



Historic Artillery in British Columbia

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➤ **An Introduction to the History of Artillery in B.C.**

In 1778 Captain Cook became the first European known to have set foot in what would become British Columbia. Cook's ships were former merchantmen that had been acquired by the Royal Navy specifically for his voyages of exploration, but as part of their refit for these voyages, they were armed with twelve 6-pounder smooth bore (SB) cannon and twelve swivel guns for protection. When Cook's crew told stories of the profits they made selling sea otter skins from Nootka in China, they were soon followed by fur traders whose ships were also armed with cannon.

The first fortification constructed by European's in British Columbia was built at Nootka by the Spanish in 1789 in a belated attempt to assert their authority over the northwest coast of North America. Fort St. Miguel is reported to have mounted 16 guns.

Spain's actions led to a quick response from Britain, and by the terms of the Nootka Convention the Spanish withdrew from Nootka in 1795. This left the area to the fur traders, most of whom arrived by ship in the early days, again well equipped with small artillery pieces.

Eventually the Hudson's Bay Company became the dominant force in what they referred to as the Columbia District, driving out the independent traders. When the HBC built Fort Victoria in 1843, it was with the intention that it would become their new headquarters for operations on the Pacific slope if Fort Vancouver (now Vancouver, Washington) became American territory. The bastions at the corners of the fort's palisades were armed with small artillery pieces. One contemporary report notes that at least one of Fort Victoria's guns was a 9-pounder SB carronade. The bastions at Fort Langley and other Hudson's Bay Company forts were similarly armed with light cannon.

In the period of sabre rattling that went on before the boundary between the United States and what would become British Columbia was decided, more impressive forces were called upon to protect British interests on the northwest coast. Four ships of the Royal Navy were sent to cruise in Juan de Fuca Strait in the summer of 1846. The flagship of this little squadron, HMS *Fisgard* provided a good example of the final development of the British wooden sailing frigate. Built at Pembroke in 1819, she was 1,069 tons and she was armed with twenty-eight iron SB 18- pounders, ten 9-pounders and eight 32-pounder carronades. She was a product of over two hundred and fifty years of gradual evolution. One could have taken a sailor from an Elizabethan galleon and dropped him on to the deck of the *Fisgard*, and he would have been able to go to work immediately. Her guns, and sailing rig, though improved, had not been radically changed. The same sailor dropped onto the deck of a ship built at the end of the 19th century would have been completely lost. Over a period of fifty years iron and then steel had replaced wood in the construction of warships, steam had replaced sail as the primary power source and smooth-bore muzzle loading guns firing round shot had given way to rifled breech loading guns firing exploding shells with far greater accuracy and range.

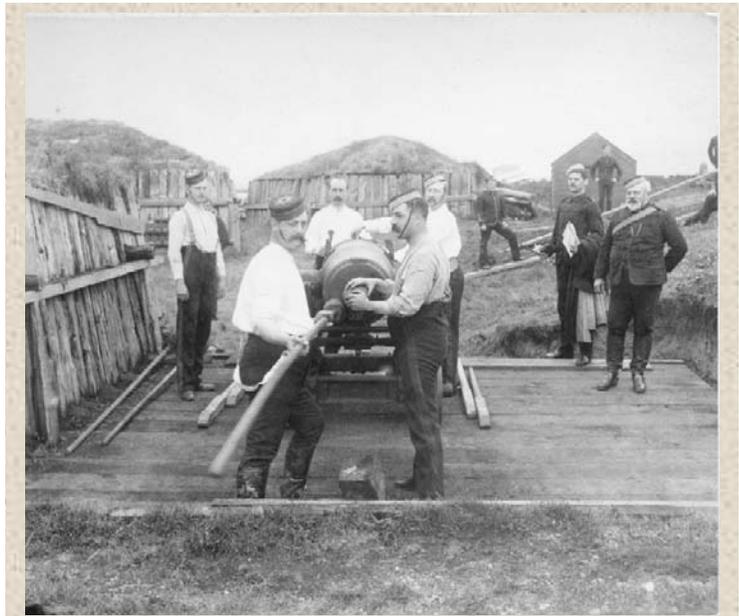
While the *Fisgard* was on station her Captain loaned some of her midshipmen to assist with the first survey of Esquimalt Harbour. Esquimalt became the favoured anchorage of the Royal Navy from 1848 on, and by the mid-1860s it had become the headquarters of the British Pacific Squadron.

The first volunteer artillery battery in British Columbia was formed at New Westminister in 1866 due to fears of a Fenian attack . The Seymour Battery of Artillery was armed with two brass 24-pounder SB howitzers (which still exist in New Westminister). In the same year HMS *Zealous* arrived at Esquimalt as flag ship of the Royal Navy's Pacific Squadron. She was the first iron-clad warship in the Pacific and in addition to armour up to 4.5 inches thick she carried an armament of the then new rifled muzzle loading (RML) guns.

These rifled muzzle loaders were the types of guns in use when the first coast artillery batteries were built to defend Victoria Harbour and the naval base at Esquimalt due to a threat of war with Russia in 1878. Four batteries were constructed of earth and timber and mounted the following (RML) guns loaned from naval stores:

- Finlayson Point: Two 64-pounder, 71 cwt RML (converted) guns
- Nias (Victoria) Point: One 64-pounder 64, cwt RML gun and one 64-pounder, 71 cwt RML gun
- Macaulay Point: Three 7-inch 6 1/2 ton RML guns
- Brothers Island: One 8-inch 9 ton RML and two 64-pounder 64 cwt RML guns

These were fairly powerful guns for their day. The 7-inch guns at Macaulay Point for example fired a 112 pound (51 kilo) shell to a maximum range of about 5,500 yards (about 5 km). These temporary batteries remained in place for 15 years while the British and Canadian governments discussed plans for more permanent defences, and particularly who would pay for them. Finally, in 1893, they agreed to share the costs of providing more permanent fortifications and the artillery for them. A garrison of regular force troops to man the defences would also be part of the British contribution.



A 64-pounder 71cwt. Rifled Muzzle loading gun at either Finlayson Point or Victoria Point Battery in Victoria, c. 1885. From the collection of the 5th (BC) Regiment, Royal Canadian Artillery Museum and Archives.

The first guns to be installed in these new fortifications were 6-inch BL Mk 6 guns on Mk 4 Hydro-Pneumatic disappearing carriages. These guns fired a shell of 100 pounds (45 kilos) to a maximum range of 10,000 yards (over 9 km). Three of these were installed at Macaulay Point and three more at Rodd Hill (one in the Upper Battery and two in the Lower Battery). These guns were designed to protect against close-range attacks by enemy cruisers.

Once the 6 inch guns were installed, construction began on batteries of lighter guns to defend against torpedo boat attack. Originally it was only intended to have one such battery, at Duntze Head at the eastern entrance to Esquimalt harbour, armed with Hotchkiss 6-pounders. In 1897 a review of the anti-torpedo boat defence requirements for



A 6-inch BL disappearing carriage, Rodd Hill, c. Hill Coll.

12-pounder 12 cwt QF guns at Belmont Battery c. 1925. Photo: Parks Canada/ Fort Rodd Hill Coll.

Esquimalt concluded that three batteries of guns were required and recommended that all these should mount the new 12-pounder 12 cwt QF guns which had just been introduced into service and had a maximum range of 8,000 yards (over 7 km) and a firing rate of 15 rounds per minute. Belmont and Black Rock Batteries were designed to mount two of these 12-pounder guns. Duntze Head battery replaced its two 6-pounder Hotchkiss guns with 12-pounders about 1904.

The final battery added as part of this defence plan was not completed until after the British garrison departed in 1906. Although the guns had already arrived and most of the construction for the battery on Signal Hill had already been undertaken, the small Canadian garrison that took over from the British troops did not have sufficient man power to mount the two huge 9.2-inch Mk.10 BL guns on Mk.5 barbette mountings. The barrels of these guns alone weighed 28 tons, and they fired a 380 pound (173 kilo) shell to a maximum range of over 19,000 yards (over 17 km). It was not until the summer of 1912 that a special party of gunners was sent from eastern Canada to help mount the guns on Signal Hill.

In addition to the fixed guns of the coast defences, the 5th (B.C.) Regiment, Canadian Garrison Artillery also had a battery of field guns which could be used for mobile defence. This battery was originally armed with 9-pounder 6 cwt RML guns from about 1892. In 1896 six 13-pounder 8 cwt RML field guns were sent from Britain as part of the new defence agreement. These 13-pounder RML guns were only in service in Canada at Esquimalt and Halifax. These rifled muzzle loading field guns were replaced by six 12-pounder 6 cwt BL field guns in c.1912.

During World War I temporary coast batteries were added by mounting two 4-inch naval guns off *HMS Shearwater* in Stanley Park to protect the approaches to Vancouver harbour. Two more naval 4-inch guns were mounted to control Seymour Narrows in Johnstone Strait, protecting the approaches to the northern entrance into Georgia Strait.



One of two 6-inch QF naval guns mounted at Macaulay Point between 1924 and 1938. These guns were originally part of the armament of HMCS Rainbow, which was the first ship of the Royal Canadian Navy to serve in the Pacific. Photo: Parks Canada/ Fort Rodd Hill Coll.

After World War I, few changes were made to the coast artillery defences until the late 1930's. In 1924 two of the 6 inch disappearing guns at Macaulay Point battery were removed and replaced by two naval 6-inch QF guns which appear to have been removed from the first Royal Canadian Navy cruiser on the west coast, HMCS *Rainbow*, which had been scrapped in the previous year.

The 5th (B.C.) Regiment, CGA had a field battery and a siege battery attached to it beginning in the early 1920's and these were equipped with 18-pounder QF field guns and 8-inch BL and 4.5-inch QF howitzers respectively. A small anti-aircraft section was also formed armed with a couple of obsolescent 13-pounder 9 cwt QF anti-aircraft guns.

In 1936 a British coast artillery expert, Major B.D.C. Treatt, was brought to Canada to make recommendations for improving the coast artillery defence of Canada's fortresses and defended ports. Treatt's report formed the basis of what would later be known as the "Ultimate Plan" for the upgrading of the defences of these harbours, including the Victoria-Esquimalt Fortress. Coast artillery batteries were also to be built to defend Prince Rupert and Vancouver, and on Yorke Island in Johnstone Strait to guard the northern entrance into Georgia Strait. The ultimate plan was originally scheduled to take five years to complete, but it quickly became obvious that war was likely to break out long before the new guns ordered as part of this plan arrived in Canada. Consequently an "Interim Plan" was formulated in 1938 to allow work to progress on new battery sites and the installation of the best coast artillery guns available in Canada in these locations, until the final armaments arrived from Britain.

As part of the Interim Plan, 6-inch Mk 7 guns on Mk 2 carriages were mounted in two emplacements at Macaulay Point and in three emplacements at the new battery built on Mary Hill. These guns had a maximum range of 14,500 yards (over 12 km). The two 9.2-inch guns at Signal Hill were moved to the new battery at Albert Head and later a third 9.2-inch gun was sent to this battery from eastern Canada. To guard the entrance to Victoria harbour, a new anti-torpedo boat battery armed with two 12-pounder QF guns was built at Golf Hill and a single 12-pounder was mounted at Ogden Point.

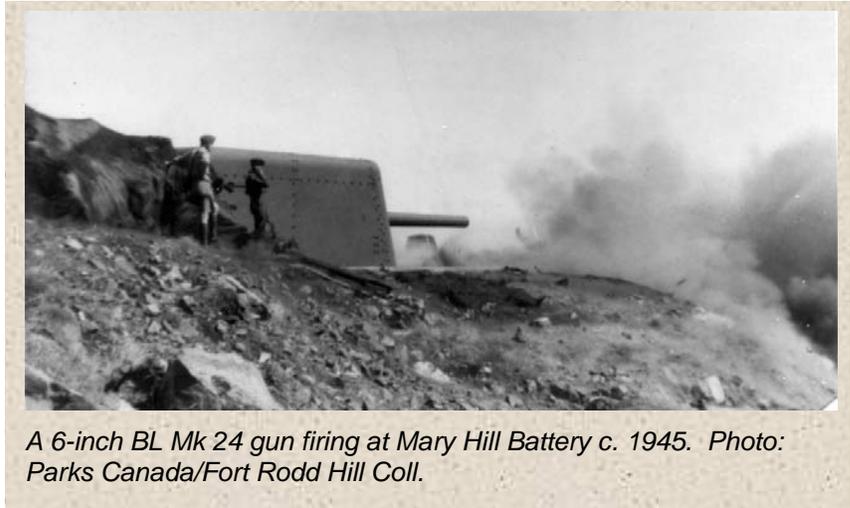
Beginning in 1940 some of the first steps in providing for the joint defence of North America were taken by the Canadian and US governments. To help close the Strait of Juan de Fuca to enemy shipping two long range 8-inch guns were loaned by the US to Canada and installed at Christopher Point at the very southern tip of Vancouver Island. With a maximum range of 23,500 yards (over 21 km) these guns were capable of reaching to the other side of the strait. They remained in place until early 1945, by which time new 9.2-inch and 6-inch guns on high-angle mountings had been installed at Albert Head and Mary Hill.

Batteries were also constructed to defend the approaches to Vancouver harbour at Stanley Park (two 6-inch), Point Grey (three 6-inch), Point Atkinson (one 18-pounder) and at Narrows North (two 12-pounders). A battery of two 18-pounder field guns (later 25-pounders) was installed at Steveston to protect the entrance to the Fraser River. The battery on Yorke Island in Johnstone Strait protected the northern approaches to Georgia Strait. It was originally armed with two 4.7-inch guns, which were later exchanged for the two 6-inch guns from Stanley Park.

The approaches to Prince Rupert were protected by batteries at Barrett Point (three 6-inch guns), Fairview Point (two US 8-inch railway guns), Frederick Point (two 12-pounder guns), Dundas Point (one US 75 mm gun) and Casey Point (one 6-pounder gun).

A number of US 75 mm guns were also made available to the Canadian army in 1941. These were actually a US-built version of the British 18 pounder field gun which had been chambered for the ammunition used by the French 75 mm gun, as both types of gun were used by the US army in World War I. Most were mounted on pedestal mountings in Canadian service. One such gun was mounted for a short period at Duntze Head Battery in the Victoria-Esquimalt defences. These 75 mm guns were also used in batteries at Ucluelet and Coal Harbour on Vancouver Island; on the mainland at Bella Bella, Alliford Bay and Prince Rupert (Dundas Point); and on the armoured train which operated between Prince Rupert and Terrace during 1942.

The first of the modern guns ordered to complete the ultimate plan for the defences finally began arriving in Victoria in 1943. In that year three 6-inch Mk 24 guns on Mk 5 mountings replaced the older Mk. 7 guns at Mary Hill. These guns could be elevated to 45 degrees and had a maximum range of 24,500 yards (22 km). At Albert Head the 9.2-inch guns were upgraded one at a time beginning in 1943. Each gun in turn was provided with a new Canadian-designed mounting, (designated C Mk 6A) with which the maximum elevation increased from 15 to 30 degrees. This provided a maximum range of 27,500 yards (over 25 km).



A 6-inch BL Mk 24 gun firing at Mary Hill Battery c. 1945. Photo: Parks Canada/Fort Rodd Hill Coll.

Some of the anti-torpedo boat batteries were also upgraded, beginning in 1943 when Duntze Head battery received the first of the new twin 6-pounder 10 cwt QF guns, and these guns were later installed at Belmont Battery and Ogden Point as well.

Between 1943 and 1945 modern 6-inch Mk 24 guns were also installed at Barrett Point Battery in Prince Rupert, and twin 6-pounder guns were installed at Casey Point Battery in Prince Rupert and Narrows North Battery in West Vancouver.

In the 1920's four 13-pounder 9 cwt QF anti-aircraft guns were sent to Esquimalt for training purposes, although only two appear to have ever been mounted. These were still the only anti-aircraft guns on the west coast when World War II began.

The first Canadian made Bofors 40 mm light anti-aircraft guns arrived at Esquimalt just three days after Japan's entry into the war in December 1941. Over the following months several batteries of heavy and light anti-aircraft guns were installed to protect both Victoria- Esquimalt and the Patricia Bay military airfield (now Victoria International Airport). By October 1942, sixteen 3.7- inch QF heavy anti-aircraft guns and twenty-four 40 mm Bofors light anti-aircraft guns were in service around Victoria and Esquimalt. Many other batteries of anti-aircraft guns were installed from 1942 to 1945 to protect harbours, airfields and seaplane bases elsewhere in BC.



Bofors 40 mm light anti-aircraft guns with a Field Artillery Tractor on Macaulay Plain in Esquimalt during World War II. Photo: Parks Canada/Fort Rodd Hill Coll.

As World War II progressed, field artillery units in the province gradually gave up their World War I vintage 18-pounder field guns for the new 25-pounder gun, and some units also began to receive a few 6-pounder anti-tank guns.

After the end of World War II, the newer coast artillery weapons installed during the war remained in service until 1956. In that year coast artillery was declared obsolete in Canada and the guns were all removed and in most cases given away to NATO allies (Norway, Portugal and Turkey) who still had a requirement for coast artillery equipment.

The 1950's also saw Canadian field and anti-aircraft units convert from British to American designed guns. The U.S. 90 mm. gun replaced the 3.7-inch gun as the standard heavy anti-aircraft gun as the Cold War led to fears of Soviet bomber attacks. British 5.5-inch medium guns and 25 pounder field guns were replaced by U.S. 155 mm and 105 mm gun/howitzers. The 5th (B.C.) Regiment, Royal Canadian Artillery survived the demise of coast artillery, converting initially to a medium, and later a field artillery battery.

Today, Fort Rodd Hill National Historic Site, the CFB Esquimalt Naval and Military Museum and the regimental museums of the 5th (B.C.) Field Regiment, RCA in Victoria, and the 15th (B.C.) Field Regiment, RCA in Vancouver continue to perpetuate the heritage of BC.'s early artillery units. The museums of the British Columbia Regiment (Duke of Connaught's Own) and the Royal Westminster Regiment also pay tribute to their predecessor artillery units and the Maritime Museum of British Columbia preserves an important collection of naval guns.

Surviving Examples of Artillery on Vancouver Island - Victoria

Fort Rodd Hill National Historic Site of Canada

Upper Battery:

➤ One British **6-inch BL Mk 6 gun** 1892 (barrel only, mounted on a modern display mounting). This is the gun barrel originally mounted in this battery in 1897 on a Mk. 4 Hydro-Pneumatic (HP) disappearing carriage. Two more guns of this type were originally mounted in the Lower Battery at Fort Rodd Hill, and three more at Macaulay Point Battery in Esquimalt.



A 6-inch BL Mk6 gun in the Upper Battery, Fort Rodd Hill NHS. The gun barrel is original, but the mounting is a modern fabrication. Photo: Parks Canada/Dale Mumford, 2005.

Lower Battery:

➤ One British **Naval 6-inch QF Converted Mk 3/4 gun** 1886/96 (barrel only, displayed with a reproduction gun to demonstrate repository equipment). This gun was discovered behind the Menzies Street Drill Hall in Victoria in the early 1970's. It is presumed to have been supplied by the navy to the 5th (B.C.) Regiment, Canadian Garrison Artillery to allow the gunners to practice repository drill, and buried soon after the regiment moved to the Bay Street Armoury in 1915.

➤ One British **3-pounder QF Hotchkiss sub-calibre gun**. This gun is displayed in the artillery store in the Lower Battery and was designed to be inserted into the breech end of a 6 inch gun barrel to allow live firing practices to be carried out using very much cheaper ammunition.



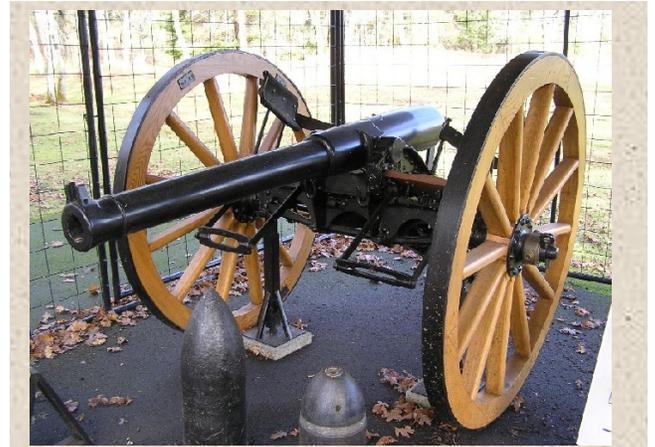
A 12-pounder QF 12 cwt gun (at left) and twin 6-pounder 10 cwt gun (at right) installed in Belmont Battery, Fort Rodd Hill NHS. Photo: Parks Canada/Dale Mumford, 2005.

Belmont Battery:

➤ One British **Mk 1 12-pounder QF 12 cwt gun** on Mk. 1 garrison carriage with shield. This gun is mounted in the right-hand 12-pounder gun emplacement at Belmont Battery. Two guns of this type were mounted in this battery from 1900 to

1944. Guns of this type were also mounted at other batteries in the Victoria-Esquamalt defences (at Duntze Head, Black Rock, Golf Hill and Ogden Point) and during World War II in the defences of Vancouver and Prince Rupert. These guns were also mounted on some smaller naval vessels which served in B.C. waters, including several Canadian Bangor Class minesweepers. This gun is on loan from the RCA Museum, Shilo Manitoba. It is displayed without its breech, but the breech is in storage at the site.

➤ One British **Twin 6-pounder 10 cwt gun**. This gun is mounted in an emplacement designed for it and constructed in 1944 at Belmont Battery. The gun is complete, and its range finder, two spare barrels and various spare parts are displayed in the Belmont Battery artillery store. This gun, and all the other guns of this type in Canada, were removed from their batteries in 1956 and given to Norway as part of a NATO mutual aid agreement. This gun was returned by the Norwegian government in 1983.



A 13-pounder rifled muzzle loading field gun on display on the grounds of Fort Rodd Hill NHS. Photo: Parks Canada/Dale Mumford, 2006.

Displayed elsewhere in Fort Rodd Hill National Historic Site:

➤ One British **13-pounder rifled muzzle loading field gun**. Displayed near the exit to the site, this gun is on its original carriage which has had all of the woodwork of the wheels and seats reconstructed. Six of these guns were sent to Esquamalt while the Royal Marine Artillery garrison was serving here in the 1890s. This was the standard British field artillery weapon in the 1880s and early 1890s, but these guns were rare in Canada, where the Canadian army adopted the lighter 9-pounder RML gun designed for the horse artillery as their standard weapon, as it was more suitable for the difficult terrain and poor roads generally found in Canada.

➤ One British **6-pounder QF Hotchkiss gun**. This gun is mounted on its original garrison carriage but is without its breech, sights and other fittings. It is displayed near the exit to the sites. These guns were the first type of Quick Firing (Q.F.) gun in British service and were widely used in the coast artillery and the navy as a defence against torpedo boats. Two guns of this type were mounted in the Victoria- Esquamalt coast defences from c.1900-1904 at Duntze Head Battery. They were replaced here, and in most British empire coast artillery sites, by the 12-pounder QF guns.

➤ One barrel for a **6-pounder QF Hotchkiss gun**. On display on wooden blocks by the entrance to the sites. This gun barrel has no breech.

➤ One Canadian made **40 mm. Bofors anti-aircraft gun**. Displayed near the exit to the site, this gun is complete on its carriage and has been painted in the colours of the 27th AA Regiment, RCA, which mounted such a gun in the Lower Battery at Fort Rodd Hill in the later part of World War II. Designed by the Swedish Bofors company, the 40mm has been built under licence in many countries and was the standard light anti-aircraft gun in British, Canadian and American army service during World War II.



Canadian made 40 mm Bofors anti-aircraft gun, produced during World War II by the Otis Elevator Company, displayed on the grounds of Fort Rodd Hill NHS. Photo: Parks Canada/Dale Mumford, 2006.

➤ One U.S. **90 mm. anti-aircraft gun**. Displayed beside the parking lot of the site, this type of gun was used by the American army during World War II, but it was not adopted by the Canadian army until the early 1950s when it replaced the British 3.7 inch anti-aircraft gun. The breech of this gun has been welded shut and the wheels used when the gun is being transported have been removed.

In storage at Fort Rodd Hill National Historic Site:

➤ One British **12-pounder BL 6 cwt field gun**. This gun was donated to the site in the early 1970s after having been discovered in a dump in Nanaimo, B.C. While most of the metal parts of the carriage have survived, they are badly corroded. Nothing remains of the wheels or their hubs and the breech is missing. The barrel and carriage have been stabilized by Parks Canada staff, but it is considered that too much of the gun is missing for it to be displayed. This type of gun was adopted in Britain for Horse Artillery in 1900 and the type was used by Canadian gunners in South Africa. Several of these guns were issued to the 5th (B.C.) Regiment, Canadian Garrison Artillery in Victoria about 1910, to replace the 13-pounder RML field guns previously in service.

➤ One British **1 inch aiming rifle**. This was the standard sub-calibre insert for the 12- pounder 12 cwt. QF gun, and was used to allow live firing practices to take place with much cheaper ammunition. This piece is on loan from the Royal Canadian Artillery Museum, Shilo, Manitoba.

• Bay Street Armoury

The Bay Street Armoury is the home of the 5th (B.C.) Field Regiment, Royal Canadian Artillery. This regiment is a direct descendant of the unit which manned the coast artillery batteries of the Victoria-Esquimalt fortifications from 1878 to 1956. In addition to the artillery pieces noted below the regiments museum and officer's mess hold many important artillery related artifacts and an important archival collection.

➤ **One British 13-pounder RML field gun.** This gun is almost exactly the same as the 13 pounder RML noted above at Fort Rodd Hill National Historic Site. These guns were used by the 5th (B.C.) Regiment, Canadian Garrison Artillery from c.1897 to 1910. The Commanding Officer of the 5th (BC) Field Battery, RCA arranged to have these gun returned to the unit in the early 1980s from Vernon Cadet Camp. At that time the guns

had no wheels (although fortunately the metal wheel hubs had survived) and were suffering from having been on display outdoors for many years. Parks Canada agreed to restore both of the guns and return one to the 5th Regiment, provided the other gun were turned over to for the Fort Rodd Hill Collection.

➤ **One British 6-pounder QF Hotchkiss gun.** This gun is unpainted and is complete on its garrison carriage with the breech assembly in place. While the exact history of this gun is unknown, as noted above two guns of this type were mounted in the Victoria-Esquimalt Defences at Duntze Head from c.1900-04.

➤ **One Canadian 25-pounder field gun/howitzer.** This gun is fairly complete, with its limber, but without the turntable used with these guns. The standard field gun of the



A 6-pounder QF Hotchkiss gun on display on the grounds of Fort Rodd Hill NHS. Photo: Parks Canada/Dale Mumford, 2005



British steel 7-pounder rifled muzzle loading gun from the collection of the 5th (BC) Regiment, Royal Canadian Artillery Museum. Photo: Parks Canada/Dale Mumford, 2003.

British and Commonwealth armies during World War II, this particular gun was converted to act as a funeral gun. It is being restored to firing condition by Department of National Defence technicians.

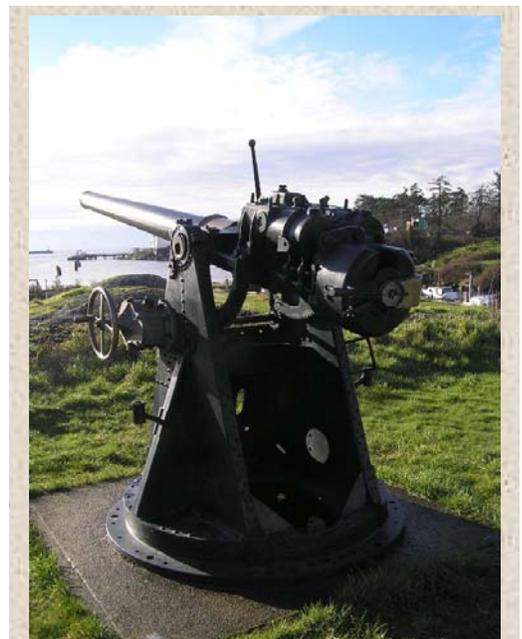
➤ One British **7-pounder RML Gun**. This steel barrelled gun (there were some 7-pounder RML's produced in bronze) was the smallest variety of rifled muzzle loader produced for British service. This gun has been on display in the 5th Regiment, RCA Officer's Mess for many years. It is mounted on a steel carriage with two small wooden truck wheels at the front and a skid at the rear. Its service history is unknown and there is no record of guns of this type having been issued to this regiment. These guns were used as small (and hence easily transportable) siege pieces by the army and on small vessels by the navy.

• Canadian Forces Base Esquimalt

Work Point Barracks -

The original buildings at Work Point were constructed between 1887 and 1890 to house C Battery, Regiment of Canadian Artillery, the first permanent force Canadian unit to be stationed in British Columbia. Two large brick barrack blocks and a number of other buildings were added between 1899 and 1905, when a larger British garrison of artillerymen and engineers was stationed here. In recent years, with the departure of the last members of the PPCLI from Esquimalt, Work Point has been taken over by the navy and the Officer Training facility HMCS *Venture* has moved there.

➤ One British **3-inch 20 cwt anti-aircraft gun**. This gun is in a location overlooking Victoria Harbour from whence, for many year the artillery fired the daily time gun. It was placed here as a memorial by the Royal Canadian Artillery Association. While other guns were adapted to fire at aircraft during World War I, the 3-inch 20 cwt. was the first British gun to be designed from the start for the anti-aircraft role. Very few of these guns served in Canada and the service history of this gun is not known. (Four of them were purchased in 1938 and at the start of the war in September 1939 they were the only semi-modern anti-aircraft guns in Canada and at that time they were sent to Halifax to boost that ports defences.)



British 3-inch 20 cwt anti-aircraft gun on display at Work Point Barracks, Esquimalt. Photo: Parks Canada/Dale Mumford, 2006.

☛ One Canadian **naval twin 4-inch QF high-angle gun**. This gun is located just south of the building housing HMCS *Venture*. These guns were of British design but they were also built in Canada during World War II. With a maximum elevation of 80 degrees these guns were capable of firing in the anti-aircraft or anti-surface ship role. They were mounted on Canadian built River Class Frigates, as secondary armament on cruisers and in the post-war years they replaced the twin 4.7-inch low angle guns on Canadian Tribal Class Destroyers. Although not used for coast defence on the west coast, some Twin 4- inch guns of this type were used in the coast artillery role on Canada's east coast.



Canadian made naval twin 4-inch QF high-angle gun on display next to HMCS Venture, Work Point, Esquimalt. Photo: Parks Canada/Dale Mumford, 2005.

Naden -

☛ Outside the CFB Esquimalt Military and naval museum can be found two, eighteenth century **6-pounder bronze smooth bore guns**. These guns are mounted on reproduction wooden naval carriages. Although the service history of these guns is unknown, they were located for many years at Royal Roads Military College (now Royal Roads University). There, generations of Canadian officer cadets maintained these guns in such a highly polished state that gradually all of the markings were worn away.

☛ Elsewhere on the grounds of Naden can be found a number of pieces of ordnance that formed part of the armament of the Canadian designed and built destroyer escorts that formed the main strength of the Canadian navy from the late 1950's to the early 1990's. These include examples of **Limbo three barrelled anti-submarine mortars**, one **ASROC eight barrelled rocket launcher** (ASROC = anti-submarine rocket, as this weapon system used rockets to launch anti-submarine homing torpedoes up to thirty kilometres) one **twin 3-inch 50 calibre gun** and one **twin 3-inch 70 calibre gun**. The British designed 3 inch 70 calibre, was mounted forward on destroyer escorts of the Restigouche and Mackenzie Classes. It was much heavier, but had a considerably higher firing rate (90 rounds per minute) and greater range than the American designed twin 3 inch 50 calibre guns which were also mounted on Canadian destroyers and destroyer escorts from the 1950's to the 1990's. A second twin 3 inch 50 calibre gun is still mounted at Black Rock Battery in Dockyard, where for many years it was used for radar gun control training.

Dockyard -

Situated on Duntze Head, flanking the saluting platform used by the Commander Maritime Forces Pacific are two iron muzzle loading guns, both mounted on reproduction wooden carriages. These are:

- One British **32-pounder smooth bore gun**. This gun has a Georgian cipher (either George III or George IV) and is of the Bloomfield Pattern.
- One British **64-pounder 64 cwt rifled muzzle loading gun**. While this is one of the types of guns used in the 1878 coast artillery defences of Victoria - Esquimalt. They were also mounted on many classes of naval vessels from the late 1860's to the early 1880's. Nothing is known about the service history of this particular gun.



British 64-pounder 64 cwt rifled muzzle loading gun at Duntze Head, in the Dockyard, Canadian Force Base Esquimalt. Photo: Parks Canada/Dale Mumford, 2005.

• Maritime Museum of British Columbia

The Maritime Museum of B.C. has a number of interesting smaller guns in their collection.

- On display on the ground floor of the museum is a beautiful **brass 6-pounder smooth bore gun** marked with the cipher of George III as well as the cipher of the Master General of Ordnance and the makers name "F. Kinman 1808". It measures five and a half feet in length and is mounted on a very accurate looking reproduction wooden truck carriage.
- Also on the ground floor is an **iron 3-pounder smooth bore gun**, marked "B.P. & Co." and reputed to have been used by the Hudson's Bay Company either on one of their coastal vessels or in one of their forts. It has a ring



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British brass Coehorn Mortar in the collection of the Maritime Museum of British Columbia. Photo: Parks Canada/Dale Mumford, 2004.

above the cascabel and is mounted on a reproduction wooden truck carriage.

☛ A recent addition is a **9-pounder carronade** on a wooden truck carriage, which was reputedly part of the defences of the Hudson's Bay Company's Fort Rupert. It has trunnions and is mounted on a naval truck carriage.

☛ On the second floor of the museum there is a **brass smooth bore Coehorn mortar** with a Georgian cipher and marked 1821. It is mounted on a wooden bed which appears a little too lightly built to be original.

In the exhibits on the Royal Navy and Royal Canadian Navy are three more modern pieces.

☛ The rarest of these is a **five-barrelled Mk 2 Nordenfelt machine gun** marked Enfield 1889 and serial number 263. This gun was part of the armament of HMCS *Rainbow*, the first vessel of the Royal Canadian Navy on the west coast.

☛ In the same exhibit is a British **2-pounder QF anti-aircraft gun**. This gun has been used for training and had part of the housing and barrel cut away to expose the internal mechanism to be able to demonstrate how it works. It is without a mounting. The 2-pounder was really an enlarged version of the Maxim machine gun and became the standard Royal Navy shot range anti-aircraft gun in the inter-war years and continued in service through World War II. They were also made in Canada by Dominion Bridge during World War II. and were used on Canadian destroyers and corvettes. They were installed in single, quadruple and octuple mountings. The latter were mounted on capital ships and referred to as "Chicago Pianos".



Bofors 40 mm anti-aircraft gun with parts of the housing cut away to reveal the operating mechanism, from the collection of the Maritime Museum of British Columbia. Photo: Parks Canada/Dale Mumford, 2005.

☛ Nearby is a naval **40 mm Bofors anti-aircraft gun** which has also had part of the breech housing and barrel cut away for use as a training aid. This Swedish designed gun generally began to replace the 2-pounder as the standard light anti-aircraft gun on British and Canadian naval vessels in the later years of World War II and a power-operated version is still in service with the Canadian Navy to this day. (See also the notes on the 40mm Bofors gun at Fort Rodd Hill above).

• Memorial Park, Esquimalt

☞ In the grounds of this small park is the war memorial of the township of Esquimalt, which is flanked by two **German 77 mm field guns**. These are two of the many German guns captured by Canadian troops during World War I and later sent to cities and towns across the country for display around local war memorials. Many of these guns were cut up for scrap metal during World War II, but it is likely that some other similar trophies of war have survived, and are still on display elsewhere in the province.

• Vancouver Island outside Greater Victoria

Sidney

☞ Outside the Army, Navy and Air Force Veterans Association building at 9831 - 4th Street in Sidney, B.C. is a **4-inch naval gun**. This gun has no shield and no details of its service are recorded on the gun. It is mounted next to a late model Sherman tank and an F-86 fighter jet.

Nanaimo

☞ Two **small iron smooth bore guns, probably 3-pounders**, on wooden truck carriages are on display at the old Hudson's Bay Company bastion in downtown Nanaimo. They are reputed to have been part of the original armament of the bastion. During the summer months one of these guns is fired daily at noon.

Ucluelet

☞ A **12-pounder 12 cwt QF** gun recovered from the wreck of HMCS *Thiepval* is on display in downtown Ucluelet. In 1930 this Canadian Navy Minesweeper struck a reef and sank in the channel now named for the ship in the Broken Group Islands. The gun has no shield and is deeply pitted from its long submersion in salt water.

Campbell River

☞ In the Campbell River Maritime Centre a **small iron smooth bore gun barrel (probably a 3- pounder)** is on display. Although referred to as a "carronade cannon" it is not actually a carronade.

☞ In the lobby of the Coast Hotel in downtown Campbell River, what appears to be a **9-pounder carronade** is on display. No information on the origins of this gun is provided

• Some significant examples of artillery preserved elsewhere in B.C.

Vancouver

☞ At the Beatty Street Armoury, home of the British Columbia Regiment, are two **64-pounder 71 cwt rifled muzzle loading guns**. One of these guns is on a iron garrison carriage. The other barrel has no carriage, but plans are underway to reproduce a

wooden garrison carriage for it. These guns were reportedly provided to 2nd Battalion, 5th (BC) Regiment, Canadian Garrison Artillery, two companies of which were in Vancouver in the late 1890s. This battalion was later converted to a rifle battalion, but the now obsolete guns remained at their armoury. The 64- pounder 71 cwt. guns were converted to rifled muzzle loaders by a process developed by Major Palliser of the Royal Artillery, by which a wrought iron rifled tube was inserted into a bored out 8-inch 65 cwt. smooth bore gun. This system allowed some of the old smooth bore guns to be retained in service, but because they were based on a cast iron barrel they were not as strong as the new 64-pounder 64 cwt. guns which were built up from a series of wrought iron tubes. They could not fire as heavy a charge and consequently were of little use against armoured vessels. Guns of this type were installed at Finlayson Point and Nias (Victoria) Point Batteries at Victoria from 1878 to c.1897. These guns may well have served in these batteries before being sent to Vancouver.

➤ The 15th Field Regiment, Royal Canadian Artillery has a World War II **25-pounder field gun and limber** and a **40 mm Bofors anti-aircraft gun** on display at the Bessborough Armoury.

New Westminster

➤ In front of the armoury of the Royal Westminster Regiment is one **64-pounder 64 cwt rifled muzzle loading gun**. This gun is mounted on an iron garrison carriage. This gun was sent to New Westminster as the training armament for the company of the 2nd Battalion, 5th (BC Regiment, Canadian Garrison Artillery, which served here in the late 1890's. Provision was made to be able to mount this gun in one part of the armoury with a firing port through which it could be fired towards the Fraser River. Guns of the type were mounted on Brothers Island and at Nias (Victoria) Point Battery in Victoria from 1878 to c. 1897. This gun may well have served in one of these batteries before being sent to New Westminster.

➤ For many years two **bronze 24-pounder smooth bore howitzers** were on display on either side of the monument to Simon Fraser near the Pattullo Bridge in New Westminster. They were later moved to New Westminster Quay, but this author is uncertain about their present location. These howitzers are reported to be the ones issued to the Seymour Battery of Garrison Artillery, which was the first artillery unit to be formed in BC in 1866.