

May 2020

Volume 42 Issue 5



The Binnacle

Victoria Model Shipbuilding Society
Victoria, B.C.



Take care of yourselves, you have more models to build, more fun to have on the pond, more people to delight with your work. There will be lots of time when this crisis is over, so don't push it.

Ken Lockley on the Saint class tugs, and progress on his Glendevon.



Glendevon Restored.



Rough weather at the Fastnet.

Edward White about lighthouses.

<http://www.vmss.ca>



**From
The Bridge**

This is the second month without a meeting or organized event at Harrison Pond due to the coronavirus.

With the province starting to open things up, there is a possibility that we may have our meeting space available to us in June or July. There is also a possibility that Harrison pond may be open by June. These are not our decisions, and I expect we will still be social distancing. Anyway, Executive will have to decide what to do when options become available. We will do what we can when we can.

This year will be hard on us financially as we are not getting new members if we are not doing anything. I can't see the Saanichton Fair proceeding this year and that was both a good for our visibility in the community as well as putting some money in our accounts,.

If things do open in June or July, there is still a possibility of having Denton and Powell cups.

I would also like some volunteers to help with Awards and Trophies, and also Education/Entertainment so we can get underweigh when we are able to get together again. If you would like to help out, please let me know.

Also, I am asking you to to send pictures of your projects. I will be happy to send them out to our members as a way to keep in touch and to encourage each other. You can send them to <mailto:VMSS-President@shaw.ca>

Once again I thank Edward for keeping the Binnacle and our webpages going, and also those who contribute.

Hope to see you soon.
Ron.

2020 Executive Committee

<i>President: Ron Hillsden</i>	479-5760
<i>Vice-Pres: Dave Nelson</i>	812-1942
<i>Secretary: Elgin Smith</i>	384-0574
<i>Treasurer: Mike Creasy</i>	888-4860
<i>Director @ Large: Ken Lockley</i>	477-5830
<i>Binnacle Editor: Edward White</i>	385-6068
<i>Quartermaster: Vacant</i>	
<i>City Liaison: Mike Claxton</i>	479-6367
<i>Membership: Bev Andrews</i>	479-2761
<i>All above area code (250)</i>	



ON THE RADAR

Upcoming Events

Waiting on the end of the corona virus shutdown.



Meetings: Second Thursday 7:30-9:30
St. Peter's Anglican Church, Lakehill
3939 St. Peter's Road
Upcoming meeting: None till further notice.



Sundays 9-11
Harrison Model Yacht Pond (HMYP)
Dallas Road at Government Street
Closed, corona virus.



LANGFORD LAKE
Wednesdays 9:30
Langford Lake, Leigh Rd. at Trillium

**NEXT BUILD #32**

By Ken Lockley

May 2020



The picture above brings back memories" to me of Bud Reid and a member of our club for many years. "Bud" was chief engineer on the ship above, the "St Anthony".

Bob Rainsford and Bud were great buddies and lived close enough that they could walk to one another's workshops. Past president Ron Wild ran a tug building program at Juan de Fuca Rec. and Bob and Bud got involved in model ship building at that time and soon joined our club. These two guys became great builders and soon had a fleet of ships between them.

The picture above shows off the lines of the St Anthony as she cruises along somewhere close to Esquimalt, her home Port.

The three "Saint" Class tugs were commissioned for the Navy as St. Anthony, St. Charles and the St. John in the middle 1950's. Above is the St Anthony which had the longest service life of the three, 1957-95 and on our coast most of the 38 years in service.

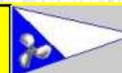
Originally designed to handle Canada's larger warships like the HMCS Ontario and HMCS Quebec. Once these ships were paid off, the need resulted in the St. John being sold to private interest. The last I can find of the St. Anthony was in 2005, she was renamed the "Matterhorn". If any readers have more recent information on the St Anthony, I would sure like to hear about it. Thanks in Advance.



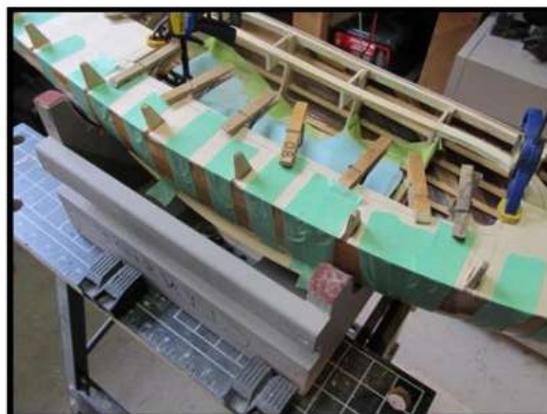
Another great picture by Mac Mackay of the St. Charles at Halifax Navel base. I feel these tugs were modern looking for the 1950's but were continually handicapped by being under powered. Regardless, St. Anthony and St. Charles stayed in service for quite a few years .



1998 picture of the St Charles, now "Chebucto Sea", operated by Secunda Marine Services



This months progress on the “Glendevon”. Being modeled as it is at present as a pleasure tug.

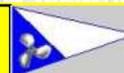


Top left: Here's the most difficult piece of band sawing in the model. In side curve is 90 degrees, the out side curve is 30 degrees at the center reducing to 10 degrees at the forward ends, with the bulwarks attaching at this point.

Top right: The picture shows fitting the sub deck with the bulwark stanchions in place. This deck work is a slow process but one I enjoy very much. A lot of trial and file to fit.

Lower right: Sub deck is fitted and glued in place. As you can see, clothes pegs and tape work well for this job.

Lower left: Ready to fit the Starboard side bulwark stanchions and then attach the sub deck. This is the fourth time I have done bulwarks and it's still a learning process.



Top Picture:

I have decided that I better paint the back side of the Bulwarks now, as it will be far more difficult when the Teak cap rail is in place.

The clear sub decking plywood will be covered with fir planking up to the stanchions.

The fir decking will have the look of Stockholme tar. I am hoping the contrast will enhance the appearance of bulwarks and the deck.



Center picture:

As you can see, I have taken advantage of the good weather and no wind to spray several layers of under coat on the hull. Once this paint is dry overnight I will carefully use a lacquer based spot filler, an auto body product at Canadian Tire stores.

Once sanded and ready for finish paint, I plan on Air Brushing Oil based "Trem Clad" gloss black paint on the hull.



A Ramble about Lighthouses.



The Pharos according to Assassin's Creed

The first recorded lighthouse that we know of was the Pharos of Alexandria. It was built around the 3rd century B.C. and showed the entrance to Alexandria for over 1000 years, succumbing to earthquakes between 956 and 1323 ad. Throughout this time Egypt remained the bread basket for all mediterranean civilizations and empires, and Alexandria was always its busiest harbour.

Astonishingly, the Tower of Hercules at Corunna, Spain, is still a working lighthouse today, having been built by the Romans in the second century ad, and renovated in 1791. It was built on the pattern of the Pharos, the original was 34 metres tall (112 feet) and the renovation in 1791 built on an extra octagonal storey so the lantern house is now 55 metres (180 feet) tall.

Of course, beacon fires are much older than shipping. (My very favourite scene from Middle Earth is the lighting of the beacons of Minas Tirith.) Beacon fires to guide ships to harbour have been common all through the centuries, as have been their rivals, the fires lit by wreckers to lure ships to wrecking coasts.

But they aren't cheap. Keeping a flame going that can be seen from miles away takes a bunch of fuel. Wood fires need feeding constantly to keep a bright flame, the glowing coals I love to



Tower of Hercules.

barbeque on won't help ships. So either lots of fresh wood or the addition of oil is needed and getting either of those to the top of a remote tower is costly. Candles were also used but bees have never worked cheap and tallow has lots of other customers.

You can readily imagine the number of hours spent in local council meetings around the world's coasts on how to economize on the light and how to pay for it. A common solution for a port was to have a light privately owned, and allow the owner to take a light duty out of the port taxes on ships docking.

In Britain, as Henry VIII expanded the Royal Navy, he granted a charter in 1514 to the "Master, Wardens, and Assistants of the Guild, Fraternity, or Brotherhood of the most glorious and undivided Trinity, and of St. Clement, in the Parish of Deptford-Strond in the County of Kent." This charter was to regulate pilotage. The first master was Thomas Spert, the sailing master of Henry's flagship, Mary Rose, and later Henry Grace a Dieu.

52 years later, Queen Elizabeth 1st. passed the Seamarks Act which enabled Trinity House "at their wills and pleasures, and at their costs,(that's our girl!) to make, erect and set up such, and so many beacons, marks, and signs for the sea.....whereby the dangers may be avoided and escaped, and ships the better come into their ports without peril." Trinity House is still a charity, its Masters have included Samuel Pepys, William Pitt the Younger, the Duke of Wellington, and Admiral William Penn, whose son founded Pennsylvania.

The current Master of Trinity House is Princess Anne, and Trinity House's 65 lighthouses are financed from "light dues" levied on commercial shipping calling at UK ports. (37.5 pence per tonne in 2018-2019). Trinity House shares its responsibilities for lights with the Commissioners of Irish Lights and the Northern Lighthouse Board (Scotland and the Isle of Man).



Argand Lamp with raised reservoir.

Anyhow, the first real advance in the actual lights used in lighthouses (and everywhere else) came from a Genevan, Ami Argand, in 1680. He invented the Argand lamp, which featured a cylindrical wick and a glass chimney. Air could get to the flame up through the centre of the wick as well as from outside around the base, and the chimney both increased the air flow and steadied the flame. Argand lamps produced from five to ten times the light of a candle, burned cleanly, and were a lot cheaper to run.

In 1783 Argand brought his lamp to England, and went into partnership with Matthew Boulton, (who built steam engines with James Watt), to manufacture the lamps. Sadly, the best oil available for the lamps was whale oil, and this remained true until kerosene became widely available in the 1860s.

The eighteenth century saw an unprecedented increase in world trade, especially with the opening up of the Americas. So lighthouses became more and more important and the need to mark

hazards, as well as harbours, meant that the time had come to place lighthouses out at sea.

The Eddystone rocks, 13 miles south-south-west of Plymouth, annoyed Henry Winstanley. He was a courtier in the time of the Merry Monarch, Charles II. He was the Clerk of Works at Charles's palace at Audley End in Essex, he designed and sold a very successful set of educational playing cards, and built and ran a museum just off Picadilly in London. From the profits he decided to try his hand at shipowning, but by 1696, the Eddystone rocks had taken two of his ships. Trinity House had been avoiding taking on the project for decades, but had a license from the Crown to build a lighthouse there.

Winstanley didn't know that such a project was impossible, so he made a deal with Trinity House and built it. In his own inimitable style.



The First Lighthouse on the Eddystone rocks.

And it stood from its completion, in 1699, through 4 years of weather, until 26th of November 1703, when the Great Storm hit southern England. That storm was so bad that the Navy lost 16 ships in it.

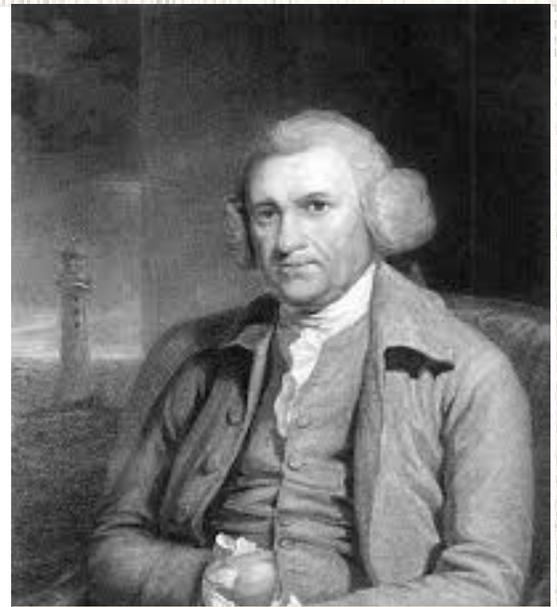
As the storm built up, Winstanley had gathered a gang of carpenters and taken a ship out to the light to reinforce it. They tried, presumably, but the night following their landing was the height of the storm and the light was swept away with all the men in it. No trace of Winstanley or his crew was ever found. Only a few mangled iron bars were left.



But in those few years, the light had proved its value. In 1706 a Captain Lovat obtained a lease to the Eddystones from Trinity House and with his architect John Rudyerd, erected a second lighthouse by July 1708. This was a much more sober structure, sheathed with massive vertical timbers and anchored by 36 wrought iron bars into the rock. John Rudyerd was obviously much more qualified to design it than his background as a silk merchant would suggest, because his lighthouse lasted until December 1755, when it was destroyed not by the sea, but by fire. The crew were rescued the following morning.

So in 1756, another syndicate took up the lease, and they, through the Royal Society, sought out a man with a proven record in engineering and building, who had presented award winning papers to the Society on the power of wind and waves. John Smeaton came from West Yorkshire, self taught because there were then no teachers, but self taught by experience of his own completed projects, successes and failures both.

Smeaton had the chance to examine models of both previous lighthouses and to learn from both. He took as his concept for the structure the trunk of an oak tree, a wide base tapering to the top, capable of standing through the worst storms, its own weight contributing much to its stability. He decided to build it in stone, specifically Cornish granite, with the stones carved to interlock with dovetails. The cost was going to be huge, and the labour horrendous, but Smeaton was convincing in his ideas and methods and on 16th October 1759 the candles were lit for the first time.



John Smeaton



Smeaton's Tower

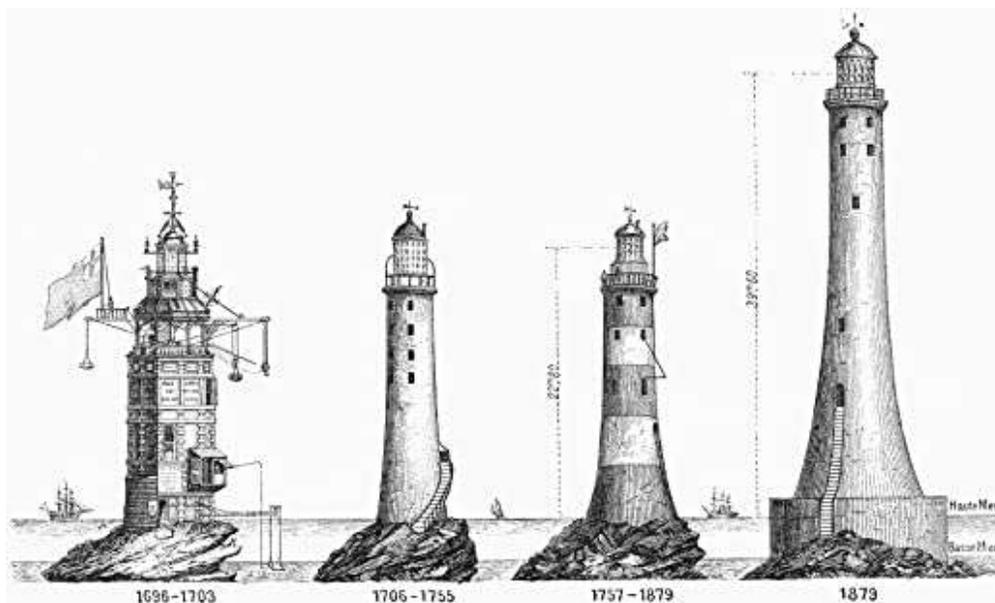
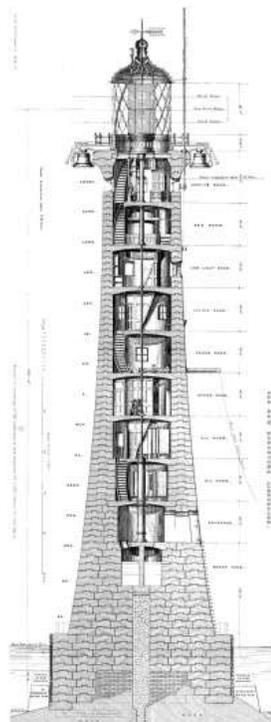
Smeaton's light stood and served on the Eddystones for 123 years, and the upper parts of it still stand, but now on Plymouth Hoe, safe inland. It was replaced not because of any fault in the structure itself, but because the sea had eroded the rock ledge on which it stood.

It was held in such esteem that the citizens of Plymouth found the money to dismantle the old stones and rebuild it on the Hoe. The base of Smeaton's tower still stands on the reef, a few yards from the current light.



The Eddystone reef today.

The current Eddystone light, built very much on Smeaton's principles, but at the height of Victorian engineering's power and confidence, with steam powered cranes and ships and rock cutters instead of all the manual labour of Smeaton's time, was completed and lit on the 18th of May 1882. It's 161 feet high (49 metres) and weighs 4,688 tonnes. It's now fully automated and accessed by a helicopter platform built above the light. The University of Plymouth took vibration measurements in the tower in the winter of 2013, which produced the severest storms in 50 years. They detected no weaknesses in the tower after its hundred and thirty one years. The light is visible to 22 nautical miles, two flashes every ten seconds.



The Four Eddystone Lights.

The current Eddystone light, showing the structure and the dovetailing of the granite.

Back to the lights themselves. The next advance was the use of parabolic reflectors to gather more of the light and project it in a single beam. Rotating the beam provided the means to flash the light out to sea in a specific time pattern so that a ship could tell which light it was seeing. The reflectors were an improvement, but were to be completely outclassed by a French invention, the Fresnel lens.

Augustin-Jean Fresnel designed multi-part lenses for use specifically in lighthouses. Essentially the Fresnel lens is a series of concentric rings that are prisms in section. These can be mounted to form a lens much flatter and lighter than a conventional lens, and, in addition, can gather light coming from a more oblique angle than a conventional lens. The first Fresnel lens was installed at the Cordouan lighthouse, (a story in itself), at the mouth of the Gironde estuary in 1823. It increased the luminosity of the lamp by a factor of 4 and became the standard that is still in use today. Fresnel lenses for lighthouses came large. Up to 3.5 metres (12 feet) high, and with as many as 1000 prisms, they made for lights that could be seen at huge distances, and a beam that often could be seen from the side, as it swung around towards or away from a ship. That's a very reassuring sight from a darkened ship bridge.





After 1860, Kerosene became the fuel of choice. Much lighter than whale oil, a wick can readily feed it to a flame from a reservoir below. (Whale oil, heavier and more viscous, needed a reservoir above the flame to feed the wick below.) And the flame from Kerosene was whiter and brighter. Kerosene also burned with less soot and less smell.

With the availability of electric lamps, the complete automation of lighthouses became possible, and some of the feeling has gone as a result. Identifying a lighthouse no longer means that there's another human being over there, maybe watching your approach and seeing if you are in trouble. Rationally, automated lights are both cheaper and more reliable, and modern navigation aids like radar and GPS means that they are less necessary, but here in B.C. we still have some 25 or so manned lighthouses and most of us like the feeling that there are still human beings out there watching our remote, rugged, coastline.

As with most of these articles, I started to write worrying if there was enough material to fill it, and finish with a huge regret for all the stories that I haven't put in, and the sense of many, many stories on the subject yet to discover.

If you go to the Lighthouse Directory on the web, you'll see that there are over 22,000 lighthouses worldwide today, that's an average of 6 built each month since Winstanley got going, and every one of them tells a story. I sourced most of this information from Wikipedia and the web in general, and the story of the Eddystone lights from a great little book, *Seashaken Houses*, by Tom Nancollas, about the rock lighthouses offshore from the British Isles. My sister Jenny sent me that for Christmas. Bless her!

If you fancy doing a different nautical challenge, how about a scale lighthouse that you could display in or by Harrison Pond on high days and holidays. Here's three locals.

The Entrance Light at Nanaimo.



The Fisgard Light, Victoria.

Race Rocks.



Suppliers

This page is simply a list of suppliers who have been found useful by our members or friends.

B.C. Shaver and Hobby, local supplier in Victoria.

Hobbyking, general supplier for all types of modelling, good mail order service.

Sarik Hobbies, laser cut kits and more. Over 1000 model boat plans, mostly from Model Boats Magazine.

Cornwall Model Boats, extensive British supplier. Plans from Marine Modeller International Magazine.

Belair Kits, laser cut model kits.

West Wind Hardwood, lovely lovely wood, in Sydney, worth a visit anytime.

Harbor Models, mail order site in California. All sorts to drool over.

Sources of Plans

Robert Allan Ltd. designed many BC ships and launches. They provide design documentation to modellers for any vessels which are more than twenty years old. The fee is \$150 CAD (including tax) for a set of model-building plans. As part of their ongoing commitment to support the Vancouver Maritime Museum (VMM), these monies are donated to the VMM without any deduction.

The Maritime Museum of BC has an online list of plans in their collection.

CFB Esquimalt Naval and Military Museum has an extensive collection of drawings of West Coast naval vessels. The list is online.

The Vancouver Maritime Museum has a searchable database.

Russel Brothers was a Great Lakes shipbuilder. Some plans are available for free download, including the first Ville and Glen class naval tugs.

Vanguard Model Marine Ships Plans are model makers plans which were carefully researched and drawn using official naval plans and information from Public Archives. Ships are WW2 and cold war Canadian naval and government vessels.

Library and Public Archives Canada has many ship drawings, but it is an exercise in patience to find what you want. The good news is that there is now a collections search function that appears to work quite well.

The Victoria Model Shipbuilding Society is a non-profit club, open to all, established in 1978 under the Societies Act of B.C.