Green Island and Its Lighthouses

The History of Green Island, Ohio

by

Michael Gora
Middle Bass Island Historian,
Lake Erie Islands Historical Society


Originally published 3/9/06.
Footnote 8 revised 3/10/06
Typo on p. 3 corrected 5/1/06
2 Addendums Added 8/27/08 and Updated 8/28/08
Corrections to Fig. 9 caption and Footnote 8, 2/7/09
New Photo of Lighthouse (Figure 3) added, 11/28/09
1858 photo of lighthouse added, 2/17/16

This history was first assembled for Elizabeth C., a fourth grader in Red Oak Elementary School, Oklahoma City, OK. She is a participant in Moore Public Schools’ Gifted and Talented “S.E.A.R.C.H.” Program (Students Experiencing Appropriate Research & Creative Happenings). This year they are studying “Lighthouses” …history, geography, design, etc. It gave me an opportunity to summarize Green Island lighthouse history for her and publish a couple of rare Green Island lighthouse postcards that very few people have seen before.

Did you know that Oklahoma has the East Wharf Lighthouse, the most inland working lighthouse in the Untied States? It is at Lake Hefner in Oklahoma City.
Green Island, Ohio, one of fourteen islands that make up Ohio’s Bass Islands Archipelago in western Lake Erie, first made a name for itself in 1820 when it was still called Moss Island. Major Joseph Delafield, an American Agent of the International Boundary Commission which was surveying the U.S.-Canada border for the first time, was visiting the island when he discovered celestite crystals there. Also known as strontium (called "strontian" at the time), these crystals occurred naturally in the cliffs along the east side of the island. Green Island was soon the main American source for the element. For a number of years after Major Delafield’s visit, the island was called "Strontian Island," and all the strontium was mined fairly quickly. Exactly when the name changed to Green Island is uncertain, but it was probably between 1840 and 1860.

Figure 1: Major Joseph Delafield, who first visited Green Island (Moss Island) on Oct. 18, 1820

1 Image from *The Unfortified Boundary*, a private reprinting of Major Delafield’s diary in 1943
Major Delafield visited Green Island for the first time on Oct. 18, 1820. He returned briefly on May 15, 1821 and again for a longer day trip on July 20, 1821. On that day, his group took out all the strontium crystals they could carry, the largest of which weighed about 7 pounds. Strontium was used to make fireworks, among other things.

For many years, the island was the principle American source of specimens of celestite for mineralogical collections throughout the world. Green Island and Crystal Cave on Put-in-Bay had the only known strontium deposits on the Lake Erie Islands in the nineteenth century. (Strontium was also found on Grosse Ile, MI.) In 1851, the U.S. government purchased Green Island from Alfred P. Edwards. The first Green Island lighthouse was built in 1854 and burned in 1864. Here's a photo of it in 1858 from the National Archives. The story of its burning is below.
An Eventful Night – Thrilling Story of the Burning of Green Island Light House in 1864

"That cold New Year's night," is the way the old folks put it when they refer to the time wherein occurred the events here narrated. The night was that of the outgoing of '63 and the incoming of '64, and is remembered as the coldest ever known in this country. Among the islands, exposed as they are to the fierce blasts which sweep Lake Erie, this particular cold snap was especially noted.

December 31, 1863, was mild as an April day. Heavy rains had fallen, filling ditches and lowlands with water, while the lake was entirely free from ice. With the cessation of the rain, however, a gale sprang up from the Northwest which steadily increased in violence. As darkness fell and night advanced, the sea rose in its strength and swept the shores with a deafening roar. The gale became terrific in force and its breath cut like daggers, so that pedestrians along the island roads could scarcely face it. Within a few hours the mercury dropped from 60 degrees above to 25 degrees below zero.

At Doller's Hall on Put-in-Bay, a party of young people had assembled to dance "the old year out, and the new in," but owing to the extreme cold they had deserted the dancing floor and had formed a gathering around the stove. Suddenly the group was startled by a glimmer which shot up over the tree-tops, faintly illuminating the windows of the hall.

"It's the moon rising," suggested one. But no, there was no moon, and in a moment a bright flame arose, mounting higher and higher, while the sky was a lurid glare of light. A few moments later came the news:

"Green Island light-house is on fire!"

This intelligence struck a chill to the hearts of all who realized its import to the isolated keeper and his family on that bitter night; for in the wild storm raging without, the boiling sea and the midnight darkness, no human aid could reach them.

While at Put-in-Bay the alarm was spreading, Colonel Drake, the light-keeper at Green Island, and his family were gathered in the sitting-room of the cottage which flanked the tower, and formed a part of the structure. The hour was late. They were watching the old year out. No apprehension of danger came to them until above the roar of the wind they heard the crackling of flames. A moment later the whole upper portion of the building was discovered to be all ablaze.

---

2 From *Sketches and Stories of the Lake Erie Islands, Souvenir Edition*, Theresa Thorndale, Register Press, 1898
With characteristic coolness Colonel Drake attired himself in boots, hat, and overcoat before making any attempt to fight the fire, but seized with consternation his wife and daughter rushed at once from the house - the latter bareheaded, barearmed, and with feet protected only by thin stockings and slippers.

By means of a ladder Colonel Drake mounted to the roof with a pail of water. Miss Drake caught up a pail in each hand, and filling them from the lake, passed them to her mother by whom they were carried up the ladder to the burning roof where the keeper was making a brave effort to stay the flames.

Over thirty pails of water were in this manner transferred to the roof, but though they worked with the energy of despair the fire steadily gained and colonel Drake was forced to beat a retreat down the ladder.

The family now turned their attention to the saving of their valuables, some of which were secured, but already the interior of the house was burning and smoke met them at the door in stifling volumes. A sudden thought of his family’s precarious condition almost turned the brain of Colonel Drake. Unless he could succeed in saving a bed or two with which to protect them from the intense cold, they must inevitably perish, since no assistance could reach them from adjacent islands until the sea went down. He darted into the burning structure. Tongues of flame licked his face, singed hair and beard, and the smoke blinded and choked him. With a desperate bound he gained the door of an adjacent room. The flames had already communicated to this apartment, but the bed was still untouched. Upon it was a tick filled with feathers and another with straw. Hastily rolling them into a comforter, he shouldered the bundle and succeeded narrowly in making an exit from his perilous situation.

The scene now presented was one of the wildest grandeur. Blown by the howling blast, the fire surged, and roared, and by its vivid light could be seen line after line of white breasted waves rushing tumultuously shoreward, and breaking with a thundering sound at the base of the tower. Clouds of blinding surf mounted thirty feet into the air and showered upon the steps, freezing as it fell, and forming a glaring pavement of ice upon the very threshold of the burning structure. Wind and sea, fire and darkness had united, and seemed to vie each with each other in painting a picture of savage sublimity.

To the houseless family the situation was one of horror. Under strong, nervous pressure Miss Drake had exhibited unwonted endurance, but when nothing more could be done, strength deserted her and she sank into an almost insensible condition. An examination revealed the fact that her ears, arms and legs were frozen stiff. The bed was removed to an out-house which remained standing, and with father and mother the girl was tucked carefully between the ticks, and thus through the remaining hours of the night they endeavored to keep each other warm.

Pitt Drake, son of the light-keeper, was at Put-in- Bay, having formed one of the party assembled at Doller's Hall. Frenzied with apprehension concerning the fate of his kindred, the young man could hardly be restrained during the night from setting out by boat for Green Island - an undertaking which could have resulted only in his being drowned.
With the dawn of New Year's day came a lull in the storm. The unprecedented cold had thickened the waters of the channel with slush ice and frozen drift, and although a heavy sea was still rolling a few miles beyond, the channel between the two islands was becoming rapidly crusted with thin ice.

Pitt Drake was now determined to hazard a passage to Green Island, two miles distant, and in the enterprise was re-inforced by a number of hardy and courageous men. Two cutters were procured, together with ropes, pike poles and several long planks. The ice was not sufficiently strong to bear men and cutters, and the way was bridged with planks which were projected forward and each as it was passed over was taken up to be again placed in position. Several times the shifting and sinking of these planks threatened disaster, but the party reached their destination without serious mishap.

With a feeling of dread Pitt Drake now approached the smoldering ruins of the light house. No signs of life were visible; the little island seemed empty and deserted.

Had the family perished in the flames, or had they suffered the slower agony of death by freezing?

While with a beating heart he sought for a solution of this problem, a shout was heard from the outbuilding - the only one which the island now contained. The unfortunates had been discovered, and in a moment young Drake had clasped the hands of his kindred and was shedding tears of gladness and relief unspeakable. The family was removed to Put-in-Bay - by means of the cutters employed - where they were taken in and cared for at the nearest habitation. They were all more or less prostrated and medical aid was summoned for Miss Drake whose sufferings from the exposure of the previous night were terrible. Col. Drake also suffered both from the cold and from burns received.

The Drake family subsequently removed to the mainland. Thirty-five years have passed since the occurrence here recorded. Green Island lighthouse was substantially rebuilt at a later date by the U. S. government, but the old residents of neighboring islands have never forgotten the night when the original structure went up in flame and smoke.

Account of the fire from the Sandusky Daily Commercial Register, January 5, 1864

GREEN ISLAND LIGHT-HOUSE BURNED - The Light-House on Green Island was burned between 7 and 8 o'clock on Friday evening last.

The light was a recent one, being built in 1854 from an original appropriation of $5,000 made in 1851. It has been repaired and improved from time to time - some additions having been made last fall. The light was a "flash light" with a costly French mirror, and was very important to lake navigation. The structure was somewhat like the one on Cedar Point, being a light tower and dwelling conjoined. The light was kept by Col. Chas. F. Drake, formerly of this city, who is a severe sufferer - he having saved only two beds, a marine clock and some small articles.

The loss to the government will be from $6,000 to $8,000.
By July 1865, a new, two-story lighthouse had been built on Green Island. The square tower and its adjoining keeper’s house were made of limestone. The ruins of this lighthouse still stand today.

![Figure 2: Green Island Lighthouse, around 1912. Taken by lighthouse keeper George Ferguson](image)

A 1913 story by Lydia Ryall, reprinted in my 2004 history of the Lake Erie Islands, is excerpted in the following:

Hibernating at Green Island may be found another employee of “Uncle Sam,” George Ferguson, who has held the position of lighthouse keeper there since June, 1905, a faithful wife having been his only companion during that period.

Mr. Ferguson, the present keeper, has been in the government service for a period of fourteen years. Having served three years at the Ashtabula Life Saving station, he was appointed, in 1901, assistant keeper of Detroit River light.

A year later he was promoted to keeper of “Black River” light at Lorain, Ohio. After serving there two years, he transferred to Green Island, where he has been employed for the past eight years.

Mr. Ferguson and wife have rendered assistance to several small launches, and sail boats, while at Green Island, bringing them ashore, and caring for them

---

4. Ibid.
until, Mr. Ferguson could fix up their boats, and send them on their several ways.

In recent years, Mr. Ferguson has suffered much from ill health and his plucky little wife thinks nothing of jumping into a boat and pulling across a mile of open water, through all kinds of weather, for a doctor. Latterly, however, they have arranged a code of flag signals with the Put-in-Bay light keeper. When assistance is required, they signal from the tower. At night, lights are used instead of flags.

Mr. Gibeaut held the position of keeper on Green Island for several years, having many adventures; but Mr. Ferguson’s immediate successor was owner of a splendid team of Italian greyhounds, and with a sled of ample size made daily trips across the ice to Put-in-Bay, carrying his children to and from school. The dogs were provided with a light but fancy set of harness and made the run with remarkable swiftness.

Mrs. John K’Burg, of Catawba Island, daughter of Mr. and Mrs. Gregoier, and granddaughter of Col. Drake, is now the only one living of the six persons who were at Green Island the night of the (1864) fire. Though but a little child at that time, she retains a vivid remembrance of the events of that awful night.
Green Island and Its Lighthouses

The two postcards shown below are from my private collection, and have never been published before. They are the only historic postcards of Green Island I am aware of. The first (Figures 4 and 5) was clearly written by Bertha Ferguson, wife of the lighthouse keeper, George Ferguson. It is addressed to a relative of Charles Duggan, who was the lighthouse keeper at the South Bass Island lighthouse at the time. The postmark is unclear, but it is probably from 1912-14.

![Figure 4: Postcard Picture of the Green Island Lighthouse, around 1912-14](image)

![Figure 5: Back of the Postcard in Figure 4, written by Bertha Ferguson, the lighthouse keeper's wife](image)

Postcard from the author’s personal collection.
The 1913 article above mentions that the Fergusons used light signals to communicate with South Bass Island via the South bass Island lighthouse keeper, Charles Duggan. Mr. Duggan was born in 1866 at Sacketts Harbor, near Watertown, NY and was married there to Bertha Graham. The wives of both lighthouse keepers were named Bertha.

The above card makes it clear that Bertha Ferguson was also close to the Duggan family.

Figure 6: Postcard of Green Island, sent in 1907

Figure 7: Enlargement of the center of the image in Figure 6

---

7 Ibid.
The 1907 card is a Christmas card that was probably written by the Green Island lighthouse keeper, George Ferguson. The card is signed “Green Isld.” Postmarked December 24, 1907, it is addressed to Capt. & Mrs. J. Fox of Put-in-Bay. Instead of writing “Put-in-Bay” in the address, the Fergusons simply wrote “City”.

Capt. Fox was the master of the Steamer Olcott at the time. The Olcott was formerly the Steamer Lakeside. Heavily strengthened, she was built of steel and was one of the few Lake Erie ships built for the double purpose of being an excursion steamer in the summer and icebreaker in winter and early spring.

A small barn was erected for the keeper's livestock, which included a 3-acre partially wooded fenced in pasture. An inspector was impressed in a 1916 visit to the island because, “the chickens were confined, and there were apparently no other animals to clean out the underbrush.”

In 1926, the U. S. Lighthouse Service abandoned the residence after it had been in service for 61 years. The light was active until 1939, when the Coast Guard replaced it with an automated light on top of a skeletal tower. That light is still in service today, and is shown in Figure 10. It is on a 67 ft (20.5 m) square cylindrical steel skeletal tower (focal plane 80 ft (24 m); white flash every 2.5 s).

The old lighthouse building abandoned in 1926 was gutted by fire set by vandals at some point, but the shell still exists. The building is on the Lighthouse Digest Doomsday List, meaning that there is no hope for preservation of the building.
Green Island and Its Lighthouses

Figure 9: If you see this picture, it's NOT the Green Island, OH lighthouse  

Figure 10: The Green Island Lighthouse in January, 1963

8 Image courtesy of the U.S. Coast Guard, from http://www.uscg.mil/history/weblighthouses/LHWI.asp. While this image had long been called one of the Green Island, OH lighthouse by the USCG, there had always been considerable doubt about its authenticity and the USCG finally made a correction. The picture is actually of Green Island, WI in Green Bay off Marinette, five miles southeast of the mouth of the Menominee River. More information about this lighthouse is at http://www.terrypepper.com/Lights/michigan/green-island/index.htm.
At some point, Green Island came under the jurisdiction of the U.S. Fish and Wildlife Service, and is today managed by the Ohio Division of Wildlife as a wildlife refuge. Unfortunately, the south shore of the island has recently become overrun with cormorants in large numbers. They are visible in the tops of trees in Figure 11.

---

9 The picture was taken before an abundance of vegetation had grown up around it and prior to the house being gutted by a fire started by vandals. Photo by Harold J. Germann from the collection of Ronald L. Stuckey, Professor Emeritus of Botany, Ohio State University.

10 Picture by the author.
In the summer of 2005, Beau Sedivy and Nate Hahn made an excursion to Green Island and took a number of pictures. The following pictures (Figures 13-21) were contributed by them.

Figure 12: S. Shore of Green Island, July, 2003, showing denuded trees with cormorants on them\textsuperscript{11}

\textsuperscript{11} Ibid.
Figure 14: Green Island - The Walkway to the Old Lighthouse, 2005
Green Island and Its Lighthouses

Figure 15: The Front of the Lighthouse

Figure 16: Inside the Front Entrance

Figure 17: The Rear of the Lighthouse
Figure 18: The Year the Lighthouse Was Built, 1864, is Still Visible

Figure 19: Another View of the Entrance
Figure 20: Another View of the Rear

Figure 21: Looking Straight Up Inside Today's Light Tower
Addendum 1 (Added August 27, 2008 and updated August 28, 2008)

The article “Life History of a Small Island”\textsuperscript{12} contains an interesting story that had the original title “Green Island and the Manhattan Project” in a working draft before it was published.

It states that sometime between 1942 and 1944, “Miners were recruited from the gypsum mines that lined the Port Clinton area, sworn to secrecy, and delivered to Green Island under guard” to mine the germanium salts that could be found in the strontium there. The germanium was needed for early transistor research and the other main source was in Nazi-controlled Africa.

According to the author, Kenneth R. Dickson, the information was obtained from Dr. Ed Foster, emeritus chairman of the University of Toledo’s Engineering Department, who worked on the project. Dickson states that “the miners and engineers arrived on Green Island and reopened one of the existing strontium mines. All was going well until the mine spring a leak and the waters of Lake Erie were entering the mine faster than the pumps could remove it”. The operation was shut down, and the whole project lasted less than five days. When Dickson asked Dr. Foster if they removed enough material to make early transistors, he replied “the bomb went off, didn’t it?”

The skeptical reader will argue that germanium wasn’t used for transistors until 1948, but there are two possible responses that would not invalidate the story. Either the government made the first transistors secretly and Bell labs later patented them, or the germanium was needed for some other purpose related to the Manhattan project. With the Manhattan project files now de-classified, someone may find more information about this story hidden in the millions of pages available.

Last but not least, the article also mentions that Green Island and West Sister Island were both used as bombing or strafing targets during World War II. According to the article, the planes that fired at Green Island came from Wright-Patterson AFB near Dayton.

Addendum 2 (Added August 27, 2008 and updated August 28, 2008)

An unpublished Spring, 2007 survey of the caves on Green Island identified three definitive caves, plus several small cavelets and one cenote. The group surveyed a total 400 feet of cave in five different caves.

The following section is from the unpublished study. Credits will be added here after the study is published, but for now the contributor wishes to remain anonymous. The blue cenote is most likely the cave from which strontium/germanium was taken for the Manhattan Project.

\textsuperscript{12} Article by Kenneth R. Dickson. Published in \textit{Inland Seas} magazine (The Quarterly Journal of the Great Lakes Historical Society) Vol. 49, No. 2, Summer 1993, pp. 88-92
**Blue Cenote**

On the north side, the Blue Cenote – a beautiful blue 36x26-foot roundish pond in a slump - was measured and plumbed - it connects to the lake and lake fish have been reported in the Cenote - but no attempt was made to dive it, thanks to common sense and 50-degree water. Blue Cenote is surprisingly shallow: only about four feet at its deepest point, we found, and it is 37 feet 9 inches from the Lake.

The Blue Cenote has not technically been proven to be a cave, although its shape and location in the rock would indicate as much. Its location, 37 feet from the Lake, would indicate a connection to the Lake itself, especially given the light rhythmic movement in the cave that mirrors the Lake’s waves and the occasional presence of fish in the Cenote. An interesting natural feature, it is heavily veined with Celestine crystals.

Measurements were taken from above the pool, from the rock surface to the water level, and then across on an N-S and E-W axis. Maximum water depth was approximately four feet, but more shallow in most areas. From the profile and plan views below, we can see that the Blue Cenote was perhaps a dome cave which collapsed completely into the Lake due to its shoreline proximity, which had a diameter of perhaps 40 to 50 feet.

![Figure 22: The Blue Cenote on Green Island](image-url)
Green Island and Its Lighthouses

Figure 23: The Blue Cenote on Green Island