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Spring 2016

**Note to our Readers: This edition of “Light Reading” is primarily dedicated to news about the new Fresnel lens exhibit. “Light Reading” will return to its usual format with the Summer edition.**

## Fresnel Lens Exhibit Installed in Keeper’s House Museum



*Dan Spinella (designer) of Artworks Florida prepares to open the boxes that hold the replica Fresnel Lens to be assembled and displayed at the Keeper’s House Museum.*

A new Fresnel lens exhibit has been installed in the Keeper's House Museum at the Cape St. George Light.

The lens displayed in the Lighthouse Museum is a replica of the Third Order Fixed White Fresnel Lens that lighted the Cape St. George Light from 1857 to 1949.

The Fresnel lens was developed by French physicist Augustin-Jean Fresnel in 1822, and revolutionized the technique for transmitting light over long distances. The lens uses an assembly of prisms supported by a brass frame to reflect and refract (or bend) the light coming from a single lamp, and concentrates the light into parallel horizontal beams.

“Third Order” refers to the size of the lens, which determines the distance over which its beam is visible. First order lenses are the largest at more than eight feet tall, and are generally used in seacoast lighthouses, like St. Augustine or Cape Hatteras. Usually considered the smallest, the sixth order lens is only about 17 inches tall and is used in river or harbor lighthouses. Our third order lens sent out a beam visible for about 14 nautical miles, which is 16 statute miles.

“Fixed White” is the light characteristic of the lens. A fixed white lens emits a steady white light, and does not flash. When the Fresnel lens at Cape St. George was removed in 1949, the light characteristic was changed from fixed to flashing. The current Vega LED optic maintains the latter characteristic, and emits a one-second flash every six seconds.



*Dan Spinella assembling the lens.*

# Fresnel Lens Exhibit Installed in Keeper's House Museum (continued)



*Dan unpacking the Dioptric Panel.*

The 1833 lighthouse, built by sea-captain-turned-lighthouse-contractor Winslow Lewis, was most likely lighted by a candelabra arrangement of 13 or more whale oil Lewis Lamps, which Winslow Lewis patented in 1810. Because Lewis had a contract with the U.S. government to supply lamps for all U.S. lighthouses, the superior Fresnel lens technology was slow to be adopted in this country. Although a Fresnel lens was a large initial investment, the cost savings for fueling a single lamp instead of 13 was significant.

The replica Fresnel lens displayed in the museum contains 149 individual prisms set into the brass framework. The prisms are made of acrylic rather than glass, because acrylic has a better light transmission percentage than glass, and is lighter in weight and much less expensive than glass. The prisms are tinted green to match those in historic Fresnel lenses.

Dan Spinella of Artworks Florida in Celebration, Florida built the lens using CAD drawings and computer models based on Augustin Fresnel's original formulas. The brass frames are waterjet cut, then sanded and polished. The prisms are individually set and glazed into the framework.

The lamp displayed in the Lens Exhibit is a reproduction Moderator Lamp, which would have been used starting around 1860. This specific lamp design was developed in 1883 by Joseph Funck, who worked for the Lighthouse Service. Lampists were always seeking to invent a brighter and cleaner light to use with Fresnel lenses, so that lighthouse keepers could spend less time cleaning soot off the prisms. The replica lamp in the exhibit was handcrafted by Kurt Fosburg of Superior Lighthouse Restoration, LLC in Michigan.



*Dan Spinella gets assistance from Jerry Murphy with the installation of the new lens display.*



*Dan installing the replica lamp built by Lampist Kurt Fosburg from Michigan.*



*Lens display installed.*

# Members and Friends Celebrate New Lens



*SGLA President Jim Kemp welcomes guests at the reception introducing the new Fresnel Lens exhibit.*



*Members and guests view the lens exhibit.*



*Elaine Kozlowsky and Sherri Roberts greet visitors.*



*Members Debbie Flowers, Chuck Paget, Barb Paget, and photographer Debbie Hooper.*



*SGLA member Rhonda Lambert and grandson Gunner.*

The new Fresnel lens exhibit in the Keeper's House Museum was celebrated at a reception attended by about 100 St. George Lighthouse Association members, friends, and local dignitaries.

Gathered in Lighthouse Park on a sunny spring afternoon, the attendees enjoyed refreshments before viewing the magnificent replica of the third order lens that illuminated the lighthouse from 1857 to 1949.

SGLA President Jim Kemp welcomed guests and thanked members for their continued support which enabled the acquisition of the reproduction lens. The original lens was removed by the U.S. Coast Guard when the lighthouse was automated in 1949, and its current whereabouts is uncertain.



*Docent Jackie Bell tells visitors about the lens.*

Docents Jackie Bell and Mary Jean Heide offered information and answered questions about the lens as guests, including County Commissioner Rick Watson and TDC member Brenda LaPaz, marveled at the beauty of the full-size replica.

"A lighthouse without a lens is like an engagement ring without a diamond," commented SGLA board member Bob Heide.

And so now our spectacular "diamond" is reunited with its "ring" and ready for all our visitors to enjoy!

*Thank you to Debbie Hooper, [JoeBay.com](http://JoeBay.com), Lois Swoboda, and Jackie Bell for photos from the lens reception.*

# PLEASE PATRONIZE OUR BUSINESS MEMBERS

Welcome to returning Business Members **St. George Island Realty** and **Sometimes It's Hotter Seasoning Company**. Our membership campaign is still in progress, and we hope that all of our Business Members will renew their memberships for 2016.

- Aloha Bugs Pest Management
- BJ's Pizza
- Bobby James Roofing
- Builders by the Sea, Inc.
- Century 21 Collins Realty, Inc.
- Collins Vacation Rentals
- Island Adventures
- Island Outfitters
- Jerry Thompson, Realtor
- Journeys of SGI, Inc.
- Mason & Marilyn Bean, Realtors
- Pandora Schlitt, Realtor
- Prudential Shimmering Sands Realty
- Resort Vacation Properties of SGI
- Sometimes It's Hotter Seasoning Company
- St. George Island Civic Club
- St. George Island Realty
- Steve Harris, Realtor
- Suncoast Vacation Rentals
- Survivors Bait and Tackle
- The Butler Agency
- Thomas M. Shuler, Attorney-at-Law

## Quick Blinks

- **Spring Full Moon Climb Schedule**

May 21, 8 p.m. to 9:30 p.m.

June 20, 8:30 p.m. to 10 p.m.

Please call the Lighthouse Gift Shop at 850-927-7745 for reservations.



*Photo by Earl Orf*

- You may have noticed that someone has been missing at the lighthouse for the last few weeks. Lighthouse Keeper Jim Dunkin has been ill and hospitalized since mid-April. We understand that he is better, but his recovery is still underway. **We miss you, Jim, and hope that you will be well soon!**



**We don't want to lose you!!!!** If you have not yet renewed your St. George Lighthouse Association membership, please consider continuing your support of our historic lighthouse. We will be updating our records at the close of the membership campaign in June, and only current members will continue to receive our electronic newsletters, SGLA event invitations, free lighthouse climbs for the membership year, discounts at the Lighthouse Gift Shop, and the satisfaction (and tax deduction) of being a valued supporter of our historic lighthouse.

Please renew your membership with a check made payable to the St. George Lighthouse Association, and send it to 2B East Gulf Beach Drive, St. George Island, FL 32328. Thank you for your support.

## A Parting Shot . . .

