

The CDSG Newsletter



The Coast Defense Study Group, Inc. — Fall 2020



Chairman's Message

Richard Wong

I'm honored to have been selected to serve as the Chairman of the CDSG through a unanimous vote of the CDSG's Board of Directors (thank you, Robert Grimm and Steve Waldron). Special appreciation goes to our outgoing chairman, Danny Malone, who has left this organization in a very strong position. Under his leadership, annual dues were kept at \$45, membership numbers were maintained, and initiatives were undertaken to provide an e-version subscription option to our international members.

This year has been globally described as "unprecedented." The annual meeting in New Orleans was twice postponed due to the persistence of the global pandemic that disrupted the travel plans of our domestic and international members. (A special thanks to our conference chairman, Quentin Schillare, for his yeoman's work in scheduling, rescheduling, and then cancelling all the hotel and boat reservations). Speaking of New Orleans, an unprecedented number of tropical storms raced across the Atlantic into the Gulf of Mexico this year, exhausting the National Hurricane Center's list of alphabetical first names and extending into the Greek alphabet. Four of those storms -- Cristobal, Laura, Marco, and Delta -- made landfall in Louisiana, with yet-undetermined impacts on the coastal fortifications that the CDSG had planned to visit this year. Tentatively, the New Orleans conference is going to be held March 30-April 3, 2022, with the Charleston/Savannah taking place a year before that.

Coronavirus continues to disrupt our daily lives. Thousands of polling places were shuttered, forcing millions of voters to mail in ballots that weren't counted until after Election Day, forestalling the announcement of a winner. Businesses have been closed since March, with some fortunate enough to telework. One can walk into bank wearing a mask and request money without triggering a silent alarm. The Tokyo Summer Olympics were postponed for a year, and Major League Baseball held a World Series that nobody attended. Kids stopped going to school and instead are getting an online education via something other than YouTube and TikTok.

Meanwhile, life (and sadly, death) goes on. The US Department of Agriculture continues its plans to move the Animal Disease Center from Plum Island to someplace closer to Quentin Schillare. The overgrowth at Fort Adams continues to be trimmed. And in Washington State, we lost one of our stalwarts and former CDSG Board Member, Al Chiswell. I first encountered Al when a business trip sent me to Seattle. I stayed an extra day and rented a car to drive out to Port Townsend. When I arrived at the Coast Artillery Museum and Al found out I was a relatively new CDSG member who flew out from Washington, DC, to see "his" fort, he threw me in the front seat of his car and took me on a grand VIP tour of Fort Worden, treating me as if were the Chairman of the CDSG. Now, 20 years later, I am, thanks to Al and his enthusiasm for the organization and looking after its members.

CDSG Meeting and Tour Calendar

Please advise Terry McGovern of any additions or changes at tcmcgovern@att.net

2021 CDSG Conference

April 21 - 25, 2021

Charleston/Savannah

Gary Alexander, gary_a_alexander@nps.gov

2021 CDSG Special Tour

August 21 - 29, August 25 - September 3, 2021
Sweden

Terry McGovern, tcmcgovern@att.net

2022 CDSG Conference

March 30 - April 3, 2022

New Orleans

Quentin Schillare, qschillare@kc.rr.com

Other Meetings and Tours

April, 2021

Kehl/Strasburg

Interfest Annual Meeting

Oliver Zauzig, president@interfest.de

May 27 - 28, 2021

Luxemburg

International Fortress Council Annual Meeting

Kees Neisingh, secretariat@internationalfortresscouncil.org

May 29-30, 2021

Assn Saint-Maurice d' Etudes Militaires Tour

Ticino & Lake Como

Pascal Bruchez, president@asmem.ch

May 29 - 30, 2021

Deutsche Gesellschaft fur Festungsforschung Study Tour

Paris & Lille, France

Andres Kupka, akupka@juelich.de

June 2021

ECCOFORT Study Tour

Armenia

Hans-Rudolf Neumann, hrv.neumannqt@online.de

June 7 - 11, 2021

Rochefort, France

Association Vauban Annual Congress

Charles Rofort, c.rofort@orange.fr

September 11- 19, 2021

ECCOFORT Study Tour

Kotor/Montenegro

Hans-Rudolf Neumann, hrv.neumannqt@online.de

September 16 - 20, 2021

Assn Saint-Maurice d' Etudes Militaires Tour

Wallon - Liege

Pascal Bruchez, president@asmem.ch

September 23 -27, 2021

Piemont - Val D'Aoste

Association Vauban Annual Congress

Charles Rofort, c.rofort@orange.fr

September 24 - 26, 2021

Deutsche Gesellschaft fur Festungsforschung Annual Meeting

Wesel, Germany

Andres Kupka, akupka@juelich.de

November 2021

Charleston

Concil on America's Military Past Annual Conference

Brigwt Hart, brigwthshea@hotmail.com

April 10 - 23, 2022

ECCOFORT Study Tour

Morroco

Hans-Rudolf Neumann, hrv.neumannqt@online.de

Thank you, Al, and thanks to all the members of the CDSG who have supported the group in one way or another -- welcoming new members, protecting historic resources, contributing to the Journal, providing trip reports and site updates for the Newsletter, serving as Site and Regional Representatives, or simply by maintaining your memberships. We all share a love and passion for what we do, and as your incoming chairman, I would like facilitate those efforts.

Regards, Richard

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Preservation Committee Report

Gordon Bliss

I have very little new to report on for this issue, so this column will be very short. The continuing and resurgent pandemic has still put a significant damper on activity. The future of one site of great interest to the group, Fort Terry on Plum Island, NY, is still uncertain; any proposed legislative action to benefit it is extremely unlikely to occur until at least next year. Fort Wool in Hampton Roads has been turned into a substitute bird sanctuary for at least the next few years as construction on the new highway tunnel there has begun. From a few distance pictures I have seen, the sand put down there is not covering any structures and nothing appears to have been directly damaged but I have not seen any detailed views of the site. What it will look like after this project is finished and whether the public will ever be allowed back there is an open question.

One bright spot is that even with the restrictions, it is still possible to do outside work to help maintain sites as people can maintain appropriate distances and generally there are less restrictions on such activity. The regular volunteer crew at Fort Adams, Newport RI, has been working most Saturdays, weather permitting, to both keep the Third System structures clear and looking good, and to clean up some of the Endicott period batteries. If something is going on in your area, please email me so that I can mention it in the next newsletter.

If you have a preservation issue or question, or for further information on any of the items I've mentioned so far this year, contact Preservation Committee Chair Gordon Bliss, at preservation@cdsg.org.

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CDSG 2020 Annual Business Meeting and "Members Day" Presentations

Mark Berhow

The CDSG 2020 Annual Business Meeting, November 7, 2020, via Zoom along with a "Members Day" of presentations on coast defense subjects.

Presentations began at 11:30 AM (Eastern time) with 5 presentations by both previous schedule conference speakers and "members day" speakers. Presentations were given by: John Weaver – "Third System Forts of New Orleans"; Charles Bogart – "Chiefs of CAC"; Ted Pamkayotuff – "Fort Fremont"; Steven Kobylk – "Puget Sound Update"; and Ian Gray – "Defense of New Orleans during the War of 1812". These presentations were well received with over 40 online attendees. A number of participants indicated they would like having quarterly "member day" events via Zoom so other members could provide presentations. The Fortress Study Group is offering a similar lecture program of one presentation per week. The CDSG leadership would like to know of any member interested in giving a presentation.

The CDSG Annual Business Meeting was held virtually at 7:30 PM EST on November 7, 2020. There were approximately 34 attendees. The CDSG Business Meeting consisted of the Chairman's report and then reports of each of the standing committees' activities over the past year. The business meeting is the opportunity for the membership to interact directly with the board of directors and the committee members to ask questions or get information. As a member, please consider attending in the future.

The 2020-2021 Board of Directors are Richard Wong, Robert Grimm, and Steve Waldron. Opening remarks were given by Chairman of the Board Richard Wong, who then introduced the reports from the various committees. Updates on the committees' annual activities will be provided in upcoming issues of the *Newsletter*.

Membership Chairman Quentin Schillare reported that we currently have 403 members, with 373 US members and 28 foreign members, of which 12 are electronic subscribers.

Preservation and Interpretation Chairman Gordon Bliss noted the ongoing saga of Fort Wool, the great progress in reclaiming Fort Adams outworks, and the outstanding accomplishments of

the volunteer crews at Fort Casey and Fort Ebey. Gordon can only respond to developing events if he is notified by observant members. Site Representative and Outreach chairman Norman Scarpulla noted that he has regional representatives in place to cover the US, but the CDSG is still looking for site representatives to regularly make contact with any and all coast artillery sites. It would be greatly appreciated if site visit reports, long or short, could be provided on a regular basis.

Publications Committee member Mark Berhow noted while the CDSG has a nice backlog of articles for the *CD Journal*, new authors are still needed.

Treasurer Terry McGovern reported that CDSG finances are in great shape and we are sustainable in keeping the annual dues the same as last year (\$45 per domestic member). The CDSG Fund Trustees reported that donations are running behind last year's total (about \$6k), but it was hoped that the funds year-end appeal will allow us to match last year.

The CDSG Fund has provided funding for Battery Gadsden lighting and for the solar powered lighting at the Eternal Flame at the Pacific War Memorial on Corregidor. The CDSG fund is seeking project proposals.

The CDSG Press is hoping to add a new coast artillery guidebook title next year.

Projects chairman Mark Berhow notes that the website is running smoothly but is seeking someone to take over management of the website and our social media. He is willing to work with a volunteer over the next year. As the Zoom meeting seemed to be pretty successful, it was suggested that the CDSG should procure its own Zoom account for future online events. This will be discussed at the next board meeting.

The Nominations Committee is seeking members to volunteer to run for a term on the Board of Directors starting in October 2021. Chairman Richard Wong urged members to come forward to volunteer and learn more about how the organization runs.

As the Zoom meeting seemed to be pretty successful, it was brought up that the CDSG should procure its own Zoom account for future online events. This will be brought up and discussed at the next board meeting (1/25/21). Richard then thanked Charlie Bogart for making the arrangements for this Zoom meeting and for running the show. The meeting was adjourned at 9:30 Eastern Time.

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2020 Year-end Donation Appeal for the CDSG Fund

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

As you know, 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 year-end 2020 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. Projects the

CDSG Board of Directors has already agreed to fund (and we have funds on hand to cover) are:

Restoration Supplies for Battery Guenther at Fort Canby – up to \$2,500 – Waiting on USCG approval to continue the clean-up of the mortar battery by Aaron Buda, the CDSG Representative for Columbia River. We hope that more work is done on this special mortar battery so we need to reserve these funds for those efforts.

USS *Iowa* Veterans Association 16-inch/50 Barrel Project – The Fund challenged our members up to \$5,000. The US Navy has accepted the display of the barrel at JEB Fort Story at Cape Henry, but the USS *Iowa* Veterans Association needs to raise the funds needed for the movement and display (\$125,000). We need to reserve the \$10,000 as our members have meet the trustee's challenge and have given \$5,000 towards this project.

The **CDSG Fund** has been approached for possible grants for the following projects, but we need to raise more funds before we can consider these requests, as well as have a formal written request to the CDSG Fund Trustees so they can make a recommendation about these requests to the CDSG Board.

Fort Michie, Great Gull Island, NY – Chris Zeeman – Stabilizations of WWII fire control tower due to rusting steel supports – cost estimated at \$1,800 through the use of 12 floor jacks – We are working with Matthew Male through the AMNH to fund the purchase and installation of these floor jacks, but we have only a small window of time for gaining water access to Great Gull Island. It is not easy in months outside the tern nesting season (April to September).

Fort Wool, Rip Raps, Hampton, VA – Mike Cobb – Stabilization of 3rd System Casemates and WWII battery commander's tower – cost estimated at \$2,500 for 20 floor jacks – This project is on hold as the City of Hampton has not renewed its lease for this island fort from the Commonwealth of Virginia. The Department of Conservation and Recreation now controls the island 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 3rd System 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 (one of the only two remaining in the world) is rusting, especially on the "cab" portion where only two steel supports carry the weight of the cement roof. Mike has been using car jacks to try to support the roof, but the whole roof is leaning due to the weight. It is a real possibility that the tower may topple if these roof supports give way. Mike needs to get organized and provide us with a written request.

Fort Mills, Corregidor Island, Philippines – Fort Monroe Authority (FMA) and Corregidor Foundation (CFI) – Movement and display of a 12-inch M1895 barrel from "Bottomside" on Corregidor to Battery Parrott at Fort Monroe, VA – cost estimate not known at this time – The CFI has agreed to give this 12-inch M1895 barrel to FMA for display on a cradle at Battery Parrott (same type of barrel that was used on a disappearing carriage). Challenges will be gaining approval from other Philippine government agencies, especially the Ministry of National Defense, to export this barrel and raising the funds to move the barrel (38

feet long and weighs 60 tons) from Corregidor to Manila to ship via break-bulk to Newport News, VA. Part of Battery Parrott would become a display on the functioning of the battery and a display on the military history of Corregidor. This project will require political, logistical, and fundraising expertise.

The **CDSG Fund** can only fund these possible projects by receiving your donations, so without your donations we cannot approve these projects. Please consider donating when paying your membership dues for 2021. 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 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. 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 website. Consider combining your membership dues with a **CDSG Fund** donation this year.

Attention – We have added the CDSG Fund to Amazon Smiles 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. Please do so today.

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Update on 2021 CDSG Special Tour to Sweden's Defenses

Proposed Dates – August 25th to September 3rd

Seeking your Interest – Please let us Know
Terry McGovern

The CDSG and FSG have been working on organizing special tours to Sweden's defenses in 2021 (subject to developments with the COVID-19 pandemic) but we need to learn if you are interested in attending one, or two, or all three of the proposed Sweden tours. Wait, you might say, how can there be three fortification tours to Sweden in the same year!! This is due to each group's different focus, mode of transport/lodging, and duration of tour. By having three options we hope to better serve each member's needs.

These tours are being organized by the leading tour organizer to Sweden's impressive defenses, Lars Hasson. He has designed a 9-day tour to the "best" of Sweden's modern defenses for the CDSG which would take us across the breath of Sweden. He is also organizing an 8-day tour for the FSG that would overlap with the CDSG tour so our two groups would travel together for 4 days. You could attend just the FSG tour or just the CDSG tour or both tours for a total of 13 days. Lars may also organize a 4-day "add-on" tour for those who really want to see all the major Swedish defenses. If you joined all three tours you would have 17-days of both Swedish and Danish fortifications and artillery. You would truly become an expert on Swedish defenses.

The CDSG's 9-day tour is planned to start and end at Stockholm's International Airport. You would need to book and pay for your own flights. The round-trip fare from Washington, DC, recently was \$1,033 via Iceland. We would use shared rental

cars as the size of the tour group would be limited to around 15 members. Total in-country costs are estimated to be \$2,500 (subject to number of attendees). The planning dates are now late August 2021, due to the virus developments.

The first day we will visit Landsort Fortress, both the 15.2 mm turrets and more modern 12 cm turrets. The next day we will visit Vaxholm Fortress, which has a whole complex of defenses on several islands. We will visit the Fortress Museum and Oscar-Fredriksborg Fort as well as the Vaxholm Line of defenses. On the third day we drive and boat taxi to remarkable Siaro Fortress, an underground island fort with two 15.2 cm guns, before we fly and boat taxi to Arholma to stay overnight in Battery Arholma (10.5 cm coast defense work). Day Four has us traveling north to Storholmen Island with a 15.2 cm battery and its over 1 km underground tunnel system. Day Five the tour continues on with the drive north to the Hemso Fortress (twin 15.2 cm turrets with fire-control complex) and an overnight stay in a 7.5 cm battery on Havstoudd. On Day Six we fly to northern Sweden to the Boden Fortress, with very impressive series of forts carved from the bedrock (Rödberget Fort and Fortress Museum) on Day Seven. We will also go to Vuollerim with its ex-navy 15.2 cm twin turrets. Day Eight its off to Lappland and the Kalix Line and Kamlunge Fort (15.2 cm guns before going to the Siknas Fortress (twin 15.2 cm turrets). On Day Nine we fly to Stockholm for flights back to the USA.

Please let Terry McGovern at 1700 Oak Lane, McLean, VA 22101 or tcmcgovern@att.net know of your interest in attending one, two, or all three tours. If we get enough interest from CDSG members, we will start collecting a deposit for the tour. Please let me know your questions.



Fortress Hemsö twin 15.2 cm m/03 turret battery



Two 15.2 cm guns at Siaro Fortress

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Current Conditions at Fort Jefferson, Florida, September 2020

Chuck Ruby

The following article is based on my trip to Fort Jefferson and information provided by my guide. The gentleman providing the guided tour was an employee of the ferry company and not a National Park Ranger. His knowledge seemed to be based on what was relayed to him by others.

Fort Jefferson is a 3-story brick fort, 70 miles west of Key West, FL, in the Gulf of Mexico. One of the largest of the 3rd-System forts, it encompasses nearly 16 acres. The United States needed to protect the vital shipping route from the East Coast to New Orleans, and Fort Jefferson was built on Garden Key for this purpose. Even though the fort was not built to defend a major city or an important river or harbor along the coast, as most 3rd-System forts were, it was constructed during the same period.



Because of the fort's immense size and location, construction was exceedingly difficult and continued off and on for over 50 years, but was never completed. The flooring of the second tier was never finished. It was determined that the weight of the finished fort, along with the weight of the guns, would be too great for the shifting sand that the fort was built on.



When walking the second tier, the brick tops of the first-tier casemates are visible along with the cement and coral used as fill. Only one small section of the slate flooring was installed and it gives us a small view of how of how 3rd-system forts were built. The rest of the slate flooring was never installed. Also, the scarp walls were built but the embrasures were not. There are large

10-foot by 10-foot openings in the 2nd tier all around the fort, where the embrasures would have been, giving us another view of the construction method for these brick forts. The scarp wall was built first with openings for the embrasures. The brickwork was left in an alternating pattern so the embrasures could be tied into the scarp when built later.



During the fort's history it was used as many things, from a trade route defense fort to a quarantine island to a prison. It has been home to as many as 1500 men women and children at one time. The 45-foot-high walls of the fort blocked much of the coastal breeze, so the parade, where most of the people lived in tents, was uncomfortably hot and humid. Whenever possible the residents inhabited the 2nd tier casemates. Walls were built between some of the casemates and in some cases the embrasures formed rectangular openings for windows. Also, in some of the casemates in the bastions, stoves with chimneys were built utilizing excess bricks and accessing the chimneys in the top of the casemates designed to funnel out the hot gasses and smoke from firing the cannon.



When I last visited the fort 35 years ago, the first-tier embrasures were all in extremely poor condition. The iron used to support the brickwork had rusted behind the bricks, expanded, and burst the brickwork around the embrasures. All the embrasures have now been repaired. Some embrasures also have Totten Shutters but they do not appear to be original and they are in poor condition. The sally port area of the fort has also been restored.

On the parapet are several restored, well maintained 15-inch smoothbore Rodman cannon and 10-inch rifled Parrott guns. The guns were restored in 2007 after laying on the ground for many years, but the corrosion has been removed and they are now coated with a protective black finish. All the other ordnance at the fort was donated or scrapped. The remaining guns were not removed because of their immense weight. There are 38 surviving guns of the two designs. One Rodman is mounted on a replica mount appropriate for the cannon. The others are mounted on steel cradles.



The construction of Garden Key Lighthouse in the fort's interior was completed in 1826. There were many challenges with the lighthouse over the next 30 years and it was eventually replaced by the Loggerhead Lighthouse, approximately 3 miles further west. The Garden Key Lighthouse is currently being refurbished.

Much of the parade is covered in knee-high grass with only trails mowed across. There are only a few remaining buildings. The Engineers' quarters are still standing and are used as housing for the National Park Staff living on the island. The hot shot furnace has been restored and is in excellent condition. Also located on the parade are a large magazine and some of the walls of one of the fort's cisterns. There are foundations of the enlisted men's barracks, officers' quarters, and a few outbuildings.

Access to the fort by ferry from Key West costs \$180 per person round trip. There are National Park Rangers on the island but the tours are given by employees of the ferry company, who do not seem nearly as knowledgeable about the fort as most National Park Rangers I spoke with on my previous visits to other forts.

The interior and exterior of the fort appear to have been stabilized and the overall appearance of the fort is excellent. Approximately 2/3 of the fort is open to explore, including much of each tier and most of the parade. There is a small bookshop and museum next to the sally port. If you are planning a trip to Fort Jefferson, allow about 9 hours - a 2 1/2-hour boat ride out, 4 hours at the fort, and a 2 1/2-hour return trip.

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Al Chiswell, 1943 - 2020

Bolling Smith

The Board of Directors sadly announces the death of Al Chiswell, a former board member. Alfred Gregson Chiswell, Jr., was born March 10, 1943, in North Carolina, and died September 25, 2020, in Port Townsend, WA, after a lengthy illness. He is survived by his wife, Maureen Lund Chiswell, of Port Townsend; his daughter, Charlotte Amalie Chiswell Dries, and son-in-law Andrew Dries, of Dumfries, VA, and his son, Thomas J. Chiswell of Vancouver, WA.

Al was retired and has lived in Port Townsend for 21 years. He has been active in community work as director and board member of the Puget Sound Coast Artillery Museum at Fort Worden State Park and was involved in many events at the park, where he served as tour guide. He was awarded a Volunteer of the Year Award and a Lifetime Achievement Award in 2017 by Washington State Parks. He had been a board member of the Council on America's Military Past (CAMP) and of the Coast Defense Study Group. He was also associated with the Fortress Study Group.

He received a Bachelor of Science Degree in Electrical Engineering from North Carolina State University and served in the U.S. Army Signal Corps, achieving the rank of captain. For his military service he received two Bronze Stars and a U.S. Army Commendation Medal. He traveled extensively in his career as a telecommunications engineer, including sites in Europe, South America, and Saudi Arabia.

In honor of his memory, donations may be made in his name to the Coast Defense Study Group, c/o Quentin Schillare, 24624 W. 96th St., Lenexa, Kansas, 66227-7285, or to CDSG.org.

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Fort Words at Fort Worden

Press release

Fort Words is a public art installation created by artist Aaron Asis to celebrate the inspired conditions and historic significance at Fort Worden State Park. These temporary installations are drawn from local oral histories, collections of historic texts, and public testimonials to give voice to these battery sites and share stories of the fort's dynamic history with park visitors — through October.

"...each installation shares a different story related to these old bunkers for people to discover, contemplate, and photograph...like a trail of breadcrumbs, shown in a stencil style text, which hope to inspire explorations, inspire curiosity, and increase our collective appreciation for this extraordinary historic treasure!!..."

Fort Words was developed in collaboration with Centrum, partnering support from Jefferson County Historical Society, content support from the Jamestown S'Klallam Tribe, project support from the Port Townsend Arts Commission, and permitting support from Washington State Parks.

Video: https://youtu.be/wdxL_-oxIKA

Website: <https://www.fortwords.com/>

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Coast Defense Military Reservations of San Mateo County Now Available!

Press Release

What once served as the eyes and ears of the Coast Artillery Corps during World War II and beyond until 1948, the small concrete base-end stations that served as observation/spotting stations that were constructed along the coast of San Mateo County, are slowly being fading into historical oblivion. Many misconceptions are abound about the purpose and scope of these unique structures built for the Harbor Defenses of San Francisco. Finally, a book has come out looking at these sites in full historical detail.

Author Matthew W. Kent puts the misconceptions to rest in his new book *Coast Defense Military Reservations of San Mateo County* (258pp, hardbound and in full color, \$100.00), a first of its kind book exploring the smaller lesser known coast defense military reservations of San Mateo County. *Coast Defense Military Reservations of San Mateo County*, is a concise full color edition to the smaller lesser known coast defense military reservations of San Mateo County, located within the Harbor Defenses of San Francisco. This book covers all fire control observation/spotting base-end stations, power houses, gun batteries, radar stations, and automatic weapon positions south of Fort Funston.

Coast Defense Military Reservations of San Mateo County, also contains complete historical information including, blueprints, period maps, up-to-date site maps made from satellite photographs, historic black and white period photographs, and full color photographs of every site. This book was specifically designed for fortification enthusiasts to use in the field when visiting these historic sites.

ISBN 978-1-7923-5065-8, 258 pages, Hardcover, Dust Jacket, Library grade binding, Printed in full color. \$100.00

To place orders for the book, please visit the following web address:

URL: <https://www.blurb.com/b/10329779-coast-defense-military-reservations-of-san-mateo>.

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Columbia River Forts Update

Aaron Buda, Site Rep

Observations from the forts:

Fort Columbia: Just within this year, the roofs in the M'2, F'5, base end stations and the dorm building have really taken a hit. The iron supports in the roof for F'5 have given way and you can't even walk into the station anymore. In June I discovered a tree fell on the back side of the dorm. The concrete wall held, but the whole roof of the enlisted part collapsed in... time is starting to take its toll.

And as a note, Greg Hagge told me that the roof, ceiling, and floor in the M'2 -later M1/4 station were rebuilt by Parks in the 1970s or 80s. Thus, the old stairway in the floor to the plotting room down below is gone, because they covered it up with the new floor. This new floor and new ceiling are now very deteriorated.

Fort Canby (Cape Disappointment State Park): The Coast Guard has closed the trail to Cape Disappointment light. The reason was too many people trekking to Dead Man's Cove on the trail, which is marked as being off limits. USCG had enough of it and closed the whole trail. I'm hoping when a new commanding officer arrives, and maybe after the Covid scare settles down, it may open again.

For a variety of reasons nothing has been done to follow up on the Battery Guenther restoration projects since the work done around the CDSG Conference in 2018. We are looking into following up at some point in the future.

Fort Stevens: The Oregon State Historic Preservation Office has deemed the Mishler BC/primary and M" station on the paradors as unsafe, as of June, and so have sadly closed that area off for now.... things are starting to creep closed In the HD of the Columbia.

The Fort Stevens museum has been closed since March, though on busy days there is an employee on the museum porch selling gift shop wares. In February an interpretive team was hired to revamp the Stevens museum. Covid stunted the work on that project, but it is slated to kick off in November possibly... we will see what happens with that.

The Fort Stevens guardhouse just got new front windows and doors, it is in a process of being restored, so that is good news.

The Tourist No. 2 Ferry in Astoria (former WWII Columbia River mine planter) has recently been listed for sale, and the group working to fund restoration for it has more or less folded. The ferry's future is looking uncertain now... hoping for the best.

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4.72-inch Armstrong Gun and Carriage Found

Thomas Batha

Another surviving coast artillery gun has been found! Glen Williford reports a 4.72-inch 40-caliber Armstrong gun is still at the American Legion Post in Dravosburg, Pennsylvania.



It was originally set up in a temporary emplacement in 1899 at Fort Delaware during the Spanish panic. By July 1, 1917, it was permanently emplaced with a second gun in Battery Dodd. Just three months later it was removed from Dodd and sent to the Army Transportation Service (ATS) for possible shipboard

use. It is unknown if it was actually mounted on a ship but on May 21, 1919, it was returned to Fort Delaware. On March 8, 1921, it was donated to Dravosburg, Pennsylvania (just outside of Pittsburgh) for memorial display.

Although freshly painted, the shield markings appear to be No. 10885, the serial number of the Mark IV gun is 9724. Its gun card indicates just three rounds were fired during its service time.

Also investigated at this time was a similar gun donation for Confluence, Pennsylvania. After discussions with local authorities and reference to a period newspaper article, it was determined that Gun No. 9424 was scrapped during WW II.

This new find brings the total of surviving 4.72-inch Armstrong guns to eight, with two confirmed as scrapped after donation. The fate of the other approximately 20 donated guns of this series remains to be determined.

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Fort Monroe's New Casemate Museum Director

from the Hampton Daily Press.

HAMPTON — The Fort Monroe Authority has tapped an Army veteran to oversee the Casemate Museum, which houses a trove of artifacts from the installation's storied history.

Françoise B. Bonnell, who has 22 years of military service under her belt, began Aug. 25 as the director of museums, education and interpretation, Fort Monroe officials said Monday.

She recently served as director and supervisory curator at the Army Women's Museum in Fort Lee. Bonnell was a ROTC Distinguished Military Graduate, served five years of active duty, 17 years as a reservist. She retired as a lieutenant colonel.

Bonnell oversees the visitor experience at the museum and the Fort Monroe Visitor and Education Center. The center has held some events earlier this year, but officials hopes to open to the public later this month.

Bonnell holds a Bachelor of Arts in history and political science from Scripps College, a Master of Arts in history from S.U.N.Y. Stony Brook, and a doctorate in education with a specialization in curriculum and teaching from North Central University.

Former museum director Robin Reed retired in March after serving since 2013. Fort Monroe officials announced it was looking to fill the post in the past month. Fort Monroe had a lot of turnover in 2019 with several people leaving — some due to retirements or jobs were absorbed into other roles.

In May 2019, museum historian Robert Kelly was fired two months before the authority hosted a widespread commemoration honoring the 400th anniversary arrival of first Africans to English North America. A few people who came to the Fort Monroe Board of Trustees meeting that June spoke on his behalf asking for him to be reinstated.

The Casemate historian position remains unfilled. Other positions that opened in the past year also not filled are the human resources director and the museum registrar. The director of finance position was absorbed into another role, while the director of special events and executive assistant have since been filled, according to the Fort Monroe website.

Fort Monroe, named for President James Monroe, had its first stone foundations laid in 1819. The museum draws its name from the many cells that held the weapons, ammunition, and prisoners. Opened in 1951, the museum chronicles the military history of Fort Monroe from the construction of Fort Algernonne in 1609, through the last major command to be headquartered at Fort Monroe, the Army's Training and Doctrine Command.

It features the casemate cell where Jefferson Davis was briefly incarcerated in 1865 after the Civil War. The museum also showcases the story of the three enslaved Black men who in 1861 sought refuge at the fort and were welcomed by Gen. Benjamin Butler, who deemed them "contraband of war." The museum, which was undergoing renovations before the spring pandemic hit, also highlights stories of the U.S. Army Coast Artillery Corps.

The authority, a political subdivision of Virginia established after the Base Realignment and Closure (BRAC) in 2005, receives roughly \$6 million in state appropriations and has a \$11 million operating budget for the current fiscal year. State agencies and authorities such as Fort Monroe were advised to hold on any discretionary spending because of the pandemic. Bonnell's salary will be in the range of \$81,000 – \$91,000.

Lisa Vernon Sparks, 757-247-4832, lversonsparks@dailypress.com. Lisa Vernon Sparks covers Hampton for the *Daily Press*.

Dr. François Barnes Bonnell is the director of the United States Army Women's Museum, and an expert in the history of women's contributions to the U.S. military. Since 2006, she has overseen the daily operations of the facility and research center, and directed the museum's programming and education. She is a peer reviewer for the American Alliance of Museums accreditation program, and a committee member for the American Association of State and Local History. Dr. Bonnell has been an adjunct faculty member for various universities and colleges since 1994, including the University of Guam and Central Texas College. She teaches U.S. history and courses in the history of military logistics. She retired from the U.S. Army in 2006 as a lieutenant colonel, having served for 22 years on active duty and in the Army Reserve.

Dr. Bonnell's father, Professor Thomas Garden Barnes, was a founder of the Canadian Studies Program at Berkeley, and Dr. Bonnell has been a longtime and highly committed supporter of his legacy. Dr. Bonnell was raised in Berkeley, but for over forty years has spent summers at the Barnes family's ancestral home in Nova Scotia, Canada. She has done extensive genealogical research and continues to uncover the roots and intricate relationships that have tied her American and Canadian families together since the 1700s. She holds a B.A. in history and political science from Scripps College, The Claremont Colleges; an M.A. in history from SUNY, Stony Brook; and a Ph.D. in education from Northcentral University.

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U.S. Army Flexes New Land-based, Anti-Ship Capabilities

Aviation Week Network, 10-20-20.

Steve Trimble and Lee Hudson



An Artist's rendering of a Precision Strike Missile offers a preview of a new weapon entering service in fiscal 2023. An advanced seeker with a maritime targeting capability has entered flight testing for delivery two years later.

Credit: U.S. Army

Finding ever new and efficient ways to sink enemy ships is usually assigned to the U.S. Navy and, to a lesser extent, the Air Force, but not anymore.

Though still focused on its primary role of maneuvering against land forces and shooting down air and missile threats, the Army is quietly developing an arsenal of long-range maritime strike options.

Project Convergence 2021 to include anti-ship test

Precision Strike Missile to receive anti-ship role in 2025

As the Army carves out an offensive role in the Pentagon's preparations for a mainly naval and air war with China, service officials now seek to develop a capacity for targeting and coordinating strikes on maritime targets with helicopter gunships in the near term and with long-range ballistic missiles by 2025.

The Project Convergence 2020 event in September focused the Army on learning how to solve the command and control challenge for a slew of new land-attack capabilities scheduled to enter service by fiscal 2023. The follow-on event next year will expand to include experiments with the Army's command and control tasks in the unfamiliar maritime domain.

"I think we have a long way to go in terms of partnering with the Navy for some of the maritime targeting [capabilities]," says Brig. Gen. John Rafferty, the Army's cross-functional team leader for Long-Range Precision Fires.

"And I think that'll be a natural evolution into Project Convergence 2021," Rafferty says, speaking during the Association of the U.S. Army's virtual annual meeting on Oct. 15.

The Army operates a small, modest fleet of watercraft, including logistics support vessels and Runnymede-class large landing craft, but service officials have been content to respond to attacks on enemy ships at sea with the Navy's surface combatants and carrier-based fighter squadrons. Last year, the Air Force also revived a maritime strike role by activating the Lockheed Martin AGM-158C Long-Range Anti-Ship Missile on the B-1B fleet.

But the Army's position has changed. The AH-64E Capability Version 6, which Boeing started developing in 2018, includes a modernized radar frequency interferometer. The receiver can identify maritime radars, allowing the AH-64E to target watercraft at long range for the first time.

Meanwhile, the Defense Department's Strategic Capabilities Office started working in 2016 to integrate an existing seeker used for targeting ships into the Army Tactical Missile System (Atacms), which is currently the Army's longest-range surface-to-surface missile at 300 km (162 nm). Beginning in fiscal 2023, the Lockheed Martin Precision Strike Missile (PrSM) is scheduled to begin replacing the Atacms. The Increment 1 version will extend the range of the Army's missiles to 500 km. A follow-on Increment 2 version of PrSM is scheduled to enter service in fiscal 2025, featuring a new maritime seeker now in flight testing by the Army Research Laboratory.

"As we begin to develop the PrSM [Increment 2] with the cross-domain capability against maritime and emitting [integrated air defense system] targets, obviously we'll be partnering with the Navy on that," Rafferty says.

Targeting ships from land-based artillery systems is not unique to the Army. The U.S. Marine Corps plans to introduce the Raytheon-Kongsberg Naval Strike Missile, firing the ground-based anti-ship cruise missile from a remotely operated Joint Light Tactical Vehicle.



In 2018, the Army conducted the first experiment of a land-based, anti-ship missile during an international maritime exercise at the Pacific Missile Range in Hawaii.

The Raytheon-Kongsberg Naval Strike Missile struck a decommissioned ship 63 mi. north of Kauai. Credit: U.S. Army

To strike a moving target at ranges beyond the horizon, the Army needs more than an innovative new seeker. A targeting complex linking over-the-horizon sensors with the Atacms and PrSM batteries is necessary. Moreover, the Army will need to adapt command and control procedures to an unfamiliar maritime domain.

The annual Project Convergence events offer a laboratory for the Army to prepare the targeting and command and control complex before new weapons enter service. With the Long-Range Hypersonic Weapon, a medium-range ballistic missile and PrSM also set to enter service in the next three years, the Army is seeking to adapt quickly.

Last month, the Army used the first prototype of the Tactical

Intelligence Targeting Access Node ground station. An artificial intelligence (AI) program named Prometheus sifted through intelligence information to identify targets. Another AI algorithm called SHOT matched those targets to particular weapons with the appropriate range and destructive power. An underlying fire-control network, called the Advanced Field Artillery Data System, provided SHOT with the location and magazine status of each friendly weapon system. A process that would otherwise take minutes or even hours dwindled—in an experimental setting—to a few seconds.

The first Project Convergence event last month focused on the Army's traditional mission against targets on land. The next event will seek to replicate that streamlined targeting process against ships possibly hundreds of miles away. These experiments are intended to help the Army familiarize itself with new tools in the command and control loop, such as automated target-recognition systems and targeting assignments. The event also helps the Army dramatically adapt, in a few years, institutional practices that had endured for decades.

"In order for a bureaucracy to change, [it has] to understand the need, and we have to create the use case in order for a bureaucracy to change," says Gen. Mike Murray, the head of the Army Futures Command. "I think in Project Convergence, what we're able to demonstrate to the senior leaders in the army will further help drive that change."

In a way, the Army is seeking to achieve in the maritime domain a networked sensor and command and control system that the Navy introduced to its fleet nearly two decades ago. To improve the fleet air-defense mission substantially, the Navy's Cooperative Engagement Capability (CEC) generally develops a common, shared database of tracks from the multiple airborne, surface and subsurface sensors available to a carrier battle group.

But the Navy also is building on the CEC standard. In 2016, a Lockheed F-35B demonstrated the ability to develop a target track of an over-the-horizon enemy warship. The track information was sent via the CEC to a launcher for a Raytheon SM-6. Although primarily an air- and missile-defense interceptor, in this case the SM-6 demonstrated an anti-ship role. A follow-on development SM-6 Block 1B is expected to optimize the weapon system as a long-range, anti-ship ballistic missile with hypersonic speed.

More recently, the Navy has been quietly experimenting with its own series of Project Convergence-like experiments. Known as the Navy Tactical Grid experiments, the Navy and Marine Corps organized a series of demonstrations in fiscal 2019, according to the latest budget justification documents. Building on the common operating picture provided by the CEC, the Navy Tactical Grid is possibly experimenting with similar automation and machine-learning algorithms to streamline and amplify the targeting cycle dramatically.

A new initiative is now replacing the Navy Tactical Grid experiments. Chief of Naval Operations Adm. Michael Gilday tapped Rear Adm. Douglas Small, the head of Naval Information Warfare Systems Command, to lead the effort known as Project Overmatch.

Small must provide a strategy, no later than early December, that outlines how the Navy will develop the networks, infra-

structure, data architecture, tools and analytics to support the operational force. This includes linking hundreds of ships, submarines, unmanned systems and aircraft.

"Beyond recapitalizing our undersea nuclear deterrent, there is no higher developmental priority in the U.S. Navy," Gilday wrote in an Oct. 1 memo that revealed the existence of Project Overmatch. Aviation Week obtained a copy of the document. "I am confident that closing this risk is dependent on enhancing Distributed Maritime Operations through a teamed manned-unmanned force that exploits artificial intelligence and machine learning."

While Small is tasked with creating the "connective tissue," Gilday directs Vice Adm. James Kilby, deputy chief of naval operations for warfighting requirements and capabilities (N9), with accelerating development of unmanned capabilities and long-range fires, Gilday wrote in a separate Oct. 1 memo outlining the details of Project Overmatch.

Kilby's assessment must include a metric for the Navy to measure progress and a strategy that appropriately funds each component. His initial plan is also due to Gilday in early December.

"Drive coherence to our plans with a long-term, sustainable [and] affordable view that extends far beyond the [future years defense plan]," Gilday wrote.

* * * * *

Fort Wool – Historic Guardian of Hampton Roads and Presidential Retreat

Terry McGovern is the mid-Atlantic regional representative for the Coast Defense Study Group (www.cdsg.org) and a founding member of the Coalition for Historic Fort Wool. This article ran in several local newspapers in Virginia.

Virginians reading the local press celebrating recent developments at Fort Wool (Reprieve for local migratory birds, Opinion, August 13) could be forgiven for asking, wait a minute, isn't Fort Wool a historic site I used to be able to visit? The reader would be right: Fort Wool was built following the War of 1812, as an island of granite and a companion fort to Fort Monroe, allowing the two forts' guns together to control access to Hampton Roads. It also served as a summer residence for two presidents, Andrew Jackson and John Tyler, as well as an initial sanctuary for enslaved Americans (contrabands) fleeing the Confederacy for the protection of the Union Army. Guns from the fort fired at the ironclad CSS *Virginia* in the Battle of Hampton Roads in March 1862, and Abraham Lincoln observed the first Union attempt to invade Norfolk from the fort's ramparts in May 1862. The fort is listed on the National Register of Historic Places, and until recently was a tour stop for thousands of tourists a year, arriving on *Miss Hampton II*, a tour boat originating in Downtown Hampton.

Virginians traveling over the Hampton Roads Bridge-Tunnel can see Fort Wool, lying to the east, just offshore of the man-made South Island, but may not realize the extent of the fort's surviving historic resources. Construction started in 1819 and for the next 125 years Fort Wool evolved as military technology advanced, resulting in a rare fort that contains military architecture that spans the entire era of America's seacoast defenses. Notable are



Historic Fort Wool before conversion to seabird nesting habitat.



Historic Fort Wool after conversion to seabird nesting habitat.

remaining granite casemates from the 3rd System fort (1826), while most of the remaining fortifications date from the early 20th century, including WW2 Battery 229 (two 6-inch shielded guns) and its iconic steel tower.

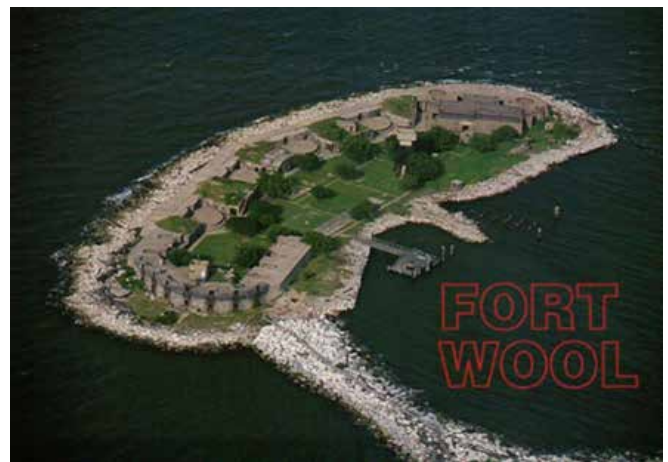
While fully recognizing the need for providing nesting sites for migratory seabirds and for completing the HRBT expansion, these outcomes need not and should not come at the expense of the permanent loss of a historic treasure. Virginia should promptly plan for a new site for the birds, including locating funding to prepare that site and for restoring Fort Wool to the condition it was in before it was converted to a nesting habitat. That means removing the huge weight of sand now threatening the island's stability (a major issue for the US Army engineers building Fort Wool), building a permanent dock (critical for public access), and stabilizing the battery commander's tower and reinforcing the granite casemates (both key preservation efforts, now on hold). These actions would allow safe visitation of the fort, and ensure it survives so that future generations may learn about its role in American history.

The tourism appeal of Fort Wool is significant and can be built upon. In recent years, thousands of visitors disembarked from the *Miss Hampton II* to walk the grounds, subject to the supervision of safety-conscious tour guides. The appeal of the site, in the middle of Hampton Roads, near the site of the 1862 USS *Monitor*-CSS *Virginia* battle, and with dramatic views of the Chesapeake Bay and Fort Monroe, is significant. Restoring public tours to historic Fort Wool can take place during the eight months each year when migratory nesting is not occurring as soon as the Commonwealth (DCR) stabilizes the fort's historic structures and repairs the dock after decades of deferred maintenance.

Both the nesting birds and historic Fort Wool need to be safeguarded. We cannot trade one important resource for another. We are confident Virginia can locate an alternative seasonal nesting habitat and urge it be done promptly. However, it is vital that the citizens of Virginia let their political leaders know that preserving Fort Wool and restoring their access is important to them.



Fort Wool's 3rd System Casemates with Totten embrasures



Another view of Fort Wool with its causeway to South Island.



Inside Fort Wool's 3rd System casemates.



Placement of sand and barrier on the fort for the seasonal nesting habitat.

* * * * *

Real Estate Activity at New England Coast Defense Sites

Norm Scarpulla

Recently, two private New England coast defense sites came up for sale; one sold.

Mishaum Point in Dartmouth, Massachusetts (MA) is a one mile long north-south peninsula projecting into Buzzards Bay. In WW2, it was location 51, part of the harbor defense of New Bedford, MA. As well as protecting the harbor of New Bedford, the harbor defense also controlled the south entrance of the Cape Cod Canal. The canal allows coastal shipping to avoid the longer, open-ocean route around Cape Cod. In April 1943, the Army acquired the tip of Mishaum Point, approximately 27 acres, and first installed a battery of 155mm GPF guns on Panama mounts. These were replaced by Battery 210 (2x6" BC) and two fire control structures north (inland) of the battery. About 100 feet behind the battery was a fire control structure stacked bottom to top: Harbor Entrance Control Post (HECP), battery commander station, signal station, and surveillance radar (originally planned for an SCR-582, possibly replaced by an SCR-682A). About 500 feet behind the battery was a fire control radar (SCR-296A) for Battery 210. After WW2, the US Navy and then USAF continued to use the site until 1964, when it was sold to a private party.

Prior to 1991, when the CDSG conference visited the site, a house was built on top of the battery. In 2007, the house was



replaced, again on top of the battery, using a design by well-known architect Robert Stern. In 2011, the CDSG conference again visited the site. During both visits, we were able to tour the battery structure under the house and find the location of one Panama mount. The property, now approximately 10 acres, is for sale with an asking price of \$25 million. There are no remains of the fire control structures.

The second site, a completed sale, is the WW2 Coolidge Point fire control station in Manchester-by-the Sea, MA. This was location 134, part of the Harbor Defense of Boston. It is a five-story concrete tower with barracks structure, for many years the home of CDSG member Craig Lentz. The observation stations in the tower provided fire control information for Battery Long (2x16" BC) at Fort Duvall, Hull, MA, and Battery Gardner (2x12" BC) at Fort Ruckman, Nahant, MA. CDSG members were able to visit the tower during the 2001 and 2016 conferences. The property sold for approximately \$1.25 million.



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CDSG Tour to Singapore's Coastal Defenses – February 9 to 12, 2020. Day Three

Terry McGovern

Day Three (Feb 12) began with breakfast and our minibus taking us to central Singapore. We had arranged for a guided tour of the former British Headquarters Malaya Command Operations Bunker, in an underground complex at the former Fort Canning. After this tour, Mr. Jeyathurai Ayadurai, the director of the Singapore History Consultants, had agreed to give us a lecture about the battle for Singapore that occurred in 1942. Fort Canning Hill was the British Army headquarters in Singapore, with a number of buildings built for this purpose in the 1920s. However, the lack of a headquarters combining all three services present in Singapore – the British Army, Royal Navy, and Royal Air Force – was a major concern. To remedy this, a combined operations headquarters was proposed for Fort Canning in 1936.

Nearly 30 feet beneath the hill, the Fort Canning Bunker, also known as the Headquarters Malaya Command Operations Bunker, was constructed starting in 1936 and completed by 1941. The bunker was constructed with one-meter thick reinforced concrete walls to withstand direct hits from bombs and shells.

The complex with about 30 rooms included a telephone exchange connected to all military and most civilian switchboards in Malaya, various signals and operations rooms, sleeping quarters, and latrines. The bunker also included a cipher room for coding and decoding messages. By the latter stages of the battle for Singapore, the Japanese were bombing the Central Area of Singapore, including Fort Canning Hill, at will. Fort Canning Hill was also within range of the Japanese artillery, forcing personnel into the bunker. There were around 500 officers and men in the bunker in the latter stages of the battle. The decision to surrender Singapore was made by Lieutenant-General Percival in a meeting on the morning of February 15, 1942. Held in the "Commander, Anti-Aircraft Defence Room" of the bunker, a number of senior officers were in attendance, including Generals Bennett, Heath, and Simmons. With diminishing water supplies, and no viable options for launching a counterattack, the decision was made to seek terms with the Japanese.

The Fort Canning Bunker was later occupied by Japanese forces during the Japanese Occupation of Singapore and used for communications right up to the time of the Japanese surrender. After the war, Fort Canning Hill was again used by the British as the Singapore Base District Headquarters. The British handed over Fort Canning to the Singapore Armed Forces in 1968–69, and the buildings of Fort Canning Hill served for a time as the Singapore Command and Staff College. The Fort Canning Bunker, having remained empty and unused since the war, was sealed off in the late 1960s due to safety concerns and its exact location forgotten. It was brought back into the public eye when it was "rediscovered" by a journalist in 1988, who was following a number of leads claiming the existence of an underground bunker complex on Fort Canning Hill. The Fort Canning Bunker was developed into a museum depicting the final days of the Battle of Singapore. The museum, called the Battle Box, was formally opened on February 15, 1997, on the 55th anniversary of the surrender of Singapore.

Upon our arrival at the Battle Box, we gathered in the gift shop of the museum to await our tour guide and to make our many purchases of all things relating to fortifications. We were escorted to the bunker and were told that no photography was allowed. Our guide led us around the complex which had been restored to its look and feel of 1942. The displays and recreations of events gave us a good understanding of the function of Battle Box and the stress its inhabitants must have been under during that time. We were joined by Jeya (director of the SHC, which runs the Battle Box) during our tour of the bunker. We gathered in the bunker's theater room to hear Jeya's lecture. His detailed presentation and the following question and answer period lasted for over an hour. Jeya demonstrated his years of research on the 1942 battle and its effect on Singapore. We greatly enjoyed his talk and we all left the bunker with a better understanding of the battle of Singapore. Our tour ended when we exited the bunker and the group quickly scattered to explore the remains of Fort Canning. We met up at the minibus to travel to the site of the 1942 surrender – the Ford Automobile Factory.



This room at the Battle Box tracked both British and Japanese aircraft over Malaya.



Work stations for telephone operators occupied this room at the Battle Box.



Mr. Jeyathurai Ayadurai, director of the Singapore History Consultants, gave us an excellent lecture about the battle for Singapore.



One of several access points to the Battle Box at Fort Canning Park.



This sally port is one of the several remains of Fort Canning.

Our minibus took from Fort Canning to the former Ford Factory (also Old Ford Motor Factory and Old Ford Factory depending on sources) which is along Upper Bukit Timah Road at Bukit Timah in Singapore. It is where British forces under Lieutenant-General Arthur Percival surrendered to Japanese forces under Lieutenant-General Yamashita Tomoyuki on February 15, 1942, after the Battle of Singapore. The Old Ford Motor Factory was gazetted a National Monument in 2006, and converted into an exhibition gallery and archive named Memories at Old Ford Factory. We surprised the staff of the museum as they did not expect 20 visitors all at the same time given the start of virus restrictions and testing. After touring the museum for an hour, our minibus took us to an area of restaurants so the group could have lunch.

We then headed to the site of Buona Vista Battery which had mounted two 15 in MK II guns on Spanish model carriages. The Buona Vista Battery straddled Ulu Pandan Road near its junction with Reformatory Road, which was renamed Clementi Road after the war. Due to the limited seaward angle of the guns, these guns saw no action during the Battle of Singapore and were partially destroyed by the retreating British in February 1942. The Japanese forces repaired Gun No. 2 for manual use, but it was never used by them. The entire area has been heavily commercially developed since WW2. The site of Emplacement No. 1 is within the perimeter of the old Mowbray Police Training Camp which today is the headquarter of the ProCom Police unit. There have been reports of several concrete entryways on the hillside within the camp, which could be the battery plotting room. We requested permission to visit, but were turned down. Across Ulu Pandan Road is the Pine Grove housing complex. There have been reports of a grassy area showing outlines of an underground structure. This development is restricted to residents, so we did not visit. We had to satisfy ourselves with driving down Clementi and Ulu Pandan Roads and looking out our bus's windows for any remains.



The Old Ford Motor Factory is now a museum to the war years in Singapore and the site of 1942 surrender.



The closest we were able to get to the site of Buona Vista Battery (15 in gun - Emplacement No. 1).

Continuing on from the Buona Vista Battery site, we returned to the Keppel Harbour area to visit the Labrador Nature Reserve which used to be Fort Pasir Panjang, which protected the western entrance to the harbor in conjunction with Fort Siloso. Fort Pasir Panjang was constructed during a period of great uncertainty when Russia was considered a threat to the British Empire. The fort received two batteries, - Two 9.2 in Mark IV BL guns and

two 7 in RML guns. The 7 in RML were installed between 1886 to 1889, while the 9.2 in guns were mounted between 1890 to 1891. The fort also supported a controlled submarine minefield located off the harbor's entrance. As the 7 in RML became obsolete, they were replaced by two Mark II 6 in QF Guns. By September 1900, the two 6 in QF emplacements had been completed and the guns located in one of the 7 in RML emplacements. Around the same time, two 6-pounder QF were installed, reusing the other 7 in RML emplacement. Fort Passeir Panjang was not a long-lived fort, being disarmed of its heavy armament by 1912, and its machine guns by April 1914. The fort never saw active service during this period.

The history of Fort Passeir Panjang is sometimes confused with the much later Labrador Battery. In the British Government's Defence Review of 1935, it was agreed that a new 6 in battery would be constructed on the site of the disused Fort Pasir Panjang. This new battery, later known as the Labrador Battery, would complement the nearby 6 in QF battery at Fort Siloso, which was to be upgraded to a BL battery. The batteries, working together, would provide an effective close defense of the western entrance to Keppel Harbour. In order to clear up confusion, Labrador Battery was constructed circa 1939 above the old 9.2 in casemates. It occupied the site of the No. 1 9.2 in gun of the Passeir Panjang Battery. This 9.2 in emplacement was destroyed to enable the construction of two 6 in Mark VII BL on Mark II CPM emplacements with all-around fire for Labrador Battery. Labrador Battery also made use of the casemates and a modified No. 1 Magazine. Around 1941, both gun emplacements were modified to have overhead concrete splinter cover installed, restricting their field of fire.

During the Battle for Singapore, Labrador Battery fired several times in February on the approaching Japanese forces,

until February 13, when the guns were spiked and magazine, searchlights, and engine room had demolition charges set off. The Japanese repaired one 6 in gun to operational status. After the war the battery was not restored and the repaired 6 in gun was transferred for use at Fort Siloso's 6 in battery. The area was undeveloped reserve until 2000, when the Labrador Nature Reserve was created. Much clearing up and safety work was required before the casemates and magazines were opened to the public in 2005. Unfortunately, the casemates are currently closed to the public due to safety concerns.

Our minibus left us near the fort's casemate so we began our walking tour with the exterior of the casemates. We had requested permission from the National Parks Board to visit the interior of the casemate and magazine, but this was denied due to safety concerns. We visited the No. 1 Emplacement of the 9.2 in guns, but all we could locate were the emplacements for the Labrador Battery, which have been converted to a sitting area for park visitors. We followed the path to the No. 2 9.2 in Emplacement which survives, along with its underground magazines (the entrance gate was locked). An open position finding cell remains next to the emplacement. Further down we spent time looking at the 6 in QF emplacement, which displays an original 6 in barrel on a replica central pivot mount. We investigated which part of the emplacement was part of the 7 in RML work and which part was added for the 6 in QF battery. Continuing downhill we reached 6-pounder emplacement which include part of the older 7 in RML structure. When we reached the remains of the fort's brick sally port, we completed our tour of Fort Passeir Panjang.



Plan for the Labrador Nature Reserve which encompasses Fort Passeir Panjang, Labrador Battery, and Batu Berlayar AMTB.



The casemates for the 9.2 in battery at Fort Passeir Panjang. Once open to the public, they have now been closed due to safety concerns.



Emplacement No. 2 for the 9.2 in battery at Fort Passeir Panjang.



The entrance to the magazines for the 9.2 in Emplacement No. 2 at Fort Passeir Panjang.



The 6 in QF battery at Fort Passeir Panjang. In 2002, an original 6 in barrel was mated with a replica central pivot mounting.



The 6-pounder QF emplacement using the older 7 in RML structure at Fort Passeir Panjang.

Our next objective was the defenses of Batu Berlayar, the point on the northern side of the western entrance to Keppel Harbour. Only a 100 yards from the former entrance to Fort Passeir Panjang, this sea cliff point was first used for a 6-pounder QF emplacement to cover the Western Controlled Minefield that blocked the entrance to Keppel Harbour. The first emplacement for this weapon was completed in 1892. By 1898, an additional 6-pounder QF gun had been added, but by 1905 there was no record of any guns at the point. It was not until 1937 that the point again received coast artillery, when a two-gun AMTB emplacement was constructed to mount twin 6-pounders, but due to the lack of these modern weapons, two 12-pounder QF guns completed this battery in 1941. Also, three seacoast searchlight emplacements were built at the point at the same time. The battery saw no action during the Battle for Singapore in 1942. On February 13, 1942, the guns were spiked and the magazines set on fire. There is no record of the Japanese using this defensive position. After the war ended, the British rearmed the battery with one twin 6-pounder, which remained in service until 1956 when the British coast artillery was disbanded.

The AMTB is currently abandoned, along with the harbor control tower that was built after WW2. We located stairs and a path to emplacements which the group quickly scattered to explore. We regrouped at a local bus shelter to await our minibus, discussing what our next step would be as we had visited all the sites on our schedule. Not willing to end our tour, we decided to look for surviving WW2 pillboxes. Our local team directed our bus driver to one of the more well-known pillboxes. One of the very few remaining in Singapore is the preserved one at the junction of Pasir Panjang and Science Park Roads. This pillbox was in the area defended by C Company, 1st Battalion, the Malay Regiment, when the Japanese swept through on February 13, 1942, and despite of lack of evidence on the pillbox, it may have been used to put down fire on the advancing Japanese. The design is similar to many built in Singapore. Pillbox designs were not rigid, and modifications could be made to suit local conditions. With our bus charter running out of time, we returned to our hotel and the tour was completed. After several rounds of good byes, the tour group each headed their own ways.



A view from the harbor control tower of the Batu Berlayar AMTB Emplacement No. 1.



The Batu Berlayar AMTB emplacement No. 1.



The director tower for Batu Berlayar AMTB Emplacement No. 2.



The harbor entrance command post at Batu Berlayar.



Half buried pillbox at Batu Berlayar.



The passageway between the two emplacements at the Batu Berlayar AMTB.



One of the very few remaining pillboxes in Singapore is this one at the junction of Pasir Panjang and Science Park Roads.

Attending the Singapore tour were Matthew Adams, Gerhard Borchert, Alan Fyson, Bernd Ibisch, Mariusz Jachimowicz, Tom Kavanagh (Tom had to drop out of the tour), Terry McGovern, Quentin Schillare, John Scholes, Rolf Thoendel, Tim Wellburn, and Ian Wolfe. Below is a group photo with our local support team in front of the casemates at Mount Serapong.



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Don't lose Plum Island's rich defense history

Chris Zeeman

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Hopefully, many of you will have heard of the recent release of the report created by the Preserve Plum Island Coalition. Plum Island lies about eight miles south of the Connecticut shoreline in Long Island Sound. The 840-acre island is the site of Plum Island Animal Disease Center, run by the federal government, and is off-limits to the public. However, the government has plans to move its lab to Kansas by 2023 and sell the island.

The "Envision Plum Island" report goes into great detail regarding the great biological diversity and rich habitats Plum Island provides. I have been to the island a handful of times, and its natural beauty and wildlife are readily apparent. There is another side to Plum Island, however, that few people know about.

From 1899 until about 1946, Plum Island was home to Fort Terry, a U.S. Army Coast Artillery base. This fort, along with forts on Great Gull Island and Fishers Island, was built to prevent enemy battleships from raiding the Connecticut coastline and using Long Island Sound as a back-door route to New York City. The fort was equipped with a variety of large guns, and at one point was the most heavily armed location on the East Coast. The big guns are long gone, but many other artifacts remain.

Since the Army left the island, it has been in the hands of various government agencies and public access has been very limited. While the gun batteries and other structures have been left to decay, the lack of public access has protected these remains. There are many details remaining here that are missing or vandalized at similar forts with public access. Details such as

an Army coal-burning stove soldiers would have used to keep warm in the winter and signs reminding soldiers not to smoke in the magazines still remain. Details such as these will help historic researchers in the future.

One other significant feature of Fort Terry is its cantonment area, the area where the soldiers lived when they were not on alert. Many of these historic structures still remain, including the chapel, hospital, guardhouse, and two large barracks buildings. These structures are a significant resource that could support artists-in-residence, museums, classrooms and accommodations for researchers, students, and other visitors.

I have been involved in historic preservation and fortification research for two decades. I have visited sites across the United States, Europe and the Pacific. In my experience, Fort Terry is unique in its level of preservation due to its lack of public access. This is a unique resource that needs to be protected. Please take a moment to contact U.S. Senators Blumenthal and Murphy to encourage them to push to stop the sale of this beautiful island.

Chris Zeeman is a resident of North Stonington.

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The Service of Coast Artillery, by F. Hines and F.W. Ward (1910), hardcover reprint \$40 / \$60

Permanent Fortifications and Sea-Coast Defenses, Congressional Report No. 62, U.S. House of Rep. (1862), hardcover reprint \$30 / \$45

American Seacoast Matériel, Ordnance Dept. Doc. #2042, (1922), Hardcover reprint \$45 / \$65

The Endicott and Taft Reports, reprint of original reports of 1886, 1905, 1915, hardcover, with plates included in a separate paperback \$45/ \$95

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