

# The CDSG Newsletter



The Coast Defense Study Group, Inc. — Fall 2022



## Chairman's Message

Steve Waldron

It is that time of year when we make leadership changes. Robert Grimm has rotated out as the Chairman of the Board after he had the pleasure of running two annual membership meetings in that same time frame as Quent Schiller set the record for the longest time as a CDSG Conference Chair due to our delay of the New Orleans trip, which turned into a great adventure. I have been joined on the Board of Directors by Gordon Bliss, who has served the CDSG in many capacities, including as our Preservation Officer, along with Norm Scarpulla who also runs our Outreach and Representative Committee. Those two have given countless hours of time over the years to make our 435-member group what it is today. For many years I just kind of sat back and enjoyed the benefits of the Newsletter, Journal, Web Site, and many trips, before stepping up to the plate. I encourage anyone who feels they have something to contribute to volunteer either for the Board, as a Site Rep, for the truly critical need of a future Conference Chair, or to help out with the space left by the passing of BW Smith as far as editing and proofreading the publications.

We have once again been able to hold the annual membership dues at \$45, a rarity compared to gas, food, and everything else.

The last item I would like to mention is to get your Portland Conference Registration form and deposit in as soon as possible to help with the planning of the logistics of this trip. The conference will have many boat rides, just like New Orleans, which has always been one of my favorite parts of the meetings.

Maine, just like the Pacific NW, is truly a beautiful place worth visiting.

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## Coast Defense Journal Editor

Mark Berhow

If the CDSG is going to continue to produce a high quality journal we will need a good effective editor. The job breaks down into two basic parts: 1) reviewing the accuracy and completeness of submissions for acceptance for publication, and 2) copy editing submissions for grammar, punctuation, redundancy, spelling, proper formatting, etc. While we have many members that can help with the first task, Bolling Smith was uniquely adept at performing the second task. Bolling has left the CDSG with a number of edited articles to keep the *Journal* in print with original material for a while. However, we do need to find a new editor for dealing with any new submissions. The BOD is looking for interested nominations for the job. Please contact Publisher Mark Berhow (berhowma@comcast.net) with any suggestions or nominations and he will forward them to the BOD.

## CDSG Meeting and Tour Calendar

Please advise Terry McGovern of any additions or changes at [tcmcgovern@att.net](mailto:tcmcgovern@att.net)

### 2023 CDSG Conference

May 3 - 9, 2023

Portland, Maine

Mark Berhow, [berhowma@comcast.net](mailto:berhowma@comcast.net)

### 2023 CDSG Special Tour

September

Northern Poland

Terry McGovern, [tcmcgovern@att.net](mailto:tcmcgovern@att.net)

### 2024 CDSG Special Tour

September

Puerto Rico

Terry McGovern, [tcmcgovern@att.net](mailto:tcmcgovern@att.net)

### Other Meetings and Tours

April 15 - 28, 2023

Morocco

ECCOFORT Study Tour

Hans-Rudolf Neumann, [hrv.neumannqt@online.de](mailto:hrv.neumannqt@online.de)

April 27 - 29, 2023

Ulm, Germany

INTERFEST Annual Meeting

Oliver Zauzig, [praesident@interfest.de](mailto:praesident@interfest.de)

May 2023

Council on America's Military Past Annual Conference

Lincoln, Nebraska

Briget Hart, [brigethshea@hotmail.com](mailto:brigethshea@hotmail.com)

September 22 - 23, 2023

Deutsche Gesellschaft für Festungsforschung Annual Meeting

Kufstein, Austria

Andres Kupka, [akupka@juelich.de](mailto:akupka@juelich.de)

September 2023

Amsterdam or Rome

ECCOFORT Study Tour

Hans-Rudolf Neumann, [hrv.neumannqt@online.de](mailto:hrv.neumannqt@online.de)

September 2023

Liege, Belgium

Association Vauban Study Tour

Alain Monferrand, [contact@association-vauban.org](mailto:contact@association-vauban.org)

October 2023

Chatham, UK

International Fortress Council Meeting

Andreas Kupka, [AKupka@juelich.de](mailto:AKupka@juelich.de)

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## Preservation Committee Report

Gordon Bliss

Regarding Plum Island/Fort Terry, the activities around the closure of the Plum Island Animal Disease Center continue. The CDSG is a consulting party to the Section 106 process being conducted by the Department of Homeland Security (DHS). Recently, on behalf of the CDSG, I signed the Programmatic Agreement produced by DHS. This part has to do with the environmental assessment and nothing in it directly relates to effects on the Fort Terry structures. Currently, I am reviewing the draft of the Historic Properties Management Plan, which does address the status of the Fort Terry structures, and will provide comments back on it this week.

The situation at Fort Wool is still uncertain as now they are looking at dumping more sand onto the island for the bird nesting habitat and this will result in more adverse impacts on the island and would cover some of the foundations of the structures that once were on the parade ground. The Coalition for Historic Fort Wool is working to prevent this and to allow access for an engineering study to help save the now unique battery commander's station tower and also to get the state to provide funds to replace the dock. My thanks to Terry McGovern on copying me on the email from the Coalition regarding this matter.

Chris Zeeman continues to post information and pictures of the ongoing activities at Fort Adams to the email list. I continue to strongly encourage other volunteer groups at forts to either post their preservation activities to the email list or to email me on them (or both).

Just recently, a document produced by the US Military Academy as part of the Department of Defense Legacy Resource Management Program on Stabilization and Preservation of Military Fortifications was found by Terry McGovern and brought to my attention by Norm Scarpulla. This document should be available on the CDSG website in the near future.

Finally, I have used this column primarily to give updates (to the extent that I know them) on what is happening regarding preservation at coast defense sites. I've also written up a summary of what to do for preservation at a site, which is posted on the website along with links to PDFs of the two manuals I used as a basis for this. If anyone thinks there are other types of items I should be mentioning would like me to cover, me know what you think and I will certainly consider it.

If you have a Preservation issue or question, or for further information on any of the items I've mentioned, contact the Preservation Committee Chair, Gordon Bliss, at [preservation@cdsg.org](mailto:preservation@cdsg.org).



## Fort Fremont Engineering Review

Theodore Panayotoff

In 1898, the construction of Fort Fremont was begun as a defense of Port Royal Sound, South Carolina in response to the beginning of the Spanish American War. Its mission was to defend the US Naval Station at Port Royal, South Carolina and its dry dock, shops, and coaling station. The company-sized fort with two Endicott Period batteries was garrisoned until 1911. The fort garrison was transferred in 1911 and the fort was placed in a caretaker status until closed in 1921. The entire 170 acres was subsequently sold to private owners. The section of Fort Fremont containing the two batteries, about 18 acres, was acquired by Beaufort County, South Carolina in 2004 and 2010. It was listed on the National Register of Historic Sites in 2010. Several years after its acquisition by Beaufort County, the Friends of Fort Fremont, a 501 (c) (3) volunteer organization, was formed to help the County with the fort.

In the fall of 2021, the Friends of Fort Fremont, received three grants totaling over \$12,000. The grants were received from the Coast Defense Study Group (CDSG), the South Carolina State Historic Preservation Office (SHPO), and the National Trust for Historic Preservation. This funding allowed the Friends of Fort Fremont, in January 2022, to contract with Bennett Preservation Engineering PC (BPE) of Charleston, South Carolina to conduct an engineering review of the concrete batteries. The firm had significant experience with concrete Endicott Period batteries for the National Park Service and others. BPE's charge was to survey the batteries and produce a report of their findings, conclusions, and recommendations.

In March of 2022, the BPE staff made an on-site visit to the Fort to conduct an in-depth examination which included a laser scan survey of one of the three-gun positions of Battery Jesup. Battery Jesup was a three-gun battery of 10-in, disappearing carriage guns and the primary battery of the fort. Another two-gun battery, mounting two Armstrong 4.72-in. Quick Fire guns made up the Fort's two batteries.

A preliminary report of the Bennett Preservation Engineering findings was submitted to the Friends of Fort Fremont in July of 2022. Subsequently meetings were held with Bennett Preservation Engineering staff and members of the Friends of Fort Fremont committee that was overseeing the engineering survey and Beaufort County. As a result, a revised final report was produced in August of 2022. This was distributed to the grantors and to Beaufort County, the property owner. As a result of the Bennett Preservation Engineering recommendations, Beaufort County is proceeding with a project to address those recommendations and make Fort Fremont a safer place for the public to visit.

This follows the completion in November of 2021 of a Beaufort County project to construct a History Center of about 2000 sq-ft on the site of Fort Fremont. This is now staffed by Friends of Fort Fremont volunteers and greatly enhances the visitor experience at the Fort. The new History Center was the focus of the CDSG visit to Fort Fremont last year.

Fort Fremont, Battery Jesup, Gun Position #1, which held one of the battery's 10-inch disappearing guns. (left)

## 2022 Year-end Donation Appeal for the CDSG Fund

The CDSG Fund Trustees (Terry McGovern,  
Quentin Schillare and Mark Berhow)

The **CDSG Fund** supports the efforts of the Coast Defense Study Group by raising funds for preservation and interpretation of American seacoast defenses (both structures and artifacts). The CDSG Fund is seeking year-end 2022 donations from our members to fund projects that support our organization's goals. We have agreed to fund several projects in keeping with our goals and we have a list of potential projects which we may fund in the coming year, but only if we receive enough donations from our members to allow the **CDSG Fund** to provide these grants. Several of these projects call for large amount of funds to complete so we need larger donations from our membership to meet these needs. Projects that the CDSG Board of Directors has already agreed to fund are:

- **USS Iowa Veterans Association 16-inch/50 Barrel Project** – Terry McGovern - The US Navy has accepted the display of the historic barrel at JEB Fort Story at Cape Henry, but the USS Iowa Veterans Association needs to be able to raise the total funds needed for the movement and display (\$150k). Our members meet the CDSG Fund Trustee's challenge in 2020 and they gave \$10,000 towards this project, so with the CDSG Fund matching at \$5,000, the Fund has committed \$15,000 to this project. Our members have made additional restricted gifts in 2021 of \$15,100, while the USS Iowa Veterans have contributed \$24,900. Corporate sponsors have donated \$35,000 as well. The grand total raised to date is \$90,000 (which is most the CDSG Fund has ever raised for a fund project!). We are still seeking more donations for this project at they need to raise \$60,000 more to complete the project.
- **Fort Michie, Great Gull Island, NY** – Chris Zeeman – Stabilizations of WWII Fire Control Tower due to rusting steel supports and spalled concrete. We are working with Margaret Rubega through the AMNH to fund the hiring of structural engineer to design a stabilization plan for the tower. The structural assessment is now done, but raising funds to pay for the contractor to install supports still is required. We have only a small window of the time to do this work as gaining water access to Great Gull Island is not easy in the months outside the tern nesting season (April to September), so current fundraising is essential. Our membership has contributed \$5,000 so far towards this project.
- **Fort Wool, Rip Raps, Hampton, VA** – Mike Cobb – Stabilization of 3<sup>rd</sup> System Casemates and WWII Battery Commander's Tower – The Virginia Department of Conservation and Recreation and Department of Wildlife Resources controls the island fort and they have converted it to a seasonal nesting habitat for seabirds. They have determined the dock and the historic structures are unsafe

and banned the public from visiting. The remaining 3<sup>rd</sup> System fort casemates continue to settle and the masonry is cracking with concerns about collapse. Mike is trying use wooden shoring to support the casemates. The WWII Battery Commanders Tower (the only standing tower of this type remaining in the USA) is in need of stabilization, especially on the "station" portion of the where only two steel support carry the weight of the cement roof. Mike has been using car jacks to try to add support of the roof but the whole roof is leaning due to its weight plus trapped water. It is a real possible that the tower may topple if these roof supports give way. The Coalition for Historic Fort Wool has donated \$5,000 to the CDSG Fund to pay for engineering assessment of the historic structures that make up Fort Wool. A construction proposal to repair the BC Tower has been received with a current cost estimated to be \$150k, while the repair of the dock is \$450k. The Coalition will try to get the Commonwealth to fund these repairs, but may need to fundraise to pay for these repairs.

- **Fort Varnum, Narragansett, RI** – Chris Zeeman – Placement of signage at this RI National Guard base to inform visitors about the WW2 role of Fort Varnum and its 6-inch and 90mm batteries. This will be a matching grant for the current OCS class at 243rd RTI, Camp Varnum. The class would like to install an interpretive sign outside the perimeter fence along a popular public walking trail. The purpose of the sign would be to explain the history of the camp and its structures. This is will be the OCS class gift to the post with the estimate sign cost of \$2,500.

The **CDSG Fund** can only fund these and other projects by receiving your donations, so without your donations we cannot approve these projects. Please consider donating when paying your membership dues for 2023. Please remember that your donations are tax-deductible for federal tax purposes as the CDSG is a 501(c)(3) organization, and 100% of your gift will go to the projects that are requesting grants. Your contributions are acknowledged annually. Make checks or money orders payable in US funds to: the **CDSG Fund**. Donations can also be made by credit card or PayPal via the CDSG website at [www.cdsg.org](http://www.cdsg.org). Send donations to: CDSG Fund c/o Quentin Schillare 24624 W. 96th Street, Lenexa, KS 66227-7285 USA or use your credit card on the [www.cdsg.org](http://www.cdsg.org) website. Consider combining your membership dues with **CDSG Fund** donation this year.

**Attention** – The CDSG Fund is part of the AmazonSmiles program where Amazon will donate 0.05 percent of your purchases to the CDSG Fund if you make the CDSG Fund (<https://smile.amazon.com/ch/52-1698506>) your default charity in their system. Amazon has already donated several hundreds of dollars to the CDSG Fund based on members that have enrolled in the AmazonSmiles program. Please do so today.

## 2022 FSG & CDSG SPECIAL TOUR to DENMARK and SWEDEN

By *Norman Clark and Lars Hansson*

The Coast Defense Study Group (CDSG) and Fortress Study Group (FSG) successfully ran another joint tour (similar to our joint tour to the defenses of Switzerland in 2018) to fortifications in Denmark and Sweden from May 22 to June 7, 2022. Key to this tour was Lars Hansson (through his Bunker Tours company) as without his leadership and logistics management this tour would never have occurred. The tour was a gigantic logistical puzzle that went very well, and the few problems arose naturally but Lars successfully solved them. Only two visits had to be cancelled while 73 sites were visited. Lars prepared a quick tour metric summary to give you an idea of the very large scope of this tour:

### CDSG and FSG Bunkertour Denmark Sweden 2022

**Number of steps:** 181,806 steps  
**Time in field:** 185 hours  
**Number of site visits:** 73  
**Number of nights:** 18  
**Number of hotels:** 13  
**Booked lunches/dinners:** 15  
**Number of flights:** 3  
**Number of water taxis/ferries:** 25  
**Number of kilometers of car/minibus:** 2,840 km  
**Number of km of train/tram:** 240 km  
**Number of km of chartered bus:** 536 km



Lars summed up this tour by saying *"I dare say that such an extensive journey has never before been made in Sweden – and will probably never be repeated – and that there are not many who would dare to embark on this massive work and have the contacts needed to cope with this. The event can be seen as the result of my 20 years of experience in military history events and tours of Swedish fortification history."*

This tour's genesis came from Charles Blackwood of the FSG and Terry McGovern of the CDSG challenging Lars to plan a tour visiting as many of the preserved Swedish defenses as possible in the shortest duration possible. For 18 days, participants came and went, some were present all the time, at most the group was 24 people and at least six people. Lars told us this tour was by far his biggest to date and required two years of planning to arrange permissions, transport, and lodging. Everything for the tour was booked for 2021 but had to be cancelled due to the pandemic, so Lars then had to rebook the tour for 2022.

The tour was divided into four parts – a pre-tour of two days in Denmark, the main tour for FSG starting in Copenhagen and ending at Arlanda, the CDSG tour starting in Nyköping and ending in Luleå and an extra end of two days in Gothenburg. The dates spiked backwards from visits to Gothenburg on National Day, June 6<sup>th</sup> (allowing us to see the annual firing of Fort Oscar II's coast artillery), which set the tour start for May 22. The tour reports are in two parts – part one written by Norman Clark (FSG tour segment) and part two by Lars Hansson (CDSG tour segment). Due the length we will run these reports over two *CDSG Newsletters*.

### Part 1: 22-30 May 2022

By *Norman Clark*

It had finally happened, I was going on a holiday with, hopefully, Covid put behind me. The last FSG trip had been to Greece 2019, so it almost felt strange going to an airport. Worry not, as things soon returned to normal. My connecting flight to Amsterdam was an hour late, I missed the connection to Copenhagen and so spend the night in Amsterdam Schiphol airport. You will be unsurprised to hear I was at the gate for the flight next morning at 04.00 – not missing that one! The day started at 08.45 in Copenhagen, and I found our minibuses on time and met with fellow travellers, FSG and CDSG – the trip had begun.

### Sunday 22 May

The overall Tour was organised and run by *Lars Hansson* of *bunkertours*; the next two days were an optional extra he had arranged.

We travelled in two minibuses with Lars driving one and the other by one of us to our first stop at **Stevns Fort**, about one hour's drive south of Copenhagen and situated on the coast covering the east channel to Copenhagen. The fort was built between 1952 and 1953 and its initial armament was a pair of twin 15cm guns which had formed the secondary armament of the German battlecruiser *Gneisenau*. It had been damaged in the 'Channel dash' and was taken to be repaired in Kiel but an air-raid detonated ammunition onboard and the hulk was stripped.





The Gneisenau Turret

In 1957 the fort added a further 12.7cm gun to fire illuminating rounds, replaced in the 1960s by a further 15cm gun. Along with the surface works for the site about 1.6km of tunnels connected stores, services, accommodation, and a control cen-

tre. There were also six twin 40mm anti-aircraft guns. The AA defences went through a number of changes with both 20mm and 40mm pieces, there being 18 guns in 1997 though by then the site had gone through a major change. In the late 1970s the gun site was closed, and the fort took on a new role as a Hawk battery. This was a radar guided low to medium height surface to air missile and Stevns Fort retains, as well as some of the guns, the Hawk missiles and associated radars. In 2000 the site closed and was converted into a cold war museum. As well as looking at the *Gneisenau* turret we were taken on a guided tour through the site and the tunnels. It was a pleasant day and Lars had collected drinks, non-alcoholic of course, and sandwiches. There was a fair amount of mayonnaise on these and I merely wish to say some coped better than others – you know who you are.



Some of the 1.6km of tunnels

Back to our transport and on to **Masnedø Fort** which has a triangular ground plan surrounded by an earthen dry ditch and was built between 1912 and 1915.

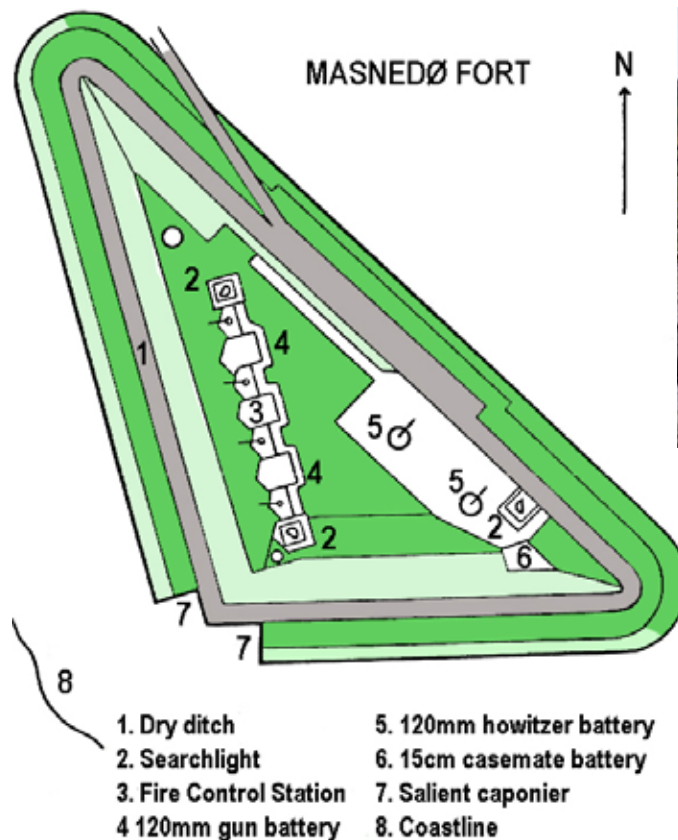
The original armament comprised 2 x 15cm m/1888 guns in the left face (dismounted in 1937) and 4 x 120mm m/1912 guns on the right face. This was augmented by 2 x 120mm howitzers m/1914 in turrets on the roof and 2 x 37mm flanking guns.

The 120mm guns were moved by the Germans in 1940 and replaced by more modern 127mm guns. The fort remained active with the Danish navy until 1951 when it was converted to a mine storage facility and remained as such until the fort was

closed in 1973. We were able to wander all over the site but sadly the fort itself was locked.



Nike and Hawk missiles on site



In the evening we visited Maribo Museum, a private collection of Danish military equipment and uniforms. An impressive range of material, it was only as we went round that the guide/curator told us it was his private collection.



Masnedø Fort, 120mm gun line and FC Station

### Monday 23 May

We travelled west to meet our ferry to cross over to Langeland – Long Island – and to drive to **Langelands Fort**. Ferries and water taxis were to be a theme, even more so in Sweden and it meant Lars had to deal with a timetable more strict than perhaps normal for, as they say, ‘time and tide wait for no man’, even the FSG.

The fort was opened in 1953 and was placed to control the



Twin 40mm Bofors AA; right upper, one of the 150mm gun

minefields in the Langelands Belt, which we had just crossed. It remained in active service until 1973 but after the collapse of the Soviet Union was mothballed in 1993 becoming a cold war museum. This is a very large site, and we were released after arriving to look around. The site has good access with roads for pedestrian access around all the important points. The fort mounted four 150mm Skoda guns as well as two anti-aircraft batteries with 40mm guns and additional mobile AA weapons. Also here were the control, storage and generator sites. The guns are mounted in single turrets and there is access to rooms below the turret from where the guns were served. Each of the turrets has now had these rooms converted to exhibition space where cold war themes such as propaganda are examined. Also on site is the Danish submarine *Springeren* – *The Knight*. This is one of the



‘Springeren’ and torpedo tubes



*Delfinen* or Dolphin class coastal submarines meant to operate in the Baltic. In service from 1964 till 1990, it had 4 torpedo tubes and was the first Danish submarine not to have a deck gun. You can walk from front to rear, and it reminds you that tall people shouldn't join the submarine service. This was also one of the last submarines in Danish service as in 2005 it was decided to no longer have submarines in the Danish navy.

Close by are a number of large hangars, one containing the Danish ship *Asko* built in 1941 as a minesweeper and used by the Germans as such when it participated in the clearing of German minefields after the war, becoming MHV 81, the designation MHV being naval home guard. Alongside it is a display of various naval mines. Other buildings contain a Polish MIG-23 Flogger-B, a Danish F-35 *Draken* and a British Ferret alongside a large display on the Warsaw Pact plans to invade Denmark using forces from Poland.

Again, dictated by ferry times we left and returned to Copenhagen, with time to call at **Mosedø Fort (below)**.



This was a coastal battery but also the left wing of what was known as the *Tune Line*, and its biggest concrete structure.

Planned in 1908 it was completed in 1916 with 6 x 12cm howitzers originally in two batteries N and S of the fort and a secondary armament of 4 x 75mm QF's (below, Lars Hansson).



Close-in defence used 8mm Madsens and 37mm Hotchkiss.

We then drove to the **Kongelundfortet Battery** located almost at the end of Copenhagen airport's main runway. Built 1910 – 1914 as an artillery battery to cover the offshore minefields it was armed with 15cm guns.

The site is rectangular and surrounded by a wet ditch. Like many other forts it has been built over when in 1959 it was converted to serve as a radar station for Nike and Hawk missiles which were located elsewhere. This results in some strange elevated concrete platforms stuck on top of the central redoubt (below).



Finally, we called in at **Dragør Fort** constructed on an artificial island and completed by 1915 (below). Built with a massive armament of 4 x 35.5cm howitzers; 4x17cm howitzers; 4 x 120mm QF and 2 x 75mm QF plus 1x47mm and a number of machine guns, it covered minefields and was built to prevent ships closing the coast to bombard Copenhagen. During the cold war 40mm AA guns were installed and in the 1980s two 76mm guns. However, remodelling and the installation of communication towers among other works have meant that only the 17cm



Dragør Fort



A pair of 17cm howitzer emplacements

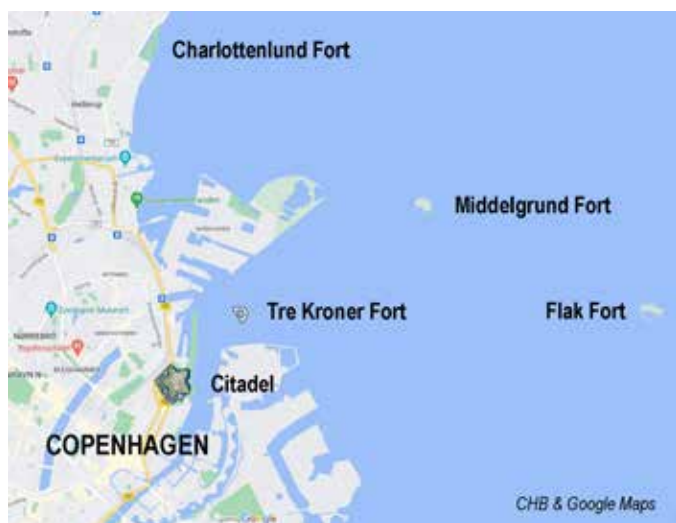
and a pair of the 75mm gun emplacements remain intact. The fort has been converted to a hotel and restaurant and is home to The Big Mermaid Statue.

These last three batteries were not part of our planned itinerary but when we made good time Lars had added them in – excellent.

At our hotel we found the rest of the Tour party of FSG and CDSG members.

### Tuesday 24 May

Our first visit planned for this morning was **Charlottenlund Fort**; though the forecast was for rain and wind we appeared to miss it. The coach was due at 09.00 but now the world butted in – the coach didn't leave at all; the company had forgotten us and so we had to wait before it arrived. We now ran into the Copenhagen rush hour which added even more time and so we had to cancel the visit as we needed to meet our water taxi to visit the three sea forts.



Charlottenlund Fort has 12 x 29cm (1910) howitzers mounted

And so, we set off for **Flakfortet** the furthest out of the three we would visit, all to protect Copenhagen from naval bombardments and all on artificial islands. We motored past the Danish submarine *Seal* on display, and after dropping off what looked like a school trip at Middelgrund Fort we landed at Flak Fort for a guided tour. Our guide explained that Flak in this instance had no connection to antiaircraft guns.

*Flak* is the Danish term for a low sandbar often just below the water surface and it was taken advantage of as the foundation of the artificial island, hence its name.



One of the three paired 21cm gun positions

Built between 1910 and 1914 it was initially armed with 4 x 29 cm m/1910 howitzers: 6 x 21cm m/1913 guns and 4 x 75mm QF guns. This was augmented with 2 x 47mm anti-balloon guns, another 75mm and a number of machine guns and searchlights. In the 1950s German 150mm guns brought from elsewhere were installed in place of any existing armament, along with 40mm Bofors AA pieces. It continued in military use until 1957.



Flak Fort

In 1965 it was decided to mount a Hawk battery on Middelgrundsfortet and while works were carried on there to mount them, from 1965-68 they were stored at Flak Fort.

In 1975 the fort was leased to the Copenhagen Sailing Association, but this unfortunately led to widespread vandalism due to the easy and uncontrolled access. In 2001 the ministry of defence sold the island with conditions as to its future care, maintenance and public access. The fort still has several features in the former barracks though any armaments left when the fort was sold.

One item is a restored generator, one of a number which had provided the power for the island.

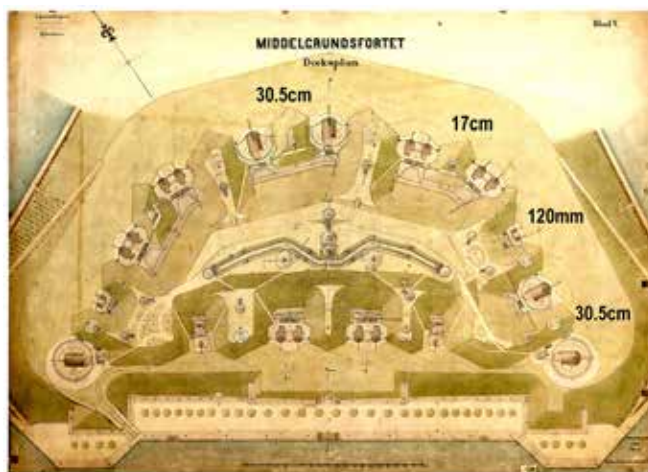
We now retired to the café for a coffee. Some of us enquired about the cakes but were told they were for a pre-booked party. It turned out *we* were the pre-booked party and after apologies we had a light lunch, coffee and those cakes. That said, not all of us. Some had asked before and then went off and as usual several had too many photos to take and so missed out. That left a few of us with the terrible dilemma of what to do with the excess cakes – yes, you're right, silly question, we just had a few more.





Restored Generator

When Flakfortet was built it was the second largest artificial island in the world; we now sailed over to **Middelgrundsfortet** built between 1890 and 1894 when *it* was the largest artificial island in the world.



333 Drawing from 6 November 1895, most recently corrected in April 1904 (National Archives)

Also known as the Youth Island this has been adapted to house youth organisations and the island was fairly full, so when looking about, we needed to bear in mind people were staying here.

Originally armed with 5 x 30.5cm and 17 x 17cm howitzers as well as 6 x 120mm and 7 x 47mm guns none of these remain



30.5cm gun, 1948

Above and left; from the book 'Middelgrundsfortet 1890-2019' by Peter Thorning Christensen and Tom Wismann



Middelgrundsfortet: above, the gorge & radar platforms. Below: positions for two pairs of 17cm guns. (CHB)







A 'nest' of gun pits, 30.5 and two 40mm Bofors AA

and many emplacements are partly built over by the structures to support the Hawk battery noted above. The island remained in military hands till sold in 2002 though it had ceased to be used by the military by 1984. We were able to wander over all of the surface and allowing for the 'occupiers', the nearly two miles of underground corridors and associated rooms.

We now boarded a 'RIB' for a fast - very fast - passage over to **Tre Kroner Fort**, another artificial island fortress. The original was a few hundred meters away when this fort was started in 1713 when three old ships-of-the-line were sunk here. One was the *Trekroner*, the Three Crowns, and from it the fort took its name. Construction started in 1787 and it played a part in both the British naval attacks on Copenhagen in 1801 and 1807. In 1885 the fort was remodelled using concrete over the existing brick and stone. Between 1900 and 1915 the fort had 14 x 29cm and 2 x 24cm howitzers; 6 x 17cm; 11 x 15cm and 8 x 47mm guns. This was altered to 2 x 24 cm; 6 x 17cm and 7 x 15cm as well as additional AA guns. Two of the 15cm Krupp guns remain. Abandoned, it was sold to the Copenhagen harbour authority in 1934. Part used as a barrack by the Germans during WW2 and as a POW camp, after the war it fell into disuse until 1984 when it opened to the public. The fort has had work done to it to restore many of the 18<sup>th</sup>C buildings and works are continuing.

We crossed back to Copenhagen, being dropped off near the Little Mermaid statue from where we individually made our way back to the hotel. I and a couple of others walked back through the **Citadel** or *Kastellet*, still a military post, from where on to the underground and back to the airport hotel. Our day finished with a pre-arranged evening meal, and so ready for tomorrow and the crossing over to Sweden.



Fire Control Station



Two 15cm Krupp guns in NW battery (CHB)



Tre Kroner Fort dock, traverses and citadel





Tre Kronor



Inside the Kastellet (CB)

### Wednesday 25 May

Our hotel was literally across the road from the airport terminal building which also contained the railway station and so it was a 5-minute walk to our platform and the train to Ronneby station in Sweden. The journey took us over the Bridge now linking Denmark and Sweden, ancient enemies. At Ronneby we boarded our bus and travelled south to a causeway which crossed over an open stretch of water brushing against the small, fortified island that is **Västra Hästholmen**.



The fortress has been closed to visitors, so we were one of the first groups in almost ten years to officially go beyond the fence. The buildings present a bizarre mass containing just about every type of construction you might imagine.

The 17<sup>th</sup>C walls are topped by irregular shaped blocks covered by almost black bitumen-like surfacing. Dated from around 1679 it was built to protect the approaches to the Karlskrona harbour, an important naval base, from the west. Until the 1860s the fort



1889 plan, from Tour Guide





had open emplacements with 12 to 16 guns but in 1871 a new stone-built arc-shaped building was added, mounting 24cm and 12cm guns in eight batteries, with a controlled mine station which was added in 1878. In 1891 the armament was: Line I - 2 x 24cm m/1869 and 3 x 23cm; Line II - 1 x 23cm and 1 x 57mm; Line III - 2 x 12cm m/1873 and 2 x 57mm; Line IV - 2 x 24cm m/1869; Line V - 2 x 17cm m/1869; Line VI - 2 x 24cm m/1869 and 2 x 27cm m/1869; Line VII - 2 x 17cm m/1869. In addition, there were a number of MGs for close-in defence. Between 1903 and 1910 extensive modernisation was carried out with new artillery and new designations. VH1 (Line III) 3 x 57mm m/1899 Bofors; VH2 (Line VI) 4 x 12cm m/1903 Bofors – these guns are preserved on site.



The surface was as much a wonderland of shapes and undulating surfaces with observation points, MG posts, turrets, and musketry walls, a fascinating site (above).



Interior of 12cm turret (Maurice Gehlen)





Other changes were VH4 (Line VII) 4 x 57mm m/1895; VH6 2 x 25mm machineguns; VH9 (Line I) 2 x 57mm m/1899; VH10 1 x 25mm MG; VH11 2 x 15cm m/1883.

After 1925 all but VH1 and VH2 were dismantled, VH1 remaining active to 1964 and VH2 to 1969. Anti-aircraft guns were added before WW2 when the 57mm battery was dismantled; the army added 40mm m/36 Bofors guns to protect the mine line, later adding a tank turret m/74.

The site is overgrown, and interiors show a lot of water penetration. Lighting had been provided for us in the form of ropes of light giving a strangely fairy-tale appearance. It was possible to get around much of the interior though it was left to us as to how much we trusted rusted ladders into turrets or engine rooms, helped a little by finding a layout plan showing proposed renovation works.

We now travelled on, making an extra stop at **Oscarsvarn**, a fort built after the disastrous battle of Poltava in 1709 and renewed fears of a Danish attack on the naval base at nearby Karlskrona. The fort covered the road bridge and a canal.

It is worth taking time to consider Swedish defences generally. The dilemma was that sites such as Karlskrona and Stockholm were coastal, though often accessed through a myriad of islands and so defences generally covered sea routes to these targets. But not all channels were suitable and as ships grew, and their draughts, where these forts were put also had to change. It was also the case that Sweden changed in size and so Stockholm for instance was either well away from an enemy or on the front line. When Sweden extended over most of the Baltic coast the front line was beyond the current Baltic states into Russia, but after Poltava it was outside Stockholm's archipelago.

The fort is now surrounded by modern roads, junctions, railway lines and a canal so there was some footwork through undergrowth to the central casemate. The site was taken over by the local municipality in 1973 and is somewhat lost, though they have put up some orientation boards. From here it was on to our hotel in **Karlskrona**.



After dropping off luggage Lars led a group out past the naval museum – more of that later – to **Bastion Kungshall** located on the small island of Stumholmen, accessed by a bridge. Karlskrona was founded in 1680 and this was one of the bastions built to protect it. It remained in the hands of the navy till the 1970s.

In the 1990s, along with many residential buildings, the excellent naval museum was built. This we visited on our way back; it contained, as such buildings do, the devil's work – a book shop – to which many of our party fell victim.



*Naval Museum: 25.4 cm Bofors m/94C, No 6, made at Bofors in 1899, the carriage made by Swedish company Finspongs styckebruk in 1898. Placed in the aft turret on 1st class pansarbåt (Coastal defence ship) Niord it was Bofors' first attempt at a heavy gun and also the last made for the navy with forged steel.*

*The ship also had a front turret as did her sister ships Oden and Thor but they had m/94A and /94B guns made by French company Canet. Niord was in service 1899 to 1944 and ended her career as a 'guinea pig' for explosive devices. (Thanks to Lars Hansson for information).*



Kungsholm Fort, early and late periods (Maurice Gehlen)



**Thursday 26 May Aspö Island**

Leaving Karlskrona in our water taxi we headed off to **Kungsholms Fort**. However, when nearly there the boat slowed to a stop and then headed off to the island of Aspö – what's happening? We found out when we landed. The navy occupies Kungsholms and had refused entry, even though it had been arranged, it was to turn out that our permission to land hadn't got to them – neither Lars nor the local tourist board were best pleased. Nor us – just tantalising glimpses of some of the many batteries and guns.



diers in more comfortable quarters than the fort itself. From here the bridge connects to the fort and our guide took us round the fort and interior, good timing as that was when the rain started. On the first floor a vaulted corridor runs the whole length of the donjon providing accommodation as well as access to gun positions covering the bridge and landward side. The outer walls connect the bastions where cannon would have covered the seaward channel. These walls enclose a small area within which there is a small commander's house, looking rather incongruous. There is a small, neat museum within the fort.

We now moved further inland to the **Mobile Coastal Artillery Museum** which shows a wide range of artillery pieces as well as



Drottningkärs Castle from SE (Maurice Gehlen)

There had to be some thinking on his feet, but Lars had a contact on the Island and he got us into **Drottningkärs Castle**. This was close to our landing point so just a short walk. The castle site just offshore is connected by a timber bridge and forms part of the various defensive works constructed after the creation of the naval base at Karlskrona and was completed in the last decade of the 17<sup>th</sup>C.

The rectangular fortification has four corner bastions with a massive granite donjon, a casemated barracks.

The fort was on a war footing at various times between 1710 to 1811 but in 1865, when the new *Ellenabben* fort was built on the island, it was taken off the active list. The fort can be said to start on shore where the builders realised its weakness was a land-based assault and so, starting in the 1730s a series of outer works were built where a central ravelin was located surrounded by lunettes, a caponier and outer glacis. Later the caponier was converted to provide accommodation for the garrison's bombard-



the associated command and control equipment, much of it from the disbanded coastal artillery regiment KA2. The museum is in two large sheds with a number of the larger pieces outdoors.





Close to the museum there are the remains of **Battery Aspöberg**, in the form of a large concrete gun pit, for the 30.5cm howitzer battery that was here. The museum is very impressive, and we were guided round by one of the volunteers who keep it going.



Next to **Ellenabbens Fort**. As noted above this was created to replace the fort at Drottningkärs and was completed in 1904 and manned by Regiment KA2. The fort is formed of a long, 150m block, surrounded by a dry ditch, on top of which are the fort's guns.

It was originally armed with 3 x 25cm guns m/85, whose origins are British 10-in BL guns, taken from Swedish armoured ships. These remained until 1936, but there were also 2 x 57mm m/89 guns which remained in service until 1959, though the fort was still used for exercises till the 1970s. Lars had managed to get keys, so we didn't need to climb the unclimbable fence.

The exterior was easily accessed and the turrets for the two later guns remain, but the interior was different. Partially put off by my failing torch the interior was flooded throughout the parts I looked at and I did not explore lower levels.



Inside the fort: railway and 57mm gun (Maurice Gehlen)

Nearby is **Ellenabbens Battery** built in 1972 and armed with 3 x 7.5cm m/57 guns, only discontinued in 2000. Only the turrets show but beside one of them we uncovered a hatch to which Lars had the keys, with a push of a button the hydraulic hatch opened revealing a ladder down to the magazine and lower levels. We needed no invitation.

Below ground there was accommodation for the crews, as well as ammunition storage and handling and access to the turrets - a really fascinating visit. We almost beat that when we all exited the site and the hydraulics that closed the door didn't work -







something had fused and the key holder – who had gone back on the boat – had to be recalled.

The radar/control station was a substantial underground site accessed by a sloped roadway. Further in, a large chamber had been carved out of the granite and within it the facility was built. This was one of many bunkers built on this island, the most fortified in Sweden. The bunker was on four levels with the main measuring station with radar and TV/laser rangefinder.

As we hadn't been to Kungsholms Fort we had time to visit the former radar station and then **Jutudden** (1940) and **Hyttorna** batteries. Both had been armed with 57mm guns, the sites remain and can easily be reached on foot, but Jutudden in particular is fairly overgrown and the works, like large concrete pillars are not open.

Hyttorna 57mm battery (CHB)



Godnatt Artillery Tower (1862), en route for Karlskrona (CHB)



**Friday 27 May**

Today was to be a day on the bus. We walked to the bus station and as we did Lars pointed out the signage that indicated an underground nuclear shelter for the population. These were built throughout the country to give some protection to the population. From here we travelled to Kalmar where we changed onto the bus which would take us to Nyköping.

Here we picked up our transport for the rest of the tour and took the opportunity to visit **Nyköping Castle**.



Until the 16<sup>th</sup>C it was the second capital of Sweden. A medieval building, it was burnt down, along with the town, in 1665 and wasn't rebuilt; to add insult to injury some of the stonework was used to build the modern Stockholm castle.



**Fömore Fort, Battery Oxelösund** followed; the battery was one of a series built during the 1960s and 1970s, this one being completed in 1964, the third out of a total of 30 built in the Cold War. The site extends to some 3,300m<sup>2</sup> and is connected by a 450m-long tunnel and was armed with 3 x 7.5cm m/57 guns.



7.5cm m/57 gun (CHB)



Loading tray (CHB)

The site was closed in 1997 and was scheduled to be demolished in 2003 but a local group took it over and it opened as a museum in the same year.

The volunteers treated us to a fine meal in the fort, so ending the day.

**Saturday 28 May**

A long drive to the Ankarudden ferry took us over to **Landsort**, the last island before the open waters of the Baltic, with major waterways on either side. In the 1930s it was decided to create a line of guns further out in the archipelago, the 'Sea Band Line'. Three 15.2cm m/98 guns were moved from Vaxholm forming the first battery in a line which would stretch to the north of Arholma. The three guns and control bunker were situated close to the lighthouse on the southern tip of the island.



The battery was modernised during the cold war with new radar and range finders but by the 1960s it was old fashioned. There was a 7.5cm m/57 in an inlet to the west and other batteries to the east. In 1977 it was decided to replace these defences with a modern ERSTA system. Six of these were ordered for various sites on the coast – Landsort is the only one remaining. The modern battery was of 3 x 12cm m/70 guns along with associated control bunkers, with modern radar and measuring equipment, an AA gun and close-in defence weapons. The battery was decommissioned at the turn of the century.



Landsort Battery 12cm/m70 turret (CHB) and magazine



9.4-in is said to be the largest preserved gun in Sweden

We drove up through an abandoned camp site to the lighthouse and made our way to the guns. As usual these had been blasted into granite 'bulges'. They were like ice with a thin mix of lichen and dew. I slid down close to a drop but was outdone by one of our group who came hurtling past and luckily stopped himself before he too would have gone off the edge.

From here we took a boat to the nature reserve that is **Järflotta** island. Dating from 1942 this was the location for a battery, one of a number built in WW2, comprising 3 x 24cm Bofors MO6 naval guns, which were active until the 1970s. It was decommissioned in the 1990s but the gun we visited is preserved as a protected historical building and at 9.4-in is said to be the largest preserved gun in Sweden.

We got a bit lost on the way back to the boat but a phone call brought Lars to our rescue.

Back to the hotel we all went and out that night for a pre-ordered meal, rounding off my adventurous day.

### Sunday 29 May

A chain-link ferry took us to **Vaxholm Fortress**, which occupies the whole of a small island just offshore with some sort of fortification having been present since 1548, to control the sea route to Stockholm. The fort was located on the western strait separating





Vaxholm island from Rindö Island. The eastern sea passage on the other side of Rindö was also fortified, and we visited it later. These two formed the main practical sea routes to Stockholm as the increased draughts of naval vessels ruled out other accesses; artificial methods were used to reduce water depth elsewhere by building underwater walls or simply dumping rubble. The first work at Vaxholm was a wooden blockhouse, later replaced by an artillery tower. The fort was unsuccessfully attacked by the Danes in 1612 and the Russians in 1719. The strategic situation changed in 1809 when Sweden lost Finland to Russia and the defences here became more important. Most of what can be seen today is the result of extensive works carried out between 1833 - 1863 when all the previous works were cleared and most of the island was enclosed in a large triangular area with outer walls faced in granite and the internal area creating a parade ground.



Model in museum (CHB)

Later additions extended the fort and improved the harbour and the walls covering it. Increasing draught meant this passage became too shallow for major naval vessels and the increased power of naval armament doomed the fort. In 1872 in a trial a Swedish monitor with 24cm rifled guns penetrated the walls after only three rounds. The major defences now concentrated on the eastern side of Rindö island.

Vaxholm fortress is a popular tourist attraction and there is accommodation in the fort as well as a café and other facilities. The walls, courtyard and exterior of the fort have a large number of guns mounted which show the range of armaments employed by Sweden. There is also a large display of sea mines. Within the fort is an excellent museum of which we had a guided tour, with a history of the fort, illustrated with numerous models, as well as an overview of the Vaxholm Line which at the turn of the last century had some 24 batteries. At its height between 1890 and 1916 Vaxholm fortress had one battery of 4 x 57mm m/1895 guns, two batteries of 4 x 57mm m/1899-1900 guns as well as 5 x 23mm m/1854 and 20 x 23cm m/1890 guns.

From Vaxholm we took the ferry over to Rindö, across it and took another ferry to visit the **Fredriksborg Fort**.

As noted above this is on the Oxdjupet seaway on the eastern side of Rindö Island. It was one of the sea routes to Stockholm but as ship sizes increased so too did its importance leading to the decline of Vaxholm. This is now the main route to Stockholm. The first fort was built in 1710, a redoubt on the shore with 4 x 24-pdr guns. The waterway had been partially blocked and people encouraged to dump stone to make it shallower, but it



Fredericksborg Fort (CHB)



Fredericksborg Fort (CHB)





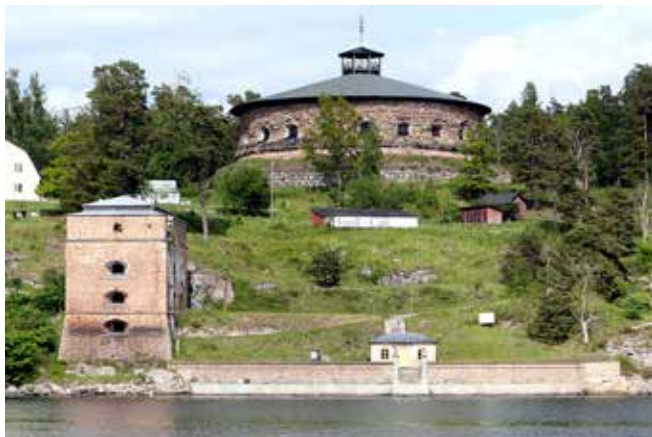
was soon realised that the other sea passages were inherently too shallow and the waterway here had to be cleared of the obstacles. Following a Russian attack aimed at capturing eastern Sweden, a new four-floor fortified tower was erected with 40 guns to protect the redoubt and the strait. The fort was abandoned during the 1740s in a more peaceful period and large amounts of the exterior sandstone were robbed to repair Vaxholm Fortress and the Oscar-Fredriksborg fort across the waterway leaving the fort a rather sad spectacle. The interior is reached over a wooden walkway bridging a dry ditch into a large open space forming a circle around a central stairway which gives access to a similar first floor and observation cupola on the roof with excellent views.

The tower's open floors form gun decks. The ground floor is an impressive arched space.

Below the fort at the landing stage is a further gun tower though other parts including a second tower were demolished when the fort was abandoned.



Gun Tower (CHB)



GunTower and Fort from Oscar-Fredriksborg Fort (CHB)

A brief diversion took us to **Battery No 7** (right) where the steel fire control cupola could be seen with the remains of two emplacements.



We now retired to the restaurant for an excellent lunch before catching the ferry over to what might be called its sister fort on the other side of the Oxdjupet.

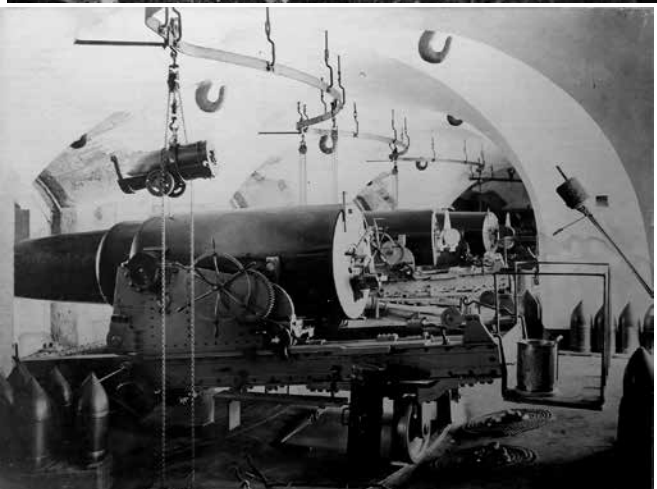


Map of the Vaxholm Defence Line (1895-1903) with older positions marked with red circles. (Tour Guide &amp;CHB)





This is **Oskar-Fredriksborg Fort**, Sweden's first attempt to build a modern low-profile fort, constructed between 1870 and 1877. It has upper and lower-level batteries connected by a tunnel which saw the first use of dynamite. The main guns were 24cm with the lower battery close to the water line and clad in Sheffield steel, a significant part of the fort's total cost. The sunken upper battery can fire on the channel while being unobserved from distant threats. When completed the lower batteries were O1 – 3 x 24cm m/1879 guns in a flanking battery; O2 – 2 x 24cm m/1870 and 1 x 24cm m/1873 guns and O3 – 3 x 24cm m/1892 guns. The upper batteries were O4 – 4 x 5cm m/1892



24cm guns in the armoured Frontal Battery, and a 24cm disappearing gun in the Upper Battery. Photographs taken at the Vaxholm Fortress Museum (CHB)



guns; O5 – 4 x 12cm m/1870 guns; O6 – 3 x 24cm m/1896 on disappearing carriages; O7 – 4 x 8cm m/1881 guns; O8 – 3 x 8cm m/1881-93 guns. As with many such forts it ceased to be used after the Cold war and in 2002 was designated as a national monument.

These two forts are only a part of the fortifications and a number of batteries of the Vaxholm Line surround them, dug into bed rock and surrounded by a dry moat. We visited the **Byviksfortet** on Rindö Island, which was a heavy battery of four 12cm guns and a light battery of three 57mm, all in turrets. One of the former guns is now preserved at Vaxholm fortress. Also, there were the 20<sup>th</sup> and 21<sup>st</sup> batteries which had 24cm howitzers, again with one preserved at Vaxholm. There were also a number of infantry batteries armed with machine guns.

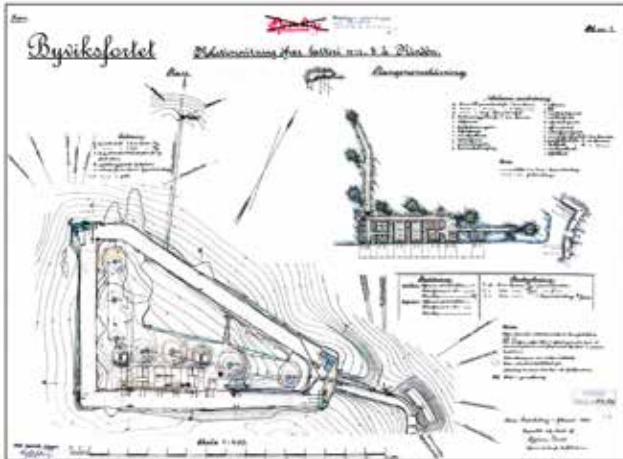


Frontal Battery today (CHB)





Byviksfortet ditch (CHB)



On the way back to the ferry we added a visit to the **Rindö Redoubt**. Erected between 1858 and 1863 it was with so many other works built to protect one of the sea routes and is almost within sight of the Vaxholm Fortress. The redoubt comprises a casemated battery with two wings which form a courtyard. The redoubt is surrounded by a ditch covered by two caponiers thought to be the first time caponiers were built in Sweden. The most interesting feature, though only part remains is the anti-infantry defences around the fort constructed by setting up a solid field of upright razor-sharp granite pieces. The fort was obsolete by the 1890s but was retained as a store until the mid-1940s though already designated as a historical site in 1935.



Rock Field, Rindö Redoubt (CHB)



Upper Battery today (CHB)

### Monday 30 May – Siarö Fortress

Sadly, our last full day of the tour. Again, it was onto a boat to travel further up the channel which was guarded in its lower reaches by the forts we visited yesterday, in this case the **Siarö Fortress** (1916), part of the outer Vaxholm Line, located on a small mid channel island. A long internal tunnel connects the various parts but the rock here is porous which made the interior so damp that troops did not occupy the fort in peacetime.

It has two 15.2cm ex-naval turrets with convoluted concrete infantry trenches surrounding the guns, with firing steps, and beyond that a barbed wire belt. The fort also controlled a minefield, protected by four 57mm guns. Two of these remain mounted on carriages which can be moved into underground shelters where



The fighting face of Rindö Redoubt (Maurice Gehlen and CHB)





Siarö Fortress



two 15.2cm ex-naval turrets (CHB)



Internal Tunnel



trenches

we also found a mobile searchlight. After being decommissioned in the 1960s the fort was abandoned until restoration started in the 1990s.



57mm gun, searchlight in its den (CHB)

From the mainland we travelled further north, leaving the port of Rävsnäs to travel to **Arholma Battery**, via a quick stop-off at a 152mm turret on **Lindö Island**. Arholma Island was the furthest north we would go, looking out over the Baltic.

During the Cold War it was decided that Sweden's coastal defences be modernised and two heavy batteries of 15.2cm guns, on order from Bofors to Thailand, were seized and mounted on the islands of Gotland and Hemsö. In the 1950s modern rapid-fire guns were needed, which became the 10.5cm m/50 system with a fully automatic loading system allowing a firing rate of 40 rounds per minute.



Arholma Battery, via a quick stop-off at a 152mm turret on Lindö Island (CHB)





10.5cm m/50 system automatic loading system (CHB)

Three batteries were ordered, with the one at Arholma, not in place till 1968. All were of two guns with AA protection, though only one of the guns is here, along with a Bofors 40mm m/48. The equipment continued to be updated until the batteries were taken out of service at the end of the 1990s, opening to the public in 2008. We had a guided tour around the site, and then they let us loose. Most interesting was the access to the turret and the optics which looked out over the sea.

While we were here to see guns (*see also front cover*) it would be churlish not to mention that the island has a visitor centre which put on a substantial barbeque for us. Man cannot live by concrete alone!

It certainly rounded off a marvellous day enhanced by the perfect weather. But all good things must end and so we travelled back to our airport hotel.

### Tuesday 31 May

Here the tour separated with most of FSG heading off to various parts while our CDSG colleagues prepared to travel further north to fortress Boden, to be covered in **Part 2**

However, I could not leave this article without commenting on the good company I had enjoyed as well as meeting up again with several friends I had not seen for a while. A special thanks too, to all those volunteers who keep many of the sites we visited open, and particularly to **Lars** who had organised a very special tour and who coped magnificently with the inevitable problems, one of which I helped provide.

**Notes:** More can be found on Stockholm's and Karlskrona's defences in *FORT 45* and *Casemates 111* and *115*. Photographs by author unless otherwise credited. *CHB* is Charles Blackwood



Fort Levett, 1930s (NARA)



## CDSG Conference at Portland, Maine

May 2 to 6, 2023

Plans are set for the 2023 CDSG conference in May to visit the harbor defenses of Portland, Maine. The conference registration fee is \$300 per person which will include our annual banquet, private boat charters, carts on Peaks Island, organizational costs, and some admission charges. We are arranging to have OPTIONAL pre-ordered lunches available for purchase for our three boat trip days. We currently have 20 members that have already paid their registration fee. Our charter boat limits us to 49 total participants on those days, so please do not wait to the last minute if you plan on attending.

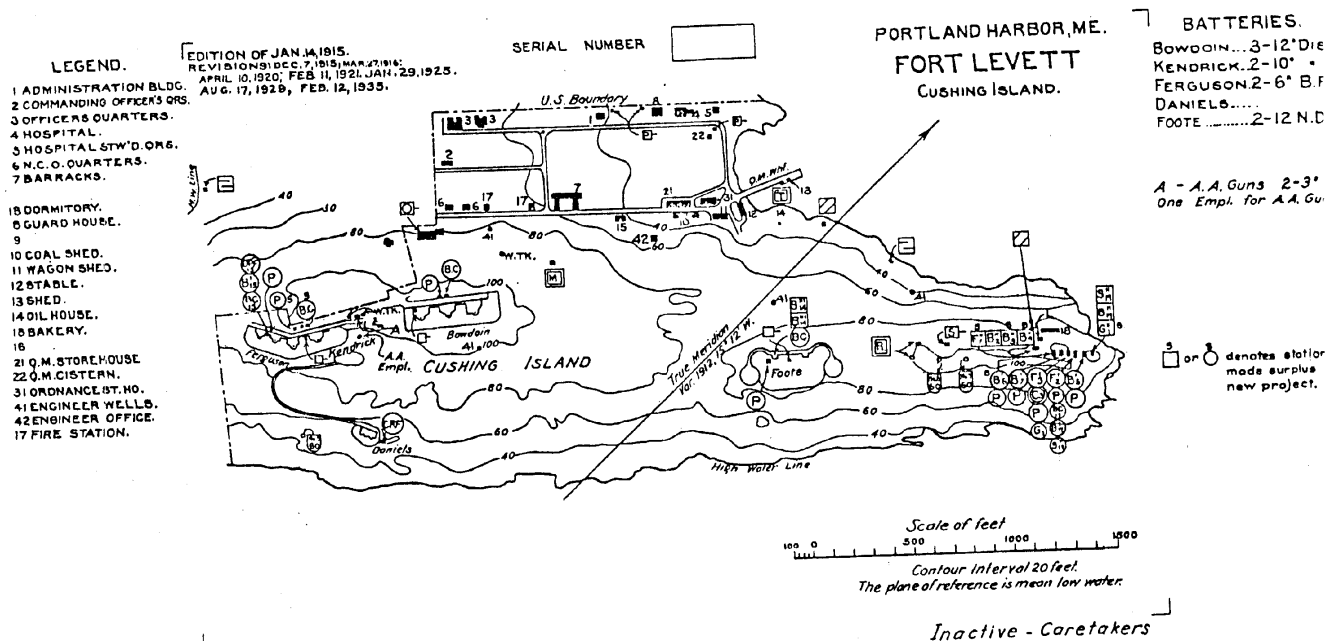
The area around Casco Bay and the river bays to the north have an outstanding collection of remaining seacoast fortifications ranging from unique second and third system forts, largely intact early modern era forts, to WWII era forts. Forts Knox, Scammel, and Gorges are outstanding examples of Third System architecture. Fort Levett and Fort McKinley have a unparalleled collection of surviving garrison buildings, plus a significant number of rare artifacts remaining in the gun batteries, fire control structures, and mine structures. In all a significant collection of seacoast defense structures that are rarely seen elsewhere. Several sites are accessible only by boat and a number are privately owned, so attending this conference will be the only way most fort enthusiasts will be able to see them. The current plan is for a four-

day meeting with two optional add on days to visit some of the more remote locations. Weather may change the final schedule.

While a few details still need to be worked out, most of the meeting itinerary is in place. The island visits will be a bit of a challenge as we will not have much, if any, ground transportation. Fort Scammel, Fort Levett, Fort McKinley, and Fort Lyon are now private property, and we will be required to stay together on a guided WALKING tour of those sites. The Levett and McKinley visits in particular will involve long walks over some rough terrain. We are looking into arranging transportation on Peaks Island. We will be leaving by charter boat Wednesday, Thursday and Friday from Fogg's Water Taxi dock which is next the Casco Bay Lines Ferry dock in downtown Portland on Commercial Street. Parking downtown will be an issue and a shuttle was too expensive so we will have to try and car pool.

The Hotel for the conference will be Best Western Merry Manor Inn, 700 Main Street, South Portland, Maine 04106, 207-774-6151, Hotel Contacts: Don Haggett. A conference room will be set up for breakfast each morning and for meetings each evening. Room Block: 50 rooms, Room Rate: \$109.00 single/double, Extra Person Rate: \$10.00. Tax Rate: 9%. Free breakfast each morning included in Room rate. Cut Off Date: April 10, 2023. Guests should call 207-774-6151 to make reservations note CDSG Meeting for group rate. Hotel Web Site: [www.merrymanorinn.com](http://www.merrymanorinn.com)

For registration details and more information contact Mark Berhow at [berhowma@comcast.net](mailto:berhowma@comcast.net) or visit [cdsg.org](http://cdsg.org).





### CDSG Fund

The CDSG Fund supports the efforts of the Coast Defense Study Group by raising funds for preservation and interpretation of American seacoast defenses. The CDSG Fund is seeking donations for projects supporting its goals.

Visit the CDSG.ORG website for more details.

The goals of the CDSG and CDSG Fund are the following:

- \* Educational study of coast defenses
- \* Technical research and documentation of coast defenses
- \* Preservation of coast defense sites, equipment, and records for current and future generations
- \* Accurate coast defense site interpretations
- \* Assistance to groups interested in preservation and interpretation of coast defense sites

Donations are tax-deductible for federal tax purposes as the CDSG is a 501(c)(3) organization, and 100% of your gift will go to project grants. Major contributions are acknowledged annually. Make checks or money orders payable in US funds to: Coast Defense Study Group Fund or the CDSG Fund. Donations can also be made by credit card through the CDSG website at [www.cdsg.org](http://www.cdsg.org).

The Fund is always seeking proposals for the monetary support of preservation and interpretation projects at former coast defense sites and museums. A one-page proposal briefly describing the site, the organization doing the work, and the proposed work or outcome should be sent to the address below. Successful proposals are usually distinct projects rather than general requests for donations. Ideally, we desire to fund several \$500 to \$1,500 grants per year. Upon conclusion of a project a short report suitable for publication in the CDSG *Newsletter* is requested. The trustees shall review such requests and pass their recommendation onto the CDSG Board of Directors for approval. The trustees for the CDSG Fund are Terry McGovern, Quentin Schillare and Mark Berhow.

Send donations to (and made out to):

CDSG Fund c/o Quentin Schillare  
24624 W. 96th Street, Lenexa, KS 66227-7285 USA

Or use your credit card via PayPal on the [www.cdsg.org](http://www.cdsg.org) website.

Send Fund Project requests to:

CDSG Fund c/o Terry McGovern  
1700 Oak Lane, McLean, VA 22101-3326 USA

Please prepare a written request of your need and how your request relates to the goals of the CDSG.



### CDSG Logo Hats, Shirts & Patches

The CDSG is pleased to offer custom-made hats, T-shirts and patches to our membership. Wearing these hats, T-shirts and patches are a great way to make others aware of the CDSG and its goals. It is also an excellent way to promote new memberships in the CDSG.

The CDSG patches have been available for several years. Designed especially for the CDSG, these quality patches combine the Coast Artillery Corps and the Corps of Engineers symbols to reflect their involvement in U.S. coastal defenses. This logo is now on hats and a set of T-shirts which are great for showing the CDSG "flag."

To order your hat, T-shirt or patch, please complete the order form below and send it along with your check (made out to CDSG, Inc.) to Terry McGovern at 1700 Oak Lane, McLean, VA 22101-3326 USA (e-mail: [tcmcgovern@att.net](mailto:tcmcgovern@att.net)).

CDSG hats, T-shirts and patches ordering information

Black T-shirt with white ink:

Size & # \_\_\_L \_\_\_XL \_\_\_2XL \_\_\_3XL

Red T-Shirt with white ink:

Size & # \_\_\_L \_\_\_XL \_\_\_2XL \_\_\_3XL

Kacki T-Shirt with black ink:

Size & # \_\_\_L \_\_\_XL \_\_\_2XL \_\_\_3XL

Navy T-shirt with yellow ink:

Size & # \_\_\_L \_\_\_XL \_\_\_2XL \_\_\_3XL

Total Number: \_\_\_ times \$ \_\_\_\_\_ = Total \$ \_\_\_\_\_

(domestic \$18/overseas \$26 each)

CDSG Cloth Patch: \_\_\_ times \$ \_\_\_\_\_ = Total \$ \_\_\_\_\_

(domestic \$4/overseas \$6) each

CDSG Color Decal: \_\_\_ times \$ \_\_\_\_\_ = Total \$ \_\_\_\_\_

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