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**Coast Defense Study Group
2016 Annual Conference:
Harbor Defenses of
Portsmouth & North Boston**

Mark Berhow, Craig Lentz, Norm Scarpulla

The annual CDSG meeting was held in Portsmouth, NH, September 14 - 18, 2016 at the Holiday Inn Portsmouth, just outside of downtown, adjacent to I-95. This year's St. Babs Conference was our 30th, somewhat of an anniversary. Given the relative scarcity of sites surrounding HD Portsmouth, the meeting planners included sites north of Boston, which have not always been covered in our Boston conferences. They also expanded the number of presentations, including two "matinees" in addition to the usual evening secessions. The weather cooperated and we were able to fit the schedule into the usual four-day gathering.

The 50 attendees registered on Wednesday afternoon, Sept. 14, before gathering for the initial 7:00 pm orientation and presentations. The large meeting room also accommodated tables in the back for CDSG's traditional membership "buy & sell" marketplace. The presentations, coordinated by Quentin Schillare, began with an orientation and overview by the conference coordinators, Craig Lentz and Norm Scarpulla. This was followed by presentations on the 1st and 2nd Systems (Steve Conrad), Battery Farnsworth (Glen Williford), and the Hybrid Forts of the Early- to Mid-19th Century (John Weaver).

The harbor defenses of Portsmouth date from colonial times, and one of the oldest fortifications, Ft. Constitution, still stands. The sites visited along coastal Maine, New Hampshire, and Massachusetts encompassed all eras of American coast defense, including the colonial period, Second- and Third-systems, and several military reservations, major-caliber batteries, and associated fire control stations stretching from the Taft/Endicott period through WWII.

The harbor defenses were built to protect the ice-free port of Portsmouth and the Portsmouth Naval Shipyard, which was established in 1800 as one of four original US Navy shipyards. The revamping of the defenses under the Third System included the rebuilding of Fort Constitution and the renovation of Fort McClary across the river in Maine, neither of which were completed by the start of the Civil War. New defenses were constructed during the early 1900s, and overhauled again prior to and during WWII. While the naval shipyard is still active today and a high security location, most of the defenses have been turned into public parks or historic sites.

Thursday, Sept. 15 - Harbor Defenses of Portsmouth

The troops gathered at 8:00 am and drove to Kittery Point, ME. The first stop was Fort Foster on Gerrish Island, now a public park operated by the Town of Kittery, which includes picnic grounds, hiking trails, beach/water front access, and a nature preserve. Fort Foster was built during the Endicott period with two batteries — Battery Bohlen (three 10-inch DC) and Battery Chapin (two 3-inch Ped) — along with an original

searchlight position and a mine fire control station. It was upgraded during WWII to include two new fire control stations, a mine casemate, AMTB battery 952 (two 90 mm fixed), and BCN 205 (two 6-inch BC). The structures are in generally good condition, although the magazine access for Battery Bohlen has been backfilled to the gun platform level and the earthen cover in front of Battery Chapin has been removed. We were given access to Battery 205, the mine casemate, and one of the fire control towers. The fire control tower behind Battery 205 was closed due to excess bat excrement. Exiting the main gate, a quick stop



Fort Foster Battery Chapin



Fort Foster Battery Bohlen



Fort Foster WW2 fire control tower



Fort Foster WW2 mine casemate

allowed a hike out to the Seward's Point fire control station (on private property just north of the park), built in 1916 for the new horizontal baseline system.

The next stop was at Fort McClary, a Maine State Park on a hillside near Kittery Point. The site has been a defensive position from the Revolutionary War and was the site of a Second-System defensive work consisting of upper and lower elliptical batteries. Its most distinguishing feature is a blockhouse completed in 1844 to give extra protection to the batteries. A projected major rebuilding and expansion of Fort McClary as part of the Third System began in 1863, but was never completed. The intent was to create a large five-sided fort with one or two tiers. Only the two seaward fronts and one of the landward bastions (with a granite magazine) exist today. The seawall was defended by a small caponier with rifle ports, which is in excellent condition. Work continued sporadically through 1867, and again in the 1870s when a lower battery was rebuilt for three 10-inch Parrott rifles and three 15-inch Rodmans (of the nine stored there), which were not mounted until 1898. The Second-System upper battery still remains, along with the remodeled lower battery.

The incomplete Third-System work surrounds the Second-System batteries, which are crowned by the stone and wood hexagonal blockhouse, one of the last built in the nation's seacoast defenses. A large number of unfinished granite blocks



Fort McClary blockhouse and 3rd System work



Fort McClary blockhouse and 2nd System battery

remain from the construction effort just outside the Third-System work. The blockhouse is in good condition and open to the public during park hours. The fort was rendered obsolete by the construction of the Endicott-era fortifications, but remained in Federal hands until acquired by the state in the 1920s. This is an outstanding location to see the style and construction of a late Third-System fort.

Following lunch, the group continued to Fort Constitution on Fort Point, New Castle Island, strategically situated to defend the harbor entrance on the river. This site has been fortified since early colonial times. The original earthwork Fort William and Mary had been the target of raids and battles during the Revolution until the British abandoned Portsmouth later in the war. The fort was rebuilt under the Second System with brick and earthworks and renamed Fort Constitution.

During the War of 1812 the fort was manned and expanded with a Martello tower to guard the landward access. As with Fort McClary, the Third-System reconstruction program also came late to Fort Constitution, which was initially redesigned to be a three-tier granite fortress. When construction was abandoned in 1867, the Second-System fort seen today was left largely intact within the two walls of the Third-System fort built around it. In 1897 construction began on Battery Elon Farnsworth (two 8-inch DC) and in 1904 on Battery Hackleman (two 3-inch Ped). During WW2, a new outer wall was added to the 1920 mine casemate. Farnsworth was disarmed in 1917 and Hackleman remained armed until 1948, although not with its original guns.

The reservation was eventually turned into the main Coast Guard station in Portsmouth, after which Battery Hackleman was demolished for a parking lot. The major part of Fort Constitution, including Battery Farnsworth, a Martello Tower (one of the very few remaining), a mining casemate, and a renovated dockside brick mine storehouse are controlled by the University of New Hampshire's Coastal Marine Lab. Both Farnsworth and the mining casemate have at times been used as storage for the marine lab. The state placed these facilities on the National Register of Historic Places and the fort is open as a state park, with the exception of the mine storehouse, which is used by the university. Nearly, the Portsmouth Harbor Lighthouse is owned



Fort Constitution 2nd System sally port



Fort Constitution unfinished 3rd system casemates



Fort Constitution 2nd System wall and magazine

and operated by a non-profit organization of its own.

Battery Farnsworth and the mine casemate are normally closed to the public, but CDSG was given access to the battery, a relatively rare unmodified early-Endicott battery with small circular gun platforms and no connecting corridors between the two platforms. UNH cleared the battery of its brushy overgrowth for our visit. The battery itself is in poor shape with some walls



Fort Constitution Battery Farnsworth gun platform



Fort Constitution Battery Farnsworth



Fort Constitution Walbach Tower ruins

of the south emplacement starting to collapse, in spite of a major concrete “restoration” of one of the gun decks. The remains of the Martello Tower — known as the Walbach Tower — are on a hill behind the battery. We were also able to go into the mine casemate. Fort Constitution is another rare chance to see both a largely intact Second-System work, surrounded by the incomplete tiers of the late Third System work. To visit the fort you have to walk from the parking area outside the security fence on the outlined path over the Coast Guard facility.

On the return to the hotel, we stopped by the site of Camp Langdon (1917-1948), the main cantonment area for the defenses of Portsmouth. It was turned over to the navy after war, and all military activity ceased by 1964. Very little remains at the site today, other than three gunblocks for WW I 3-inch antiaircraft guns, as it is now the New Castle Island Great Common, a city park.

The first afternoon matinee presentations began mid-afternoon with talks on Modern-Era Gun Emplacement Trends (Mark Berhow), Fort Monroe in Postcards (Charlie Bogart), and Quartermaster General Standard Building Plans (Quentin Schillare).

Following a dinner break, the evening round of presentations began at 7:00 pm, beginning with a last-minute photo presentation on the renovated fire control station at Gales Point in Manchester, MA, a site we had been scheduled to visit, but which

had to be cancelled. This was followed by representatives of the Friends of Pulpit Rock Tower, Federal Disposal of Fire Control Sites (Craig Lentz), Endicott Board Formation (Karl Fritz), and Coast Artillery Subcaliber Devices (Danny Malone).

Friday, Sept. 16 - Harbor Defenses of Portsmouth

The group gathered at the hotel at 8:00 am and headed down Route 1A to Rye, NH. The first stop was Pulpit Rock, beginning with the emplacements for AMTB Battery 951 (two 90 mm fixed) in the parking area, before heading up the hill to visit the Pulpit Rock fire control tower. Officially owned by the state and occasionally used as fishery enforcement observation station, the round tower spurred the local residents into action when it was proposed to use it as a cell tower. The Friends of Pulpit Rock Tower were formed to spearhead cleaning and restoring the tower to open it to visitors on a few special occasions throughout the year. The state is pleased with this arrangement and it is a win-win for historic preservation. Various local CDSG members have assisted in the open houses and in preparing the interpretive signs within the tower.



Pulpit Rock fire control tower

Next stop on the schedule was WW II-era Fort Dearborn with its three major gun batteries - four 155 mm GPF on Panama mounts, Battery 204 (two 6-inch BC), and Battery Seaman (two 16-inch Casemated BC). The site is now owned and operated by the state of New Hampshire as Odiorne Point State Park, and includes an extensive network of trails, rocky beaches, and the Seacoast Science Center. The gun batteries are readily discernible, yet rather neglected. We were given access to Battery 204, next to the parking lot, which is currently used as a storage facility. A relatively long walk through the woods to Frost Point took us to Battery Seaman, otherwise known as Battery 103, which sits in rather benign neglect in the woods. The magazines were sealed, but have been broken into so the adventurous could crawl in and wander through a fairly standard WW II-era 16-inch casemated battery. The PSR room located behind also had its entrances covered, but a few intrepid souls wiggled into a crevice to get in, finding it rather spacious compared to those on the west coast.



Fort Dearborn Panama mount



Fort Dearborn Battery 204 magazine entrance



Fort Dearborn Battery Seaman casemate



Fort Dearborn Battery Seaman overhead trolley system

Our last stop of the day was the third Endicott fort, Fort Stark, on Jerry's Point, New Castle Island. This fairly compact fort was the site of a 1870s battery, which was subsequently replaced by four Endicott-era batteries: Battery Hays (two 3-inch Ped.), Battery Kirk (two 6-inch DC), Battery Hunter (two 12-inch DC), and Battery Lytle (two 3-inch Ped.). The guns of Battery Kirk were removed during WW I, and in WW II, a very impressive combined harbor entrance control post (HECP) and Harbor Defense Command Post (HDCP) was built spanning the central magazine. The remaining guns at Fort Stark were removed at the end of WW II, when the property was transferred to the navy and ultimately turned over to the state, which now maintains the property as Fort Stark State Historic Site.

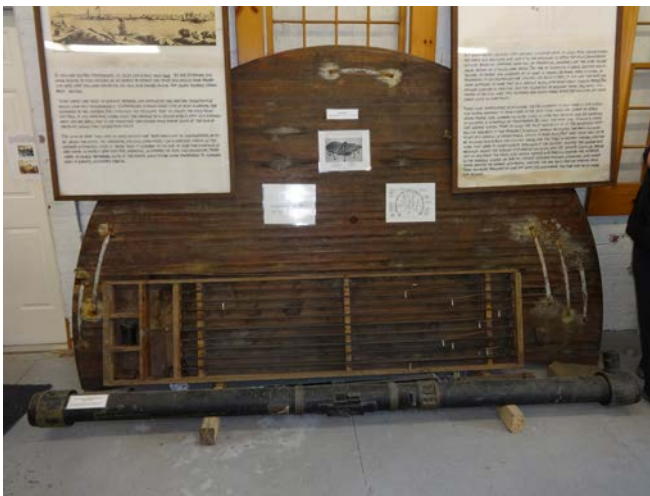
The park is not well funded, and relies heavily on a friends group and volunteers to interpret the site. The volunteers have an excellent museum in the visitors' center housed in the original brick ordnance storehouse. The gun batteries are in reasonably good shape, and are fine examples of late Endicott-period designs. Unfortunately, the HECP has not fared as well; it was closed to public access due to safety concerns. While the park is open regular hours, the visitors' center is only open for limited hours and special events.



Fort Stark Battery Lytle



Fort Stark Battery Hunter



Fort Stark plotting board display in museum



Fort Stark WW2 HECP and Battery Kirk

After this stop, many in the group fanned out to look for a New England "lobsta" lunch before gathering back at the hotel for a 2:30 pm series of matinee presentations. This was led off by a representative from the public affairs office of the naval shipyard, who spoke about its history. She was followed by talks on the Taft Board Formation (Karl Fritz), a review of CDSG's downloadable resources (Mark Berhow), and a presentation on the status of CAMP (Gordon Bliss). These were followed by our annual banquet and business meeting, and another round of presentations.

These covered the Third System (John Weaver), the 1870s System (Glen Williford), and German Shore-Based Mine and Torpedo Defenses of WWII (Danny Malone).

Saturday, Sept. 17 - North Boston Defenses

An early start to the morning found the group heading south on I-95, over to Lynn, and then out the causeway to Nahant, MA. We gathered at the former East Point Military Reservation, the northern-most battery of the HD Boston. Acquired from the Lodge family in WW II, it was the site of Battery Murphy (two 16-inch casemated BC), a two-gun 155 mm GPF battery on Panama mounts, and Battery 206 (two 6-inch BC). After

the war the site was used for a four-gun anti-aircraft gun battery and a Nike-Ajax two-magazine missile launch area (B-17L). Five fire control structures (four towers and one cottage style) were built nearby.

In the late 1960s Northeastern University acquired the site and now uses it as their Marine Sciences Center. In an excellent example of re-adaptive use, the many rooms, magazines and galleries of Battery Murphy are used as a research laboratory housing marine life research tanks and equipment. Our tour began inside the battery with a talk about the Nahant defenses



East Point Nahant Battery Murphy rear entrance



East Point Nahant Battery Murphy interior casemate



East Point Nahant Battery 206



East Point Nahant fire control tower

(Norm Scarpulla), after which we toured the facility. A walking tour of the rest of the reservation followed, visiting Battery 206, the remaining buildings of the Nike launch area (the launch area itself has been buried and turned into a park lawn), a quick visit the PSR (locked), and the former Nike personnel buildings which has been converted into offices and classrooms by Northeastern. We were also able to visit one of the nearby fire control towers on private property adjacent to a home. The current owner connected the tower to the existing house and renovated the internal rooms, all of which provide an unimpeded view of the ocean.

Next we moved to the other side of Nahant to the former Fort Ruckman and Battery Gardner (two 12-inch Casemated BC), as well as a three-gun 3-inch AA battery. Gardner was originally built in 1921 as two open barbette guns with a protected magazine. It was casemated during WW II, adding a bit more protected space behind the magazines. After the removal of the ordnance, the hill was used as the Nike radar control site (B-17C).

Today, most of the area within the fort's WW II boundaries has been converted into residential real estate, recreation, or park land. The gun casemates have been covered, but the town has access to one of the rear entrances and the subterranean galleries are used for storage. Arrangements were made with the town to



Nahant Battery Gardner



Nahant fire control tower near Battery Gardner

tour the galleries and magazines. Jerry Butler, a local military historian of note (and early CDSG member) who specializes in Nahant's military history was able to meet us at the battery. He regaled attendees with stories from times past of crawling into the bunker as a rite of passage for many of the local youths. Following a photo stop at another nearby fire control tower and a seafood lunch, we were off.

Heading back up the coast to Marblehead in smaller parties, members visited the colonial-era site of Fort Sewall, and photographed a nice fire control tower on Marblehead neck that was typical of several in New England camouflaged to appear as seaside homes. Some attendees stopped to see what remains of Fort Pickering in Salem, before driving north again back to the hotel.

Following dinner, the final scheduled session of presentations included talks on Seacoast Mortars (Mark Berhow) and the Defenses of the Panama Canal (Terry McGovern).

Sunday, Sept. 18 - North Boston Fire Control

On the final day of the conference we checked out of our hotel and drove towards Cape Ann in Massachusetts. The first stop was at Salisbury Beach State Park, to see what remains of the



Halibut Point fire control



Coolidge Point fire control

four Panama mounts installed in WW II. We visited the Halibut Point FC tower (shared by HD Portsmouth and Boston) now in Halibut Point State Park. The tower and its attached barracks currently house various interpretive displays including coast defense. We were able to gain access to the tower even though the building was temporarily closed for renovation.

A stop for photos of the Emerson Point FC station was next, before heading south to Manchester, MA. We had arranged to visit the magnificently renovated Gales Point FC station, but the visit was cancelled due to circumstances beyond our control. The last stop was the Coolidge Point FC tower, which was renovated into a residence in the 1970s and 80s by Craig Lentz, one of our members. The tour concluded there with some libations and refreshments.

This was another excellent conference and the CDSG owes a great vote of thanks to the conference organizers Craig Lentz and Norm Scarpulla for making all the arrangements and for putting together a great program of talks and presentations. The CDSG would also like to thank the following organizations and people for assisting in our visits to the sites:

- Liz Williams, Public Affairs Office, Portsmouth Naval Shipyard
- Ben Wilson and Brian Wilson, NH Dept. of Resources & Economic Development
- Nate Rennels, University of New Hampshire Coastal Marine Lab
- Ron Kolek, Friends of Portsmouth Lighthouses
- Joan Hammond & Carol White, volunteers, Ft. Stark State Park
- Patricia Weathersby, Friends of Pulpit Rock Tower

Glenn Dochtermann, Maine State Parks
 Dane Parker, Friends of Fort McClary
 Norm Albert, James Eldridge, and David Rich, Kittery ME
 Dept. of Public Works
 Delano Family, property owners, Kittery, ME
 Carole McCauley, Northeastern University Marine Sciences

Center
 Jerry Butler, historian and retired author, Nahant, MA
 Jeff Chelgren, administrator, Town of Nahant, MA
 George MacNaughton, property owner, Nahant, MA
 Michael Magnifico and John Ratti, Massachusetts Dept. of
 Conservation & Recreation



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Future CDSG Special Tours

Terry McGovern

- Switzerland, August/September 2018
- Corregidor & Manila Bay, February 2019
- Australia, August 2020

Swiss Fortification Tour – August/September 2018

As we reported in past *CDSG Newsletters*, CDSG members have been invited by Pascal Bruchez and Maurice Lovisa of the ASMEM (Association St-Maurice d'Etudes Militaires), the primary fortification study group in Switzerland (similar to the CDSG and FSG) to visit the impressive fortifications of Switzerland. The focus of the tour will be the Swiss National Redoubt, a widely distributed set of fortifications on a general east-west line through the Alps, centering on three major fortress complexes, Fortresses St. Maurice, St. Gotthard, and Sargans. These fortresses primarily defended the alpine crossings between Germany and Italy. We will also visit the Border Line, an advance line of defenses near the borders, and the Army Position, somewhat farther back. These two defense lines were designed to protect the Swiss heartlands (the industrialized and populated heart of Switzerland) during both World Wars and the Cold War. Many of the sites we will be visiting can only be accessed through this group tour and are rarely visited by non-Swiss, so please consider this a once in a lifetime tour to see the best modern Swiss fortifications.

As we need at least 20 enrollees to justify organizing such a tour, we have reached out to the Fortress Study Group (FSG) to make this a joint tour with the UK based group. We now have about 15 possible FSG/CDSG tour members that have expressed interest for this tour. Therefore we are moving forward with the detailed planning on the best sites to visit, ground transportation, and hotels/meals. We are working with Martin Egger (our Swiss-based CDSG member) and Maurice Lovisa to finalize these plans and to pick the best dates for the tour. Targeted tour dates will be between mid-August to the end of September 2018, subject to accessing the sites and best tour costs. From this planning effort we will be providing an estimated in-country cost of the tour,



A 10.5cm gun at a former Swiss Army fort in the town of Faulensee