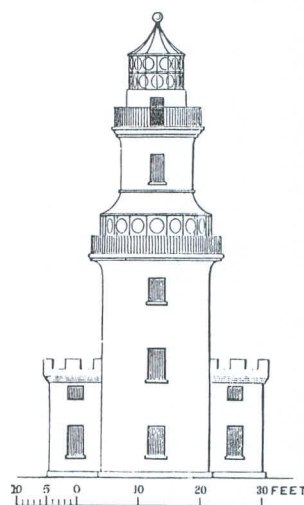
Below—Stevenson's first design for the structure. Note it was to be a "double light." The lantern room shows a two tier reflector system. A second, single tier, reflector system is depicted just above the railing.

Opposite page—The Isle of May looking NNW. The large structure is Stevenson's tower. The small white building to the right of the lighthouse is the "modified" original 1636 structure. The 1844 "low light" tower can be seen in the upper right of the photo and the remains of the other 1844 buildings in the middle right just above the helicopter landing platform. The structure at the very top center of the photo is a fog signal building.

Northern Lighthouse Board Photo.

improvement of electricity and an electric lamp caused the old three wick paraffin lamp to be discontinued. It was, however, retained just in case the new electrical plant failed. The new light was rated a 3 million candlepower and had a rated range of 22 miles. Ironically, with the development of the new Incandescent Oil Vapor (IOV) lamps around 1900 it was found that by reverting to oil they could discontinue the power generating equipment on the Isle of May, remove half the keepers and reduce their annual operating expenses from 2,884 PS to 1,031 PS a year.

In 1972 the station became a "rock station" which in England means manned by unaccompanied keepers who are occasionally spelled by relief keepers via helicopter. The lighthouse is still manned but it is soon to join the ranks of automated lighthouses.



Original Stevenson design which was not constructed



Photo Courtesy of the Northern Lighthouse Board—Scotland

Today the island is perhaps best known among naturalists for the bird observatory which was established in 1934 by the British Trust for Ornithology. The island was declared a Natural Nature Reserve in 1956.

Many of the buildings are used by naturalists to study bird breeding and migration habits. There are large colonies of gullimots, shags, kittiwakes and razorbills among the ledges of the cliffs and puffins nest in burrows on the east and north ends of the island. The flatter surfaces are host to herring and lesser black-backed gulls.

In July 1982 an American tourist from New Hampshire visited the Isle of May.

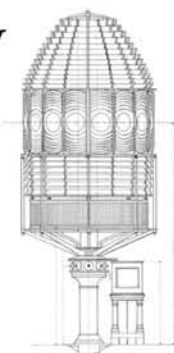
He met and talked at length with Summer volunteer Mike Fraser. The visitor was particularly interested in the old lighthouse. Volunteer Fraser showed him the structure and quietly watched as the American inspected it. The visitor turned to Mike and said "You know a very tragic event occurred in this house. One January night in 1791 fumes from an ash pile surrounding this structure pervaded the living quarters and killed all but one of a family of eight." "Why that's correct!" stated Mike, "but how did you know of that old tale?" "Because", replied John Douglas Dowie, "that baby that survived was my great, great, great, great grandmother. There is a grave in

Andes, NY with an inscription on the headstone that reads *Our mother Lucy Anderson, wife of Henry Dowie, born on The Isle of May, Firth of Forth, Scotland. She alone by a special providence was found after the fatal event, alive and sucking the corpse of her mother. God in His infinite mercy preserved her and in his goodness blessed her with a disposition in which every female virtue shone...*"





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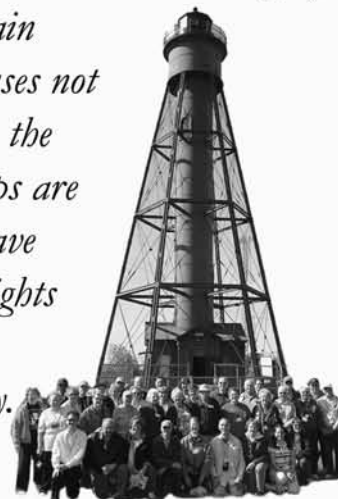
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