

Regina Scale Modellers' Subject Guide for Proposed Battle of the Atlantic Sunday 2025 Model Display - Michel Rozon

Battle of the Atlantic Sunday is celebrated on the first Sunday of May each year by every naval unit and facility in Canada to commemorate RCN ships and personnel who served and were lost during World War Two. In Saskatchewan, it doesn't have as high a public profile as Remembrance Day and so a knowledge of appropriate model subjects may be lacking.

This document has been prepared for the Regina Scale Modellers, IPMS Chapter so that members will have an understanding of what model subjects would be appropriate, and for the staff of HMCS Queen, the naval reserve unit in Regina, SK., and the proposed location of the display, so that the command staff of HMCS Queen will know what they can expect to see.

First, a little background.

The Battle of the Atlantic started Day One of World War Two and did not end until the final surrender of the U-boat fleet in May of 1945. The battlefield extended from the east coasts of North, Central and South America through the Caribbean Sea, ALL of the Atlantic Ocean, the Norwegian Sea, the Barents Sea and the Arctic Ocean and, to a lesser extent, around the Cape of Good Hope (South Africa) and into the Indian Ocean. Some German disguised raiders and U-boats operated in the waters of Southeast Asia, Australia and the Pacific.

The Battle of the Atlantic is usually seen as the battle for the protections of shipping, supply and troop transport against the German submarine force and surface warships, supported by the Luftwaffe, and occasional Italian submarines and aircraft.

On occasion, Japanese submarines would appear in the Atlantic as blockade runners, transporting rare materials, technology and personnel between Imperial Japan and Nazi Germany going in both directions. Some of them were sunk.

The war at sea went both ways as the Allies went after Axis merchant shipping as well as warships and submarines as much as they possibly could.

The Mediterranean Sea saw an extended and vicious naval war that also affected the conduct of the Allied operations in the Atlantic. The argument can be made that this theatre of operations is, therefore, of interest.

This expansive battlefield involved, in one way or another, almost every combatant in World War Two that possessed naval and maritime-oriented air forces.

The major combatants most involved in this conflict were;

- The United Kingdom, its colonial empire and the Nations of the Commonwealth,
- The United States and its territories,
- France and its colonial empire before June of 1940

- The Soviet Union,
- Brazil. Much of Latin America sided with the Allies but for the purposes of the Battle of the Atlantic, the most important of these combatants was Brazil.
- Several of the Governments in Exile who fought on the Allied side (Poland, The Netherlands, Norway, France after June of 1940, and many others),
- Nazi Germany,
- Italy and its colonial empire.

Spain was effectively neutral in this conflict as far as the Battle of the Atlantic was concerned.

Despite intense pressure from both sides, Portugal remained a non-belligerent throughout the war but from 1942 onward progressively allowed allied bases on its territory. None of its combat forces participated.

The only units of Imperial Japan that made it into the Atlantic were submarines, as previously mentioned. After the carrier raids into the Indian Ocean in early 1942, some IJN submarines continued to operate in the Indian ocean. Otherwise, their air and surface units stayed closer to home, their colonial empire and conquests in China, Southeast Asia and the Pacific.

I think I've covered the important bits as far as combatants are concerned. If I've missed some, please let me know. Now for a little bit more detail, combatant by combatant.

I'm going to discuss the ships used by the navies, first. Then I'll discuss various air arms and their aircraft.

Ships.

First, some discussion of scales.

Ship model scales can run from 1/2400 (1 inch = 200 feet) up to 1/72 (1 inch = 6 feet). Using the Flower class corvette as an example, in 1/2400 this ship model would be just over 1 inch in length. In 1/72, it would be 34 inches in length. The model of HMCS Regina that was built by the club and currently on display in Regina City Hall is in 1/72 scale.

Generally, the most popular are 1/1200, 1/700, 1/600 and 1/350. As always, the choice is entirely up to the model builder with the rule of thumb being that the larger the model, the greater the detail but also the greater the expense and time involved in its completion.

The following does list relevant ship types, but it is not exhaustive.

The United Kingdom, Its Colonial Empire and the Nations of the Commonwealth

Being that this is a Canadian day of remembrance, it is fitting that the emphasis should be on the ships of the RCN, with the ships of the RN and other Commonwealth navies also having a place so we'll start with them.

The **Royal Navy (RN)** is an easy one.

Any ships that sailed under a Royal Navy flag is fair game. Anything from harbour defence launches, motor torpedo boats, motor gun boats, trawlers, minelayers, minesweepers, corvettes, frigates, sloops (more heavily armed frigates), escort destroyers, destroyers, cruisers of all kinds, all the way up to battleships, battlecruisers, aircraft carriers of all types.

The UK, like many navies, was in the midst of a major building program that was interrupted and modified by the outbreak of the war. The ships from these programs that were not completed are often the subject of many debates in the “what if” arena.

In addition to British designs, American-made ships built to American designs and others built to British specifications were taken into Royal Navy service, most under Lend-Lease. This included;

- fifty former USN “Flush decker/Four Stack” destroyers transferred to the RN for American basing rights in British possessions (these were modified and eventually became the Town class destroyers),
- several former large cutters from the United States Coast Guard, plus
- seventy-eight frigates (the Captain and Colony classes),
- twenty patrol frigates (Tacoma class, American built versions of the River class frigates, becoming the Colony class frigates in RN service) and,
- many escort carriers (the Avenger, Attacker and Ruler classes).

Many merchant ships were converted into auxiliary warships, and they featured heavily in RN operations.

Any merchant ship that carried personnel or goods of any kind (like tankers) to and from the UK are obviously of interest. The most interesting of these, in my opinion, are the many ocean liners that were taken into service as troopships, such as RMS Queen Elizabeth and RMS Queen Mary.

There were British equivalents to the Victory class and Liberty class transport ships (the “Capes” and “Forts”) that would be of interest in any Battle of the Atlantic display.

Royal Canadian Navy (RCN) is another easy one.

Like the RN, any ship that sailed under a RCN flag is fair game. The RCN was mostly a “small ship” navy with surface ships from harbour defence launches, motor torpedo boats, motor gun boats through to trawlers, minesweepers, corvettes, frigates and, finally, destroyers. By the end of the war, the RCN included ships up to light cruisers (HMCS Uganda and HMCS Ontario) and, occasionally, escort carriers (e.g. HMCS Nabob, Ruler class) so these are also of interest.

Several of the above-mentioned “flush decker/four stacker” Town class destroyers were transferred to the RCN. The RCN also received the above-mentioned HMCS Nabob under Lend-Lease.

Some Canadian merchant ships were converted into auxiliary warships (for example, the Armed Merchant Cruisers Prince Henry, Prince Robert and Prince David) and these would be of interest, as would merchant ships just carrying men and goods to and fro. Several of the above mentioned “Capes” and “Forts” were built in Canadian shipyards.

As this is a display in a Canadian naval unit, subjects outside of the time of the Battle of the Atlantic”, such as World War 1, pre-World War 2 and post-World War 2/Cold War are also invited.

Royal Australian Navy (RAN)

Royal Australian Navy surface warships ranged all the way up to heavy cruisers and were of mainly British design. Their purpose-built warships were heavily involved in all types of naval operations in the Atlantic and the Mediterranean until Japan entered the war, when they were recalled for operations closer to home. Converted auxiliaries operated close to home to protect against Japanese attack and the depredations of German commerce raiders.

The RAN did not operate submarines during World War 2

Royal New Zealand Navy (RNZN)

At the beginning of World War 2, The Royal New Zealand Navy was functionally a division in the Royal Navy. They did not become a fully New Zealand entity until 1941. They built up during the course of the war to include a spectrum of ships up to and including light cruisers. The purpose-built warships of this division/navy were of mainly British design and were involved heavily in operations against the Axis in the Mediterranean and Atlantic until Japan entered the war, at which time they pivoted back to the Pacific. Converted auxiliaries, like those of the RAN, stayed closer to home for the same reasons those of the RAN did.

The RNZN did not operate submarines during World War 2.

Royal Indian Navy (RIN)

This one surprised me when I was writing this. In retrospect, it shouldn't have as Indian troops figured heavily in the British Army's formations in Europe.

The Royal Indian Navy had fleet minesweepers (Bangor class), corvettes (Bathurst and Flower classes) and sloops (Bittern and Black Swan classes), operating in European waters almost from the start of the war and present there for the entire duration of the war in Europe.

The RIN did not operate submarines during World War 2

Other British colonial possessions made contributions, but these were effectively subsumed within the Royal Navy and other British armed forces.

South African Naval Service

In addition to homebuilt and converted auxiliaries that served in the vicinity of South Africa, the SANS operated British Algerine class minesweepers, Flower class corvettes, River class frigates and Loch class Frigates. These ships ranged throughout the Atlantic and Indian Ocean.

The United States and its Territories (United States Navy (USN) and United States Coast Guard (USCG))

The United States Navy and Coast Guard were heavily involved in the Battle of the Atlantic, even before the attack on Pearl Harbor brought the United States officially into the war. Although the extent of American fleet operations was not as great as it was in the Pacific, the USN's presence in all parts of the Atlantic and Mediterranean was nonetheless extensive.

Just about all of the Coast Guard's oceangoing ship types took part in the Battle of the Atlantic in one form or another. Several of its large cutters were transferred to the Royal Navy for deep ocean convoy escort.

U. S. Navy ship types involved in the Atlantic and Mediterranean extended all the way from the lowly submarine chasers through PT boats, destroyer escorts, destroyers of various classes, light and heavy cruisers and some battleships. Escort carriers were heavily involved as well as two of the Navy's fast fleet carriers

Whereas almost everything that sailed in the Royal Navy fought in the Atlantic and Mediterranean at one time or another, there were some major ships and ship classes that never saw combat service in the Atlantic.

The USN received Flower class corvettes from Reverse Lend-Lease. They all served in the Atlantic.

For patrol frigates (Asheville and Tacoma classes, the American version of the British River class frigate) many served in the Atlantic in one capacity or another.

For destroyer escorts, of the five wartime classes, all classes participated in the Battle of the Atlantic at some level.

For destroyers, Fletcher class or Gearing class destroyers fought only in the Pacific theatre. All others carried out some operational and combat service in the Atlantic.

For light cruisers, no Atlanta class ships served in the Atlantic.

For heavy cruisers, no ships of the Baltimore class heavy cruisers operated in the Atlantic

For battleships, California, Tennessee, Maryland, Colorado, West Virginia, Indiana, New Jersey, Wisconsin, and Missouri performed all of the WW2 combat service in the Pacific. All others spent some time operational in the Atlantic.

For escort carriers, Bogue and Sangamon classes served in the Atlantic while the Casablanca and Commencement Bay classes did not.

For light fleet carriers, none of the Independence class light fleet carried out any operational service in the Atlantic.

For fleet carriers, only USS Ranger (CV-4), Yorkton (CV-5) and USS Wasp (CV-7) carried out combat operations in the Atlantic.

United States Navy submarines were very active in the Pacific but their involvement in operations in the Atlantic and the Mediterranean was minimal.

In addition to merchant ships taken up from trade and converted into auxiliary warships, there were many more that carried cargoes of all types everywhere. The United States Government also had many cargo ships (Victory and Liberty ships) and tankers (Like the "T2" tankers) built to replace lost shipping and all of these are of interest.

France (Marine Nationale (MN))

France ranked fifth in size in the world, and in European waters second only to the Royal Navy and the Italian Navy. It was a full co-belligerent together with the UK when the war started in 1939. Its full range of ships operated in the Mediterranean and Eastern Atlantic until France's surrender in 1940. Thus, any French Naval unit from this period is of interest.

Like many navies, France in the midst of a major building program that was interrupted and modified by the outbreak of the war. The ships from these programs that were not completed are often the subject of many debates in the "what if" arena.

After the surrender, some French ships that fell into German hands. up to and including destroyers in size, were taken into Kriegsmarine service. Of note is that France was building Flower class corvettes for its own use at the time of the 1940 surrender. Some of these were later completed and taken into service by the Kriegsmarine.

Soviet Union (Workers and Peasants' Red Fleet/*Raboché-krest'yansky krasny flot (RKKF)*)

The Soviet Navy became involved in the Battle of the Atlantic after Germany and its allies invaded in June of 1941. The Soviet Navy was large numerically but submarines, small warships (destroyers and smaller) and coastal craft (like motor torpedo boats) formed the bulk of it, along with a sprinkling of cruisers and three heavily rebuilt and modernized battleships left over from

World War One. A major building program was underway but the German invasion interrupted it, leaving much of it unfinished.

As a matter of principle, all of the Soviet Navy's ships are interesting subjects, especially those not completed. Having said that, of the Soviet Union's four major fleets, only one fleet was involved in the Battle of the Atlantic; the Northern Fleet. By its composition, this limits the field to ships of destroyer flotilla leader and below.

These ships were of the Following classes;

- Project 38 destroyer flotilla leader (Baku)
- Project 7 destroyers (Gnevnyi class)
- Project 7U destroyers (Storozhevoi class)
- Novik class – these were originally built during World War One and the survivors continued on through World War two

Numerous "submarine chasers", both Russian-built (MO4 and BO2 classes) and American (various types). These were vessels around 100 feet in length and up to as much 140 tons full load displacement. They operated primarily in coastal waters to escort coastal convoys and secure the approaches to ports and anchorages.

Numerous submarine classes of small and medium size categories were in operation and continued to be built during the war though at a reduced rate.

In addition to the large number of small craft, equipment (radars, sonars, radios and other electronic gear) and weaponry (Depth charges, Hedgehog, Mousetrap and others) The Soviets received the following on temporary loan;

- one battleship (HMS Royal Sovereign, becoming the Archangelsk),
- one Light Cruiser (USS Milwaukee, becoming the Murmansk),
- nine Town class destroyers (Flush Deck destroyers transferred to the UK by the US and modified),
- and three "U" class submarines were loaned to the Soviet Navy.

These are the ships that operated in Northern Fleet. The Soviet Pacific Fleet received many other ships and small craft via Lend-Lease but these played no part in the Battle of the Atlantic.

Brazil (*Marinha do Brasil*)

Of the Latin American navies, the only one that took a significant part in the Battle of the Atlantic was Brazil.

When World War 2 started, Brazil had the second largest navy in Latin America, operating a spectrum of ships from submarines through to battleships. It was well regarded in terms of its professional skills. However, by the onset of the war, its ships were largely obsolete. Most of them had been built in other countries. There was a building program in place, but it was being

disrupted by ships under construction in foreign yards being requisitioned by the countries where they were being built.

Nevertheless, when Brazil entered the war in 1942, it participated to the limit of its ability, operating throughout the length of its coastline, the Caribbean, and into European waters. Brazil also granted basing rights to the United States for the duration of the war.

Models of Brazilian warships relevant to the Battle of the Atlantic from this period are few and far between.

Modern ships built in Brazil slowly came on line. Lend-Lease then brought more ships, equipment and training to the Brazilian Navy and industrial and financial support to improve bases and shipyards, primarily from the United States. The ships took the form of;

- Eight destroyer escorts (Cannon class),
- Eight submarine chasers,
- Other ASW small craft and,
- Plans and materials for three destroyers based on the American Mahan class that were built in Brazil.

Governments in Exile Fighting with the Allies

Free French Naval Forces (*Forces Navales Françaises Libres (FNFL)*)

After an often bloody interregnum complicated by the existence of Vichy France and the British desire to keep French warships out of German hands, the establishment of the Free French under De Gaulle as the sole government recognized by the allies eventually brought surviving French warships and merchant ships into Allied service. Surviving French warships were evaluated for their utility, refitted and repaired in England and the US as appropriate and they operated throughout the world where needed. The Free French also received much in the way of ships, aircraft and equipment through Lend-Lease.

In terms of ships, through Lend-Lease France received minesweepers, corvettes, frigates, escort destroyers, destroyer escorts and submarines from the UK and the USA.

From the UK they received;

- one Hunt class escort destroyer,
- eight Flower class corvettes. British yards were building several for the French at the time of the 1940 surrender, these were taken over by the RN. The six being built under license in France were taken over by the Germans. The FFNL received the previously mentioned eight Flowers after the 1942 Armistice under Lend-Lease.
- six River class frigates
- and three "U" and "V" class submarines.

From the US they received;

- six Cannon class destroyer escorts,
- thirty YMS minesweepers,
- thirty type PC submarine chasers
- forty-nine Type SC submarine chasers and other craft.

Free French forces would be very active in the Mediterranean and Eastern Atlantic. Eventually, these forces would re-deploy to Southeast Asia and the Pacific.

Poland (*Marynarka Wojenna (MW)*)

When it became clear that Poland would not survive the invasion, as many merchant ships surface warships, and submarines as possible sought refuge in France and England to continue the fight. They received repairs and modification in British ports and fought under Royal Navy operational control, throughout the Atlantic and Mediterranean while Polish merchant ships carried everything everywhere. All are of interest.

During the course of the war, Free polish forces were loaned the following by the UK;

- Two D-class light cruisers (Dragon and Danae/Conrad),
- Four destroyers (Garland (RN "G" class), Piorun (RN "N" class), Orkan (RN "M" class) and Ouragan (French destroyers of the same name),
- Three Hunt class escort destroyers,
- Two submarines ("U" class),
- and numerous Motor Torpedo Boats (MTBs) from the UK.

Norway (Royal Norwegian Navy/*Sjøforsvaret*,)

Norway started the war as a neutral party, but this changed when Germany invaded in 1940. Few of its modern ships made it out when Norway fell. At this point they began to take part in the Battle of the Atlantic. Those ships that did escape saw service under RN control everywhere in the Atlantic and the Mediterranean, as did Norwegian merchant ships. Ships that didn't make it out and survived were often repaired and taken into Kriegsmarine service.

Numerous Norwegian merchant ships were converted into a variety of Auxiliary warships.

The Free Norwegian navy expanded greatly during the war, receiving ships and equipment primarily from the UK. This took the form of;

- Two "S" class destroyers, HMS Success and HMS Shark, becoming HNoMShips Stord and Svenner (not to be confused with the World War One "S" class);
- Five Town class destroyers (from the 50 "Four stackers" transferred to the RN from the US);
- Three Hunt class escort destroyers;
- Six Flower class corvettes and one Castle class corvette;
- Twenty Motor Torpedo Boats;
- Two "U" class submarines

Plus, other small vessels.

The Netherlands (Royal Netherlands Navy (RNLN)/Koninklijke Marine)

Like Norway, the Netherlands started World War 2 as a neutral, as it was in World War 1. As such, its navy confined itself to covering its home waters in Europe and its colonial empire. This fleet, though not large, was significant enough within a European context and consisted of ships ranging from submarines and motor torpedo boats through various gunboats, minesweepers and colonial patrol ships, destroyers and, finally, light cruisers. Much of this was concentrated in the Far East covering Dutch colonial possessions.

Given the build-up to war in the east and west, The Netherlands had embarked on a major re-armament and expansion of the fleet, especially to protect its colonial empire. The invasion in 1940 interrupted this process and the attack by the Japanese ended it.

The German invasion meant that the Dutch were no longer a neutral. Like Norway, when it became clear that the Germans could not be stopped, as many Dutch warships and merchant ships as possible escaped to the UK. Ships in the Dutch colonies generally stayed there. Once the Government in Exile was formed, they began operating with the Allies. This did not go smoothly at times as the Dutch, the British and The Americans had to learn how to operate together.

In European waters, this process was easier. Dutch-built ships and submarines operated under RN control and these are the ships that are of interest for the Battle of the Atlantic.

In addition to Dutch-built ships that successfully escaped, the Dutch received ships via Lend-Lease and loan, mainly from the RN;

- One River class Frigate
- One Flower Class Corvette
- One American PC type (PC468)
- Sixteen American-built Vosper PT Boats
- Twelve British Motor Torpedo Boats, mainly of the Vosper type.
- Four British "S" and "T" class submarines

There were other governments in exile that received naval assistance via Lend-lease and loans but, as far as the Battle of the Atlantic was concerned, these were the players of note.

And now the opposition.

Nazi Germany (Kriegsmarine (KM))

Like the Royal Navy, any and every Kriegsmarine surface warship from torpedo boats (Schnelboote and the like) through corvettes, escorts, frigates, destroyers of all sizes, light and heavy cruisers, the infamous "Pocket Battleships" through to battleships are of interest.

The Kriegsmarine selected and converted several merchant ships into disguised raiders. Atlantis, Thor, Komoran, Orion and Komet were some of them. These ships ranged throughout the oceans of the world on epic voyages attacking allied shipping. Most met their eventual ends at the hands of cruisers of the Royal Navy and Commonwealth navies.

The Kriegsmarine was in the midst of a huge, long-term expansion of the fleet that continues to be the subject of debate and consideration of “what if” scenarios. Much of this program was curtailed in favour of U-boat construction and the construction of warship types more urgently needed. Surface warships intended for conventional operations (naval warship versus naval warship), including aircraft carriers, formed the bulk of it. Many of these “conventional” warships were to have greatly increased range and endurance in order to operate far from bases for extended periods of time.

The program also included major warships designed primarily to attack merchant shipping with little in the way of logistical support, like the pocket battleships but bigger and faster, along with smaller ships that were meant to be their consorts and scouts.

During the war, the Kriegsmarine tried to adapt to the changing nature of war at sea. This can be seen in changes in builds that were already under way, new building programs for destroyer and smaller warship types, the proposed construction of aircraft carriers and the conversion of several ships into aircraft carriers. Few of these projects made it to the construction stage, let alone seeing completion and service entry.

Many captured surface warships and combat craft were pressed into service.

Kriegsmarine surface warships operating against the convoys have always drawn the attention and imagination of many but the U-Boat arm was the primary weapon. Not surprisingly, U-Boats of any type are fair game, including those that were built but didn’t make it into service (for example, the Type XXI) and those proposed but didn’t make it into metal. There is a lot to choose from here, depending on how far you want to go and what scales you’re working in.

Italy (Royal Italian Navy/*Regia Marina (RM)*)

Italy played no part in the Battle of the Atlantic until it declared war on France in June of 1940, other than being the subject of concern and irritation on the part of the French and the British. At the start of World War 2, it was the fourth largest navy in the world, with a large fleet of surface ships of all types, except aircraft carriers, and a large submarine force. It was the largest navy in the Mediterranean. There were ships and submarines in the waters of Italian colonial possessions, but the navy’s main strength was concentrated in the Mediterranean.

Italy was also in the midst of a naval expansion program that was drastically reduced in scope when it entered the war in earnest. Building programs were altered to adapt to the changed circumstances, finishing off ships already under construction and a few of those started after the beginning of Italy’s full involvement in the war.

The surface fleet in the Mediterranean would be very active in that sea but they would remain there. That activity would affect RN and, later, Allied operations in the Atlantic. Combatants

from motor torpedo boats (MAS) through to battleships would be engaged against the Royal Navy for 2 ½ years.

Italy also pioneered special forces underwater operations and these exacted a significant toll against the Royal Navy in Gibraltar and Alexandria and others. These inspired Allied development in this area, with midget submarines and “Chariots”.

For their activities, the surface ships and special forces are of interest for a Battle of the Atlantic display.

The submarines would operate not just in the Mediterranean but also in the Atlantic (out of German bases in Bordeaux, France) as far afield as the waters of Brazil. They also operated in Southeast Asian waters from Italian colonial possessions in China and Japanese bases in the Home Islands. Italian submarines are definitely of interest.

When Italy switched sides in 1943, ships that escaped the Germans and Japanese surrendered to the Allies. Battleships and heavy cruisers were interned while light cruisers were employed in the Atlantic securing convoy routes against attacks by surface raiders. Ships of destroyer size and below, including submarines, were employed on various duties in the Mediterranean. These ships made important contributions to Allied operations. The possible use of Italian cruisers and battleships in the Pacific theatre was a matter of intense debate among the Allies.

Some Italian submarines continued to operate against the Allies under Kriegsmarine control. Italian submarine in Japanese waters were passed to the Japanese and their crews temporarily interned. Some of them would later serve in these submarines under IJN control against the Allies in the Pacific.

Imperial Japan (Imperial Japanese Navy (IJN)/Nippon Kaigun)

As mentioned above, the only units of Imperial Japan that made it into the Atlantic were submarines operating as blockade runners. Of these, I-52 is the best known in mainstream media.

Some Japanese Submarines operated in the Indian Ocean. After the IJN carrier raids of 1942, these and the blockade running submarines were the only combat units of the IJN that figured in any way in the Battle of the Atlantic.

Aircraft

First, some discussion of scales

Aircraft model scales generally range from 1/144 (one inch = one hundred and forty-four inches (twelve feet)) through 1/72, 1/48, 1/32 and 1/24 (one inch = two feet). 1/72 and 1/48 tend to be the most popular. To give an indication of size, in 1/72 scale, a Spitfire would have a wingspan of about six (6) inches and Avro Lancaster would have a wingspan of about eighteen (18) inches.

As noted in the discussion on ship model scales, the choice is entirely up to the model builder with the rule of thumb being that the larger the model, the greater the detail but also the greater the expense and time involved in its completion.

The following list of aircraft is not exhaustive but is meant to point builders in the right direction and to give HMCS Queen an idea as to what they can expect to see.

We'll take the combatants in the same order that they appeared when we were discussing ships.

The United Kingdom, its colonial empire and the Nations of the Commonwealth

For the **Royal Navy**, the **Fleet Air Arm (FAA)** came into being in 1924 as a part of the RAF and was responsible for all naval aviation and the air defence of naval shore establishments. RAF control of naval aviation would adversely affect the development of the FAA and go on to have serious consequences for both the FAA and the RN in general during the course of World War 2. The FAA finally came under full Royal Navy jurisdiction in 1939.

Any FAA combat aircraft is fair game as almost every FAA combat aircraft carried out operations against the ships, submarines and aircraft of Germany and its allies in the prosecution of the Battle of the Atlantic. This was done from shore bases (airfields and seaplane bases where seaplanes and flying boats took off and arrived on the water) as well as from ships, be they large surface combatants (seaplanes and flying boats launched from battleships and cruisers), aircraft carriers of any kind or catapulted-equipped merchant ships launching aircraft on single-shot missions (eg. the "Hurricat").

The FAA's aircraft strength was comprised of aircraft from more than one country. British designed and built aircraft included:

- Blackburn Skua
- Blackburn Roc
- Blackburn Firebrand
- Fairey Swordfish
- Fairey Albacore
- Fairey Barracuda

- Fairey Firefly
- Gloster Sea Gladiator
- Hawker Sea Hurricane
- Supermarine Seafire
- Supermarine Sea Otter
- Supermarine Walrus

There were several aircraft whose development was not completed in time for operational use during World War 2. Just because of the “weird stuff” factor, these are of interest. These aircraft included:

- Blackburn Firecrest
- De Havilland Sea Mosquito
- De Havilland Sea Hornet
- Fairey Spearfish
- Hawker Sea Fury
- Supermarine Seafang
- Westland Wyvern TF.1

American naval aircraft supplied through Lend-Lease, “Americans with Roundels”, figured heavily in FAA strength and are of great relevance. These included:

- Brewster F2A Buffalo
- Grumman F4F/FM-1, -2 Martlets/Wildcats of all marks,
- Grumman F6F Hellcats of all marks,
- Grumman TBF/TBM Tarpons/Avengers of all marks,
- Chance-Vought F4U Corsairs of all wartime marks,
- Chance-Vought OS2U Kingfisher.

There were others that were tested for suitability but never deployed operationally. Such aircraft included;

- Brewster Bermuda/SB2A Buccaneer
- Curtiss SBC Helldiver
- Curtiss SB2C Helldiver
- Douglas SBD Dauntless
- Curtiss SO3C Seamew

There were others. All would be of interest simply because they fall into the “Weird Stuff” category.

Other aircraft whose development was not completed in time for deployment in the Battle of the Atlantic but were of interest to the RN are also of interest for the display for the same reason. Such aircraft included:

- Grumman Bearcat

For the **RAF**, participation in the Battle of the Atlantic was extensive although they often begrudged the resources sent to Coastal Command. This campaign was seen by the RAF high command as a drain and secondary to the bombing offensive against Nazi Germany. This attitude also delayed the availability of some technological developments to Coastal Command. Few of Coastal Commands' aircraft were purpose built for the missions they undertook, most being adapted from bomber and fighter-bomber types.

Two of the RAF's commands were involved.

RAF Coastal Command, already mentioned, is the one most often associated with the Battle of the Atlantic. Although part of the RAF, the Royal Navy was given operational control of Coastal Command when the war started. Their aircraft performed Meteorological reconnaissance and survey, basic scouting and surveillance at sea (these missions could convert to attacks on surface ships and surfaced submarines if the aircraft was appropriately armed), spotting for air-sea rescue, anti-submarine patrols and planned anti-shipping strikes.

British built aircraft included;

- Armstrong-Whitworth Whitleys,
- Avro Ansons,
- Bristol Blenheims/Bolingbrooks,
- Bristol Beauforts,
- Bristol Beaufighters,
- De Havilland Mosquitos,
- Handley Page Hampdens,
- Handley Page Halifaxes,
- Short Sunderland,
- Vickers-Armstrong Wellington,
- Vickers-Armstrong Warwick,

Aircraft designs that didn't make it into wartime operations but are still interesting;

- Bristol Brigand

It should be noted that no Avro Lancasters were sent to Coastal Command during the course of the war. They did, however, carry out operations in support of the Battle of the Atlantic as part of Bomber Command but we'll get to that later.

Lend Lease aircraft figured heavily in Coastal Commands' strength. These aircraft included;

- Boeing B-17 Flying Fortress,
- Consolidated PBV-1 Catalina, both flying boat and amphibious versions (PBV-5A),
- Consolidated B-24 Liberator,
- Lockheed Hudson,

- Lockheed Ventura,

Lend-Lease aircraft that flew in Coastal Command in auxiliary capacities included;

- The Grumman J4F Widgeon
- The Grumman JRF Goose

These are of interest because of the previously mentioned “weird factor”.

RAF Bomber Command

RAF Bomber Command might seem an unusual subject area, but they are of interest for the Battle of the Atlantic. Bomber Command aircraft undertook several missions in direct support of prosecuting the battle. These missions included:

- Direct attack against Kriegsmarine warships in harbour, including the “Tallboy” missions against KMS Tirpitz in Norway,
- Direct attack against U-Boat bases and shelters, including the “Tallboy” and “Grand Slam” missions,
- Direct attacks against factories, shipyards and the transportation grid that supported the building of warships and U-Boats,
- Minelaying. These missions were referred to as “Gardening” sorties.

All of the RAF heavies (Stirlings, Halifaxes and Lancasters) and mediums (eg. Wellingtons) participated in these attacks in one form or another.

Some Lend-Lease aircraft participated in these operations but mainly in support roles such as electronic warfare support. The RAF preferred British-designed aircraft for the actual bombing.

For the **Royal Canadian Air Force**, RCAF squadrons served in all of the RAF’s combat commands and their equipment mirrored that of these commands in the European theatre, both British-built and Lend-Lease.

There were some notable exceptions;

- The Lockheed G.R. Mark V Ventura. Acquired via Lend-Lease, they flew coastal patrol off Canada’s East and West Coasts,
- The Consolidated PBV-5A Catalina amphibious flying boat was license-produced for the RCAF as the PBV-1A and PB2B-1A Canso. Besides flying with RCAF units everywhere the type was deployed, some of them also were transferred to the RAF Coastal Command for use in European waters.

The **Royal Canadian Navy** did not operate aircraft in any real numbers until after the end of World War 2. For the Battle of the Atlantic, the Canadian Fleet Air Arm did not yet exist.

Now, as this is a display in a Canadian venue, aircraft operated by any of the Canadian Armed Forces from any time period outside of World War 2 are also invited for the display.

For the **Royal Australian Air Force**, their operations in Europe centered on the Desert Air Force and RAF Bomber Command, and, as such, their contribution to the Battle of the Atlantic was subsumed entirely within the RAF where it happened. Their equipment choices mirrored those available to the RAF, both British-built and Lend-Lease.

The **Royal New Zealand Air Force** had squadrons operating in Fighter Command, Bomber Command and Coastal Command, with many other New Zealand personnel serving in just about every RAF command as well as in the RCAF. Their equipment choices also mirrored those available to the RAF, both British-built and Lend-Lease.

The flying strength of the **Royal Indian Air Force** was concentrated in the China-Burma-India theatre and, as such, is not relevant to the Battle of Atlantic.

The **South African Air Force** operated throughout North Africa, the Mediterranean, the Balkans, Northern and Central Europe. With regards to the Battle of the Atlantic, the SAAF operated over the Eastern Atlantic off the West Coast of Africa and Gibraltar from 1943 through 1945 flying;

- Two squadrons of Vickers Wellingtons.

The United States and its Territories

United States Army Air Force

Like RAF Bomber Command, the Eighth and Ninth Air Force carried out direct attacks against ports, shipyards and transportation grids. As a result, their aircraft are also interest.

For the Eighth Air Force, these aircraft were:

- The B-17 Flying Fortress and,
- The B-24 Liberator.

For the Ninth Air Force, these aircraft included;

- The A-20 Havoc,
- The B-25 Mitchell and,
- The B-26 Marauder.

For about the first half of the United States' active involvement in the war, the United States Navy did not have enough capacity on its own to mount long range land-based anti-submarine air operations so the United States Army Air Force created **Anti-Submarine Command**.

Antisubmarine Command's units flew such aircraft as;

- Douglas B-18 Bolo,
- Boeing B-17 Flying Fortress,
- North American B-25 Mitchell,

- Lockheed B-34 Ventura,
- North American O-47,
- Douglas A-20 Havoc,
- Lockheed A-29 Hudson and,
- Consolidated B-24 Liberator.

The USAAF ceased dedicated anti-submarine operations in 1943 when the USN had sufficiently capacity to undertake them on its own in the Atlantic.

United States Navy aircraft were very active in the Battle of the Atlantic, operating from land bases and from aircraft carriers (mainly escort carriers). It took time to build up the forces and learn how to use them.

Ship-base aircraft included:

- Grumman F4F-4, FM-1 and FM-2 Wildcat,
- Douglas SBD-4, -5 and -6 Dauntless,
- Grumman TBF and TBM Avenger,
- Chance-Vought OS2U Kingfisher,

Some shipboard aircraft that flew in the Atlantic but had little or no impact in the Battle of the Atlantic but may be of interest because of “weird factor” are;

- Douglas TBD-1 Devastator and,
- Curtiss SB2C Helldiver.

Shore-based aircraft, including flying boats and amphibious aircraft, included;

- Consolidated PBY Catalina, both flying boat and amphibious,
- Martin Mariner flying boat,
- Consolidated B-24/PB4Y-1 Liberator
- Lockheed A-29/PBO-1 Hudson
- Lockheed PV-1 Ventura and PV-2 Harpoon,
- North American B-25 Mitchell
- Chance-Vought OS2U Kingfisher (land-based aircraft replaced the floats with fixed wheeled undercarriage)

United States Marine Corps aircraft mirrored those of the United States Navy but, as their operations were concentrated in the Pacific and Far East, they had little impact on the Battle of the Atlantic.

United States Coast Guard aircraft that had an operational impact on the Battle of the Atlantic included:

- Consolidated PBY-5A Catalina Amphibious flying boat

- Curtiss SOC-4 Seagull
- Grumman JF-2 Duck
- Grumman J2F-4 Duck
- Grumman JRF Goose
- Grumman J4F Widgeon

France and its colonial empire before June of 1940

When the war started, French Naval Aviation and the French Air Force were caught in a desperate drive to modernize and grow their strength. Both suffered from a lack of organization and had a very dysfunctional relationship with the country's political leadership and each other. This had grievous consequences for France's ability to wage war.

The French Air Force carried out little, if any, activity related to anti-submarine or anti-ship warfare. Its aircraft are of interest only for "weird factor".

French Naval Aviation appears to have had little impact on the Battle of the Atlantic before the surrender in 1940. This was partly due to the nature of French naval deployments, mainly in the Mediterranean, as much as it was the above-mentioned organizational and political issues. It was trying to develop carrier-borne aviation for anti-ship warfare and shore-based combat flying boat and floatplane aircraft for scouting, anti-ships and anti-submarine tasks.

Land-based aircraft deployed or under development included;

- CAMS 37 Flying boat,
- Farman NC.470 reconnaissance/bomber floatplane
- Late.298 bomber/torpedo bomber floatplane
- Late.299 land-based reconnaissance bomber/torpedo bomber
- Loire-Nieuport LN.401 dive bomber

There were numerous other flying boat types that were plainly obsolete, with little in the way of bombload, used for coastal reconnaissance and anti-submarine patrol. I have found few indications that they attacked, let alone sank, any German or Italian ships or submarines prior to the 1940 surrender.

Domestic carrier-based aircraft under development included;

- Carrier-based Late.299 reconnaissance bomber/torpedo bomber. Development not completed.
- Loire-Nieuport LN.401 dive bomber.
- Brequet 810 twin-engined torpedo bomber,
- SNCAO CAO.600 twin-engined torpedo bomber.

Foreign aircraft being imported for carrier use included;

- Curtiss SBC Helldiver,

- Grumman G-36A and B Wildcat. These aircraft were eventually taken over by the Royal Navy and became Martlet I's and II's,
- Vought SB2U Vindicator.

The Soviet Union

Morskaya Aviatsiya (Naval Aviation) was the Soviet Navy's air service during World War 2. Such air units provided air support to the **Voyenno-Morskoy Flot SSSR** (Soviet Navy). They operated Russian-built and Lend-Lease aircraft and provided some support to convoys travelling the northern route to and from Murmansk and Archangelsk. They also carried out anti-shipping strikes where they had the range to reach German shipping and that of German allies.

For the Battle of the Atlantic, the appropriate part of Soviet Naval Aviation was that which supported the Soviet Navy's Northern Fleet. Russian-built aircraft and aircraft supplied through Lend-Lease from the UK and The United States were used.

Russian-built aircraft included;

- Beriev MBR-2 seaplane in as role similar to that of the PBY Catalina,
- Ilyushin DB-3 bomber/torpedo bomber carrying out patrol, reconnaissance and anti-shipping roles,
- Ilyushin IL-4 bomber/torpedo bomber, carrying out patrol, reconnaissance and anti-shipping roles,

Lend-Lease aircraft included;

- Consolidated PBY Catalina. In addition to those supplied by Lend-Lease, the Soviets eventually started producing their own version. These aircraft performed the same patrol, scouting/reconnaissance and anti-submarine missions the type performed elsewhere,
- Douglas A-20 Havoc, employed in an anti-shipping role with bombs and torpedoes. Rarely seen in Northern Fleet operating areas.
- Handley Page Hampden as a torpedo bomber. (still trying to confirm if these operated with Northern Fleet).

Brazil

The **Brazilian Air Force** was very active in the war from mid-1942 onward. In Europe, they operated primarily over Italy and over the Atlantic. Over the Atlantic, they operated American aircraft provided under Lend-Lease, namely;

- The Consolidated Catalina,
- The Lockheed Hudson,
- The Martin Mariner

Governments in Exile who fought on the Allied side (Poland, The Netherlands, Norway, France after June of 1940, and many others)

Free French Air Force

The Free French Air Force took a long time to form and get into action because of the same political complexities that affected the Free French Naval Forces. When this finally did occur, their equipment included surviving French-built aircraft that survived out of German control and a large quantity of British and American Aircraft supplied under Lend-Lease.

The vast majority of these forces were directly involved in the campaigns in North Africa, the Mediterranean and, finally France itself and Germany. Some French strength was involved in Maritime Patrol operations in these theatres and these units flew the following;

- Consolidated PBY Catalina
- Lockheed PV-1 Ventura
- Vickers Wellington

Poland

Free Polish units fought throughout the war after the loss of Poland. Units formed within the RAF were all within Fighter and Bomber Commands and their operations were fully within the bounds of these commands, with some operating as part of the Polish Army performing army cooperation-related missions as well as special operations missions. Their equipment also mirrored that of these commands. There apparently were no units operating within Coastal Command.

Norway

Free Norwegian Air Force units operated primarily with RAF Fighter and Bomber Commands. Norwegian involvement with RAF Coastal Command started slow but grew steadily over time. These units flew:

- Consolidated PBY Catalinas,
- Northrop N-3PB Nomad floatplane,
- Short Sunderland flying boats and,
- De Havilland Mosquitoes.

The Netherlands

Free Dutch Air Forces operated with RAF Coastal Command until 1942, flying anti-submarine patrols and anti-shipping missions. During this period, they flew;

- Fokker T. VIIIW seaplanes that escaped from the Netherlands,
- the Avro Anson and,
- the Lockheed Hudson.

By mid 1942, these units were wholly within RAF Bomber Command. Free Dutch Air Forces did eventually form more anti-submarine units but these operated in the China-Burma-India and Southeast Asian theatres.

And now the opposition.

Nazi Germany (the “Luftwaffe”)

The Luftwaffe and the Kriegsmarine had a fractious relationship throughout all of their respective existence but, even with this adversely affecting how resources were allocated, Luftwaffe aircraft proved to be a danger to Allied warships and the convoys they protected. This danger took the form of land-based aircraft, flying boats and floatplanes/seaplanes performing scouting and tracking missions and direct attack missions with guns, bombs and torpedoes. Conventional bombing missions undertaken by the Luftwaffe against British naval bases, shipyards and dockyards can also be considered as part of this, much like RAF Bomber Command and USAAF missions against similar targets.

Before the start of World War Two, the Kriegsmarine was also in the midst of an ambitious long term naval building program that included the development of aircraft carriers and carrier-based aviation. German carriers never deployed but the first generation of aircraft developed for them did, from land.

Land-based aircraft that performed the scouting and tracking missions over the open oceans included:

- the Focke-Wulf Fw-200 Condor, which also carried out direct attacks against convoy, shipping with guns, bombs and, occasionally, with guided bombs and missiles,
- Junkers Ju-290 and Ju-390.

Flying boats and floatplanes that performed these missions included;

- the Arado Ar-196 floatplane. This aircraft flew from shore bases and ships, being the primary floatplane carried by Kriegsmarine cruisers, battlecruisers and battleships throughout the war.
- the Blohm und Voss BV-138 flying boat,
- the Dornier DO-18 flying boat,
- the Dornier Do-24 flying boat,
- the Heinkel He-115 float plane, which occasionally carried out direct attacks with bombs and torpedoes.

Land-based aircraft that carried out direct attacks against warships and convoy shipping included;

- various versions of the Dornier 217, using bombs and guided bombs and missiles,

- Heinkel He-177, using bombs and guided bombs and missiles.
- various versions of the Heinkel He-111, using bombs and torpedoes,
- various versions of the Junkers Ju-88, using bombs and torpedoes. Some versions of the Ju-88 were also used as very-long-range fighters providing cover to U-boats transiting through the Bay of Biscay against attacks by British and American long-range patrol aircraft, and,
- various versions of the Junkers Ju-188, using bombs and torpedoes

Variants of the above aircraft also carried out conventional bombing missions undertaken by the Luftwaffe against British naval bases, shipyards and dockyards. At different times, the following aircraft can be added to this list;

- The Dornier Do-17 “Flying Pencil”,
- Messerschmitt Me-410A.

Closer to Europe itself and in the Mediterranean, the following can be added to the direct attack category;

- Junkers Ju-87B, D and R “Stuka”,
- variants of the Focke-Wulf Fw-190A
- variants of the Messerschmitt Bf-109E and F,
- variants of the Messerschmitt Bf-110.

As the war progressed and the Luftwaffe developed an increasing variety of anti-ship munitions, the variety of aircraft in this last category expanded. These might be of interest because of “weird factor”.

The first generation of German carrier-based aircraft saw service from land bases and are of interest. They included;

- the Messerschmidt Bf-109T fighter,
- Fieseler Fi-167 torpedo bomber and,
- Junkers Ju-87C Stuka dive bomber.

German development priorities surged back and forth over the course of the war and, as such, more aircraft were proposed and some were developed for carrier operations. These would be of interest simply for the “weird factor”.

The Germans also deployed helicopters and ornithopters from U-Boats and surface ships to increase their visual horizon when weather permitted. These were developed by the Flettner company and are of interest.

Italy (“Regia Aeronautica”)

Italy didn't enter World War Two as a belligerent until June of 1940. Once they did, the majority of its' activities were focused in the Mediterranean. That said, Italian aircraft did take part in the Battle of France and the Battle of Britain and bombed British bases within reach. In the Mediterranean, the Italian Air Force (Regia Aeronautica) was fully engaged against British warships and convoys.

As in Germany, the Italian Navy and Air Force had a very dysfunctional relationship, which hampered the development and operation of that air force in support of naval operations. Nevertheless, the activities and achievements of the RA, like the RM, affected deployments and activities in the Atlantic.

The development of aircraft carriers and carrier aviation didn't start until their value had been demonstrated to the Italians during wartime. Too little and too late, the aircraft developed are of interest only because of “weird factor”.

Italian cruisers and battleships carried floatplanes for scouting and local anti-submarine patrols. These included;

- Imam Ro.43 floatplane.

Italian floatplanes and flying boats, single-engined and multi-engined, operating from shore bases, were very active as scouts, transports, anti-shipping attacks with bombs and torpedoes, and anti-submarine patrols. They included;

- CANT Z.501 flying boat,
- CANT Z.506 Airone scout bomber/torpedo plane,
- Fiat RS.14 floatplane scout/bomber,
- Imam Ro.43 floatplane.

Italian land-based aircraft did the same. They included;

- CANT Z.1007 bomber,
- Caproni Ca.314, anti-submarine patrol, bomber and torpedo bomber,
- Fiat BR.20 Cicogna bomber,
- Piaaggio P.108B heavy bomber,
- Reggiane Re.2001 Falco 2 fighter and fighter-bomber,
- SM.79 Sparviero bomber and torpedo bomber, aka the “Hunchback”,
- SM.81 Pipisrello bomber/transport,
- SM.82 bomber/transport,
- SM.84 bomber/torpedo bomber.

Aircraft that were tested but didn't quite make it into operations (or unknown if it did) included;

- Fiat G-55S Centauro torpedo-armed fighter (experimental, flight tested but unknown if it ever flew any operational missions).

The Italians also used German aircraft. These included;

- Junkers Ju-87B and D "Stuka",
- Junkers Ju-88A-4.

All of the aircraft listed took part in anti-submarine, patrol and anti-shipping missions as well as conventional bombing attacks on ports and shipyards when able. The Reggiane Re.2001 had enough range and endurance with drop tanks to fly air cover over Italian convoys, which it did on occasion. Italian fighter aircraft not listed are of interest if only for "weird factor".

That brings us to the end of this document. If there are any questions, please email me at marozon@sasktel.net. Be sure to fully identify yourself so your email doesn't end up in the SPAM folder.

Thanks.

Michel Rozon

President, Regina Scale Modellers (a chapter of IPMS)