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A TRIDENT SCHOLAR PROJECT REPORT

NO. 180

**THE U.S. NAVY, THE NEUTRALITY PATROL, AND ATLANTIC FLEET
ESCORT OPERATIONS, 1939 - 1941**

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**THE U. S. NAVY, THE NEUTRALITY PATROL, AND ATLANTIC FLEET
ESCORT OPERATIONS, 1939-1941**

A Trident Scholar Project Report

by

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History Department

Accepted for Trident Scholar Committee



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Although the United States was officially neutral until 7 December 1941, the U.S. Navy entered World War II on 5 September 1939 when the CNO, Admiral Harold R. Stark, initiated Neutrality Patrol operations in the Caribbean and in waters 200 miles off the coasts of North and South America. During 1940, the Navy conducted battleship sweeps deep into the Atlantic to deter Axis surface raiders and U-boats from entering the Neutrality Zone, and also moved toward a solid Anglo-American alliance, one vehicle being information exchanges between OpNav and the Admiralty. The negotiation of the ABC-1 Agreement in March 1941 increased Anglo-American collaboration. Atlantic Fleet patrols became more aggressive and the fleet doubled in size. By September, the Atlantic Fleet's Support Force, in conjunction with the Royal Canadian Navy, was ready to commence escort-of-convoy operations, and that same month, Atlantic Fleet destroyers escorted their first convoy from Halifax to Iceland. A handful of convoys were attacked, but the Atlantic Fleet used these experiences to fashion an effective escort-of-convoy doctrine.

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Although the United States was officially neutral until 7 December 1941, the U.S. Navy entered World War II on 5 September 1939 when the CNO, Admiral Harold R. Stark, initiated Neutrality Patrol operations in the Caribbean and in waters 200 miles off the coasts of North and South America. During 1940, the Navy conducted battleship sweeps deep into the Atlantic to deter Axis surface raiders and U-boats from entering the Neutrality Zone, and also moved toward a solid Anglo-American alliance, one vehicle being information exchanges between OpNav and the Admiralty.

The negotiation of the ABC-1 Agreement in March 1941 increased Anglo-American collaboration. Atlantic Fleet patrols became more aggressive, the fleet doubled in size, and training improved under the new commander, Admiral Ernest J. King. By September, the Atlantic Fleet's Support Force, in conjunction with the Royal Canadian Navy, was ready to commence escort-of-convoy operations, and that same month, Atlantic Fleet destroyers escorted their first convoy from Halifax to Iceland. These operations continued into December. Collaborative use of Special Intelligence made possible an evasive routing strategy which brought most of these convoys across the Atlantic safely. A handful of convoys were attacked, but the Atlantic Fleet used these experiences to fashion an effective escort-of-convoy doctrine.

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CHAPTER 1: 1939

On 1 September 1939, Germany invaded Poland. Wehrmacht armored columns sliced through the meager border defenses and swept across the plains towards Warsaw. Armed with outdated and insufficient equipment, the Polish defenders were helpless in the face of the German panzers. Within weeks, Poland was also attacked by the Red Army from the east. Poland quickly collapsed.

Britain and France had promised to declare war on Germany in the event that Germany invaded Poland. On 3 September 1939, both Britain and France declared war on Germany. Though the Allied and German armies would not first clash until April 1940 in Norway, the war at sea soon began in earnest. When the powers went to war, eighteen of Germany's fifty-six operational U-boats were already at sea, positioned off the western coast of the British Isles and the Iberian peninsula.¹ The Royal Navy's escort-of-convoy system, which had protected British merchantmen in World War I, was a proven solution to an offensive anti-submarine campaign. At the beginning of World War II, however, Admiral Erich Raeder, the Commander-in-Chief of the German Navy, and Captain Karl Donitz, the Officer Commanding U-boats (BdU), anticipated that the British convoy system

would not be fully operational until October of 1939.² As a result, the Germans expected to sink a number of Allied ships sailing independently at the outset of the war.

In the first few months, the Germans capitalized on ships sailing singly and without escort. A British passenger liner bound for England, the Athenia, sank on 3 September 1939, the first victim of a U-boat attack. Kapitanleutnant Fritz-Julius Lemp in the submerged U-30 torpedoed her about 250 miles northwest of Ireland. She went down quickly, carrying 122 passengers with her, among them twenty-two Americans. Lemp's sinking of the Athenia violated Donitz's standing orders, for Donitz had directed that U-boats were "to operate against enemy shipping, while conforming to the terms of the new Prize Regulations."³ These regulations listed the ship types which might be attacked, specified the conditions under which an attack was allowable, and clearly prohibited attacks on passenger liners.

The Germans feared that the Roosevelt administration's reaction would be to compare the event to the sinking of the Lusitania in 1915, which blackened German-U. S. relations and moved the United States closer to the Entente Powers in World War I. Donitz moved swiftly to rectify the situation. He ordered Lemp to rewrite his deck log and omit all

reference to the action. The German Propaganda Ministry publicly accused the British of sinking their own liner in order to inflame American public opinion against the Nazis.

President Franklin Delano Roosevelt's first reaction to the war was to issue a neutrality proclamation and order the Navy to establish a Neutrality Patrol. This operation was first announced by the Chief of Naval Operation, Admiral Harold R. Stark, on 4 September, as consisting of air and ship patrols whose aim was to observe and report the movements of warships of the warring nations within American waters.⁴ On the morning of the 6th, Roosevelt's press secretary announced the commencement of the Neutrality Patrol, explaining that the United States sought to ensure its neutrality by establishing a patrol of 200 to 300 miles off the East Coast to "report the presence of any belligerent ships", including British.⁵ The Neutrality Patrol was to cover an area "bounded by a line east from Boston to latitude 42-30, longitude 65; south to latitude 19; then around the windward and leeward islands to Trinidad."⁶ Subsequent patrols would eventually cover the Caribbean and the western South Atlantic.

The new patrol meant a complete revision of the Navy's prewar training schemes and operating schedules, but the

announcement was not surprising. Roosevelt had been an thinking of such a patrolling operation for several months. On 20 April 1939, for instance, he told the Cabinet that he wished to establish "a patrol from Newfoundland down to South America and if some submarines are laying there and try to interrupt an American flag and our Navy sinks them it's just too bad."⁷ He did not make it clear whether his purpose was to uphold American neutrality or assist the Anglo-French alliance.

When the European conflict erupted, the U. S. Navy was unprepared, especially in the Atlantic. On 10 August, 1939, Secretary of the Navy Thomas Edison asked the senior admirals in Washington for an evaluation of the condition of the Navy formulated to answer the question, "Are We Ready?" The General Board, which advised the Secretary on shipbuilding policy, compiled the results and issued its report on 31 August, 1939. It listed deficiencies including a lack of auxiliary ships, bases in the Pacific, a shortage of enlisted personnel, a lack of plans involving cooperation with allies in wartime, and an overall lack of fleet gunnery and tactical training.⁸ Manning shortages were a constant problem. "As late as the end of 1939, Roosevelt continued to refuse to bring army and navy personnel figures up to what Congress had authorized--280,000 for the Army and

180,000 for the Navy."⁹ On 1 September, for example, Navy manpower stood at only 136,000 officers and men. The General Board's report also stressed the need for more anti-aircraft training for destroyers, rated existing depth charges as "adequate", and completely disregarded evaluating anti-submarine warfare capabilities.¹⁰

Though it was not specifically evaluated in the "Are We Ready?" report, the Atlantic Fleet was unprepared to conduct the Neutrality Patrol which Roosevelt had established. The reasons were many. American naval strategy had long been dominated by a Pacific, Japan-first mentality. Plan Orange -- the Navy's plan to strike across the Central Pacific to defeat Japan should she invade the Philippines -- had been the single point of focus for strategic and tactical planners since 1919, and this emphasis on the Pacific resulted in the unpreparedness of 1939.

The Orange Plan strategy had led to General Order #94, issued in December 1922, which gave priority to massing a strong Pacific fleet based at San Diego, and disestablished the Atlantic Fleet.¹¹ The new U. S. Fleet was divided into four forces: the Battle Force, with most of the heavy ships; the Scouting Force, organized for fleet reconnaissance; the Control Force, consisting of light

cruisers and destroyers; and the Base Force, the logistical support elements. The ships of the old Atlantic Fleet were distributed between Control Force and Scouting Force.¹² The Control Force and the Scouting Force, with six old battleships, about one-third of the Navy's total battleship force, was responsible for defending the entire East Coast. With the collapse of Germany in 1918, no threat was apparent.

The Control Force was at long last abolished in 1931 in order to reassign ships to other duties, thus leaving the Scouting Force as the only formation in the Atlantic theater. When Japan invaded Manchuria the following year, President Herbert Hoover shifted the Scouting Force to the Pacific. This left only a handful of ships on the East Coast -- the old battleships Wyoming and Arkansas and the nine old World War I-era four-stackers of Destroyer Squadron Ten. This command was named the Training Squadron in 1932. In July 1937, when Rear Admiral Alfred W. Johnson took command of the squadron, the old battleships Texas and New York and eight more four-stackers were added, and the squadron was renamed the Training Detachment.¹³ Navy men often questioned the value of the training, however. Gunnery exercises were unrealistic, and the state of readiness was constantly criticized. The Atlantic had

become far less important than the Pacific on the Navy's list of priorities.

The rise of Nazi Germany brought a renewed emphasis on Atlantic strategy. During the September 1938 Munich Crisis, Johnson urged the Navy Department to position more warships in the Atlantic command. Roosevelt was already wary of German foreign policy in the Western Hemisphere. Hitler's support of Franco in the Spanish Civil War raised the specter of fascist expansion, and FDR believed that Latin America was ripe for German-Italian influence.¹⁴ Munich merely moved Roosevelt closer toward reinforcing the Navy's commitment to the Atlantic. In the fall of 1938, he ordered the Chief of Naval Operations, Admiral William D. Leahy, to accelerate the reconditioning of old World War I-era destroyers, and to prepare to deploy them in the Atlantic.¹⁵ Roosevelt also directed that a new squadron of cruisers, operating under a command independent of the Training Detachment, be created as a combat force for operations in the Atlantic theater.¹⁶

The establishment of the Atlantic Squadron on 6 September 1938 coincided with the Munich crisis. Initially, it consisted of seven light cruisers and seven destroyers under the command of Rear Admiral Ford A. Todd. On 10 October,

the battleships and destroyers of Training Detachment were added to the squadron, and it came under Rear Admiral Johnson's command.¹⁷ The U. S. Fleet in the Pacific still possessed all of the Navy's modernized battleships and all of the aircraft carriers. Indeed, the four battleships, seven light cruisers, and twenty-five destroyers of the Atlantic Squadron could scarcely be expected to defend American interests in the entire Atlantic and Caribbean area effectively.

The results of the Fleet Problem XX in February 1939 and the concurrent crisis in Europe between Germany and Poland demonstrated the need to strengthen the Atlantic Squadron. On 15 April 1939, Roosevelt transferred the carrier Ranger and two patrol bomber squadrons from the Pacific fleet to the Atlantic Squadron, and that June, another four heavy cruisers and four modern destroyers joined the Ranger, the old battleships, and the destroyer flotilla on the East Coast. However, the seven new light cruisers were positioned on the West Coast at the same time. The outcome of all of this was that on 6 September, when the Neutrality Patrol sweeps got underway, the Atlantic Squadron consisted of one aircraft carrier, four old battleships, four heavy cruisers, and twenty-nine destroyers. On 1 August 1939, Admiral Harold R. Stark succeeded Admiral Leahy as the Chief

of Naval Operations. Gazing at the handful of ships at his disposal in the Atlantic, Stark wondered whether they were enough for the job. He also wondered what the job would be. The Atlantic Squadron would be enlarged into a formidable force over the coming year, with reinforcements intended to allow it to perform all of its Neutrality Patrol obligations.

Roosevelt issued his first Neutrality Proclamation on 5 September, 1939, declaring that the United States viewed any use of territorial waters by non-Western Hemisphere nations as offensive and a violation of American neutrality. Roosevelt's belated commitment to naval preparedness was still shaky, however. Three days later, he declared a limited national emergency, and issued an executive order increasing naval personnel to 145,000 for FY1940, still well below the ceiling fixed by Congress. The President feared the land war in Europe would develop into a stalemate in the trenches, not unlike World War I, and he was told by his military advisors the German Air Force was superior to the air forces of both France and Britain. Fearful of a German victory in the West, Roosevelt toyed with the notion of allowing France and Britain to purchase aircraft in the United States and take delivery in Canada as early as September 1939.

The Atlantic Squadron's Neutrality Patrol operations constituted the first practical American aid to the Allies. Patrols, which started on the 4th, consisted of long surface ship sweeps out to the 200 mile limit of the Neutrality Zone. When a patrol sighted a belligerent vessel, she made positive identification, and maintained surveillance until the belligerent vessel sailed out of the Zone. The U. S. patrol ships also reported the vessels to shore-based plotting stations via radio in plain English. Most vessels identified themselves. Occasionally, a U. S. warship would chance upon a merchantman that refused to identify herself, but there were no major incidents, and in September, no rounds were fired and few ships stopped.¹⁸

There was also some aircraft surveillance in these early days. On 20 September, Atlantic Squadron OpOrder 20-39 became effective, which detailed the mission of the Neutrality Patrol, and the area to be searched.¹⁹ The Navy's air arm was fully integrated into the scheme. Patrol Squadrons VP-51, 52, 53, and 54 of Patrol Wing Five, and Patrol Squadron VP-33 of Patrol Wing Three assisted the ships in covering coastal waters from Nova Scotia to the West Indies.²⁰ Johnson paired each squadron with a group of destroyers or cruisers, and they coordinated their patrols so as to achieve a thorough surface and air search. Except

for VP-52 which had only six aircraft, each VP squadron consisted of twelve PBY patrol bombers. In the following three months, these PBYs logged 7,070 hours and 740,000 miles, and searched over 15 million square miles of ocean.²¹

The German defeat of Poland stimulated Washington's concern about Axis penetration of the Western Hemisphere. From Paris, Ambassador William Bullitt warned Roosevelt on 13 September that "it is absolutely certain that if France and England should be unable to defeat Hitler, we shall have to fight him some day in the Americas."²² This may explain Roosevelt's suggestion in late September to expand the Neutrality Zone to 60 West longitude, a step that would push the boundary out to 1,000 miles east of Charleston.²³ Admiral Stark wondered whether the small Atlantic Squadron could handle the larger task insomuch as Johnson was having a hard time maintaining a patrol 200 miles out to sea. More ships and aircraft would be needed, Stark pointed out, with the result that Roosevelt withdrew his proposal, although he brought it up later.

Roosevelt also moved to provide diplomatic support for the Neutrality Patrol within the Western Hemisphere. On 26 September 1939, the foreign ministers of the Latin-American republics met for a special conference in Panama to discuss

the war in Europe. The United States successfully lobbied for a multilateral declaration that would keep the European war away from the Americas, and the Act of Panama was signed on 2 October. It established a neutral zone constituting an area from 60W longitude to 23N latitude, thence to a point 600 miles south of the Cape Verde Islands, and finally southwest and parallel to the South American coast. All belligerent warships were to be prohibited from warlike operations in this area. In short, the Act of Panama brought most of the Latin-American republics in line with United States foreign policy on hemispheric neutrality.

Germany's decision to undertake U-boat operations against Allied shipping greatly complicated this procedure. In early October, Washington issued a warning to all American merchant vessels to beware of the commencement of unrestricted warfare by Germany's submarines. By now it was clear to the Navy that FDR considered the Neutrality Patrol to be less benign than his public statements indicated. Roosevelt told Stark on 9 October that he was "disturbed by:

- (a) The slowness of getting the East Coast, Caribbean, and Gulf patrol under way.
- (b) The lag between the making of contacts and the follow-up of the contact.
- (c) The weakness of liaison between Navy, Coast Guard, and State

Department."²⁴ Roosevelt went further, redefining the goal of the Neutrality Patrol:

When any aircraft or surface ship sights a submarine a report thereof will be rushed to the Navy Department for immediate action. The plane or surface ship sighting a submarine will remain in contact as long as possible. On the disappearance of the submarine, immediate steps will be taken by the Force Commander ... to try to pick up the submarine again at dawn next day and during the night to endeavor to patrol such area as the submarine might use for refueling operation from tankers ... On establishing contact with any suspicious craft of any nationality which might be followed day and night until such surface craft has proceeded to her port of destination or sufficiently far out to sea as to preclude any possibility of her return to patrol area waters²⁵

Roosevelt also directed that more aircraft and ships be assigned to help the Atlantic Squadron with its mission. "The patrol squadrons will be rushed to completion by the use of the eighteen East Coast and twenty-two West Coast Priority No. 1 destroyers and by completing the aircraft patrol planes," he instructed.²⁶

How much of this illustrated FDR's habit of tinkering with the Navy, how much reflected genuine discontent, and how much was suggested by Stark and approved by the President is unclear. As it was, Stark had already made one change when

on 30 September, Rear Admiral Hayne Ellis replaced Admiral Johnson as commander of the Atlantic Squadron.²⁷ It was a routine transfer, but Ellis soon stepped up operations to increase the Patrol's effectiveness. On 16 October, Ellis issued a OpOrder 24-39, which expanded the role of the Neutrality Patrol from only reporting foreign men-of-war to reporting all "suspicious" vessels operating in the Neutrality Zone.²⁸ Any of these "suspicious" vessels were to be tracked until their actions were considered "satisfactory."²⁹ A further step was taken on 18 October, when Washington forbade belligerent submarines to enter American ports or territorial waters. Inasmuch as the German battleships and cruisers could not cross the Atlantic, the unneutral character of this order was transparent.

On 26 October, Navy air units from Pensacola, acting in conjunction with Army Air Corps planes, began to patrol the Gulf Coast and the Florida Keys.³⁰ This Gulf Coast Patrol was a response to the large number of German merchantmen thought to be hiding in Mexican ports and preparing to make the long dash for home.³¹ Owing to various strains between Washington and Mexico City in the 1930s, the Roosevelt administration worried about Mexican-German relations early in the European war. In a message to the Director of the

Office of Naval Intelligence, Admiral Anderson on 9 November 1939, Captain Alan G. Kirk, the United States Naval Attache in London, warned that "Germany will attempt to use Mexico as a base for her various nefarious schemes -- just as they did in the last war."³² By keeping watch on German ships in Mexican ports, the Navy might assist the Royal Navy in preventing them from reaching home.

It was ironic, therefore, that the British at first disliked the Neutrality Patrol on the grounds that it might indirectly favor Germany's attempts to bring her merchant ships home from the neutral Mexican ports. The British apparently either misunderstood or misinterpreted Washington's purpose. Two incidents in December confirmed their initial suspicions. The American destroyer Twiggs shadowed the British destroyer Hereward in the Yucatan Channel, watching as the British ship refueled from a G-class cruiser.³³ Later that month, two American destroyers and the heavy cruiser Vincennes followed the Australian cruiser Perth in the same area, repeated asking the cruiser to identify herself, and annoyed the captain.³⁴ These events may have led the Admiralty in London to conclude that the Neutrality Patrol was helping the Germans and hindering the British. They understood that these incidents represented the mere fig leaf of neutrality.

Indeed, Navy leaders almost uniformly sympathized with the Allied cause even as they differed over American foreign policy and strategy. Roosevelt's aim also became more evident. In his 9 October order, he stated that "planes or Navy or Coast Guard ships may report the sighting of any submarine or suspicious surface ship in plain English to Force Commander or Department. In this whole patrol business time is of the essence and loss of contact with surface ships cannot be tolerated."³⁵ Most German ships could not understand these transmissions, but the British warships certainly could. Thus, for every incident in which an American destroyer shadowed a British ship in the Gulf, there were several in which American sighting reports directed Royal Navy vessels to a hapless German prey. Only thirty-two of eighty five German merchantmen found their way home from the Western Hemisphere in late 1939, while nearly 100 of 126 merchant vessels made it back to German waters from other areas of the world.³⁶ This was owing in large part to the assistance provided by the Neutrality Patrol to the British in hunting down German merchantmen in the Western Hemisphere.

Roosevelt soon moved again to aid the Allies. He persuaded Congress to amend the 1935 Neutrality Laws in November. This idea originated in September, when he was seeking a way

to legalize aircraft sales to the British and French to improve their air forces. Overseas military aircraft sales to belligerents were prohibited by the Neutrality Acts, however, which Congress had enacted to preserve American neutrality should war break out in Europe. The 1935 legislation outlawed trading with belligerent nations in wartime. Loans to belligerent nations were forbidden in 1936, and in 1937 another law provided that foreign governments had to pay for any equipment before the supplies could be shipped out of the United States. Roosevelt attempted to get Congress to amend the Neutrality Acts by providing for "presidential discretion" in their application in mid-1939 as a deterrent to Germany, but the leaders on the Hill distrusted the White House and the attempt failed. The onset of the war began to change the political climate, however. "If we are to win this war," French President Deladier told Bullitt in September, "we shall have to win it on supplies of every kind from the United States."³⁷ British Prime Minister Neville Chamberlain agreed. However, in America, "public opinion surveys suggested that any indication of a White House willingness to aid the Allies at the risk of war would provoke strong opposition to any alteration in the Neutrality Laws."³⁸ Roosevelt nevertheless persisted in his efforts to help the Allies, and on 4 November 1939, Congress amended the Neutrality Laws

so as to allow belligerents, particularly Britain and France, to obtain arms on a "cash and carry" basis. Because Germany could not ship war goods across the Atlantic, the vent of this measure was clear.

The Neutrality Patrol operations in late 1939 and early 1940 provided the British with more evidence of Roosevelt's war policy. In October, the German liner Bremen was tied up in New York harbor. Roosevelt hoped to help the Allies to seize her -- thinking, perhaps, that she might be used as a fast troop ship -- and he ordered the Coast Guard to search her for concealed contraband. The search, which lasted three days, was meticulous. For example, the investigators conducted a one-by-one count of the ship's life preservers. Roosevelt's hope was that this delay would allow the cruiser Perth and an accompanying British destroyer time enough to reach New York and intercept the enemy liner. He was annoyed to learn that, although the warships did reach New York in time, fog and weather helped the German liner slip through their blockade and reach Germany.

In three other incidents, however, the Navy's patrols led directly to Allied interceptions of German ships. Later in October, the tanker Emmy Friedrich stood out of Tampico, shadowed by an Atlantic Squadron cruiser, two destroyers,

and planes from the Ranger.³⁹ They broadcast her location in plain English, and as soon as she put to sea, British warships captured the Emmy Friedrich.⁴⁰

On 14 December, the German freighter Arauca put out of Veracruz, and shaped a course for Hamburg. The ship's cargo included "sisal, phosphate, hides, resin, and pepper".⁴¹ Trailed by the American destroyer Truxtun and other four-stackers, she steamed northeast until she was 150 miles off the mouth of the Mississippi River, when she turned to the southeast and steamed towards the coast. She inched along the coast of Florida, cautiously approaching the Florida Straits, her movements being broadcast all the while by the shadowing Americans. On the morning of 20 December, the British cruiser Orion, responding at last to the Truxtun's transmissions, intercepted the freighter. Orion fired a warning shot to force the German seaward, but the Arauca turned towards the coast and the American destroyers. Once she entered the territorial waters, a destroyer sent a boarding party to the freighter to check the cargo, and she was allowed to enter Port Everglades. The British cruiser remained off the port for several days, but the Arauca was interned and never sailed again.⁴²

One day before the Arauca was intercepted, the infamous

Columbus incident came to a close. A 32,500 ton German passenger liner, skippered by master Wilhelm Daehne, she left New York for the West Indies on 14 August. One day after France and Britain declared war, Daehne stood into Veracruz, Mexico, to top off on oil. The liner remained there throughout September and October, but at the end of the month, the German consul conveyed orders to Daehne to run the British blockade and make for Germany. Daehne protested, but the orders from Berlin stood.

Daehne prepared his men for the voyage over the next month. The crew practiced man-overboard drills, and also trained in scuttling techniques. On December 13, the liner finally left Veracruz.

Two Navy four-stackers, the Lang and the Benham, shadowed the liner during her first few days at sea. These destroyers were relieved by the destroyers Cole and Ellis. They remained close to the German vessel the whole time. At night, the destroyers also kept their lights on, one aspect of Neutrality Patrol doctrine. Every four hours the destroyers sent out position reports in plain English, greatly aggravating Daehne. Within a few days, however, the German liner passed through the Florida Straits and began her transatlantic run to Germany. Two more American

destroyers now relieved the Cole and the Ellis, and the cruiser Tuscaloosa also joined the tracking party.

The Columbus was 320 miles northwest of Bermuda on 19 December when, the nearby British destroyer Hyperion received the sighting reports and rushed to the scene. One hour later, the Hyperion sighted the Columbus and ordered her to halt. The American ships pulled away. When Daehne failed to respond, the Hyperion fired two shots across the liner's bow. The liner went dead in the water; most of the crew abandoned ship, while a few stayed behind with the captain to set her ablaze and open the seacocks. Two men died during the scuttling procedure, but 552 were rescued by the nearby American vessels. The Columbus sank in a few minutes. The rescued crew of the Columbus was taken to the United States, where they were treated as rescued seamen in distress and freed.⁴³

Roosevelt intended to assist the British, but was unready to provoke American public opinion nor to affront Germany so openly that Hitler would have no choice but to declare war. He ordered that all mention of the Columbus incident suggest that the Hyperion had merely chanced upon the hapless German liner. Just as Donitz had ordered Lemp to erase any mention of the Athenia affair from U-30's deck log, so Roosevelt

directed that there was to be no mention of the broadcast of American sighting reports to the Royal Navy ships in the Columbus incident.⁴⁴

The number of sightings recorded by the Neutrality Patrol grew over the last three months of 1939. In addition to the 1,072 vessels identified in October, 1,924 were reported in November, and, in December, 2,648 ships were seen. Although the active pursuit of belligerent vessels put some teeth into Roosevelt's neutrality proclamation, several ship commanders criticized the Patrol because it prevented them from training their crews. Gunnery, depth charge training, and watch qualifications took a back seat to patrolling. The Neutrality Patrol nonetheless established a more important precedent -- aid to the Allied cause -- which was complemented by the revision of the Neutrality Acts. In the next year, officer liaison missions and technical information exchange between the Admiralty and OpNav drew the British and the Americans into the wartime Grand Alliance.

CHAPTER 2: 1940

In January 1940, the Chairman of the House Naval Affairs Committee, Carl Vinson, introduced the Twenty-five Percent Bill which provided for an increase of twenty-five percent over the total fleet warship tonnage authorized by the 1938 Second Vinson Act. This meant adding three carriers, eight cruisers, fifty-two destroyers, and thirty-two submarines to the fleet over the next three to four years. In September 1939, Admiral Stark had discussed with Vinson the feasibility of a navy with enough ships to maintain a powerful fleet in each the Atlantic and Pacific--a two ocean navy. When the bill was introduced, Stark was the first witness. "Our voice in world affairs will be heeded in almost exact proportion to our relative strength on the sea," he testified, "While preparedness will not guarantee keeping us out of the war, lack of it not only invites war, but utter disaster."⁴⁵ Roosevelt originally supported Vinson's measure, but backed down in April for reasons that are still unclear and told the House that he wanted only an eleven percent increase. This passed the House that month, but the Senate withheld its approval until mid-June. The Twenty-five Percent Bill laid the groundwork for work on the

far more important Two-Ocean Navy Act, which was construed by the Navy Department in June after the meager Eleven Percent measure was passed. Congress approved the Two-Ocean Navy Act, which provided for a seventy percent increase in naval warship tonnage, in June 1940.

Work on the Orange Plan was abandoned in 1938, and the following year Army and Navy planners drafted five Rainbow War Plans which presupposed the United States would enter the war as a member of one coalition opposing an enemy alliance. The bulk of the fleet remained in San Diego in the Pacific. Although the Nazi-Soviet Pact of August 1939 upset Japanese-German relations and paved the way for more emphasis on the Atlantic theater, the Pacific remained "America's ocean," and Navy planners believed that Japan's powerful fleet of battleships and modern carriers warranted positioning a strong American fleet on the West Coast. Yet in the Atlantic, Navy destroyers and cruisers were hard pressed to make the Neutrality Patrol a success. More ships were clearly needed. Stark persuaded Congress to allow him to recommission some reserve four-stackers, but a strong, modern fleet would be necessary should the President decide on more active operations.

Besides ship construction and war plans, aid to the Allies

continued to remain important to the Navy in 1940. The Navy looked to find new means by which to better Anglo-American naval cooperation. Technical exchanges between the Admiralty and the Navy Department provided the White House with one vehicle by which the United States might assist Britain, remain outwardly neutral, and not provoke the Germans. For its part, the Navy saw technical exchange as an opportunity to learn about new British weapons and detection systems, such as Radio Direction Finding (RDF) and Asdic, and British anti-submarine warfare tactics. The officer and technical information exchange programs evolved slowly, however. The naval headquarters, allied in 1917-1918, often viewed one another as rivals thereafter. Discussions began, ended and commenced again in late 1939 and early 1940. Despite their initial complaints about the Neutrality Patrol, the British were first to suggest an Anglo-American officer liaison exchange in October 1939. "In connection with the suggestion that favorable consideration may be anticipated to a request from the United States Navy Department to have an observer with the Home Fleet, and, possibly, with the Mediterranean Fleet," Kirk told the Director of British Naval Intelligence, Admiral Godfrey, "the Navy Department is much interested in the idea."⁴⁶ Kirk cautioned that he could not guarantee that the U. S. Navy would immediately reciprocate, and

reciprocity was not yet in sight. When, in late March 1940, Kirk proposed to have Royal Navy officers observe the U. S. Fleet's Problem XXI annual exercise, Stark, concerned about publicity, rejected the plan.⁴⁷ While the first British exchange officers did not arrive in the United States until late 1940, the first U. S. Navy officers assigned as observers with the British fleet appeared in London in July and August 1940. They were sent as part of the program of exchange of technical information.

The foundations of this policy were laid in November 1939. German aircraft, submarines and small craft were laying newly devised, bottom-moored mines in British coastal waters, and mines accounted for an increasing number of merchant ships being sunk. Kirk, upon learning about the mines, reported to OpNav that "the mine case probably holds a steel bar wrapped with coils of very fine wire containing a relay mechanism operated by a very small current. When a ship passes over...the induced current...causes the relay to function."⁴⁸ In December, Kirk forwarded a report on British counter-measures to deal with this weapon.

Because the British had parted with details of a new German magnetic mine, Kirk thought they might also release other classes of technical information. "The Navy Department is

very much interested in the Admiralty's device for locating submarines, familiarly termed 'Asdic'," Kirk told the Admiralty on 27 November. Stark was eager for a "quid pro quo" arrangement. "I have been instructed to suggest that if the Board of the Admiralty were agreeable to furnishing the Navy Department with complete information concerning this device," Kirk alerted Admiral Archibald Carter, the U. S. Navy was "ready to provide similar and complete information on our device [sonar] developed for the same purpose."⁴⁹ This not only reflected the secret American policy of aiding the Allies, but also suggested the Navy's increasing interest in anti-submarine operations and technology.

Despite the early efforts to get the technical exchange program underway, it stalled for several months. "Four months have gone by and no action has been forthcoming from the Admiralty" on the proposed Asdic exchange, Kirk complained to ONI on 14 March.⁵⁰ The reason for the delay was that the British had not sorted out the advantages and disadvantages of the cooperation with the United States nor had they formulated a firm policy.

The Admiralty established a committee to investigate the wisdom of exchanging information with the Americans. Its

report, composed by Admiral Godfrey reached the Admiralty on 26 February 1940. Godfrey recalled that "before the war the policy was to encourage exchange with the U. S. Navy on technical matters on a 'quid pro quo' basis," but averred that the Royal Navy had not been eager to proceed on this basis.⁵¹ One reason was America's neutrality and early worry about the Neutrality Patrol. Another concerned the question of how far the U. S. Navy would honor the reciprocity policy. "It is well known in the Admiralty Departments that departmentally the Americans are very 'sticky' and not forthcoming on the subject of exchange of information," Godfrey asserted. "They are technically behind and ashamed of the bareness of the cupboard."⁵² If the Navy Department was insincere, then the British had no reason to give away their secrets. Moreover, Godfrey believed that the Admiralty had the better hand. Even if the Americans wanted to trade information, the British would not gain anything by releasing their technically superior information for worthless American information.

Yet the advantage of entangling the U. S. Navy in the Admiralty's enterprise could not be offset. Kirk wanted to know more about German mine and torpedo technology and the details of combat damage to British warships. Such information could help naval architects design U. S. ships

better protected against German weapons. To a limited degree, the British complied. Godfrey argued that the British should make more information available. Godfrey reminded the Admiralty that when the U. S. moved its fleet to the Pacific, "they gave us all the information they have about the Japanese Navy."⁵³ Additionally, Godfrey noted that the U. S. patrols in the Gulf of Mexico "give us information, and recently they have been thoroughly unneutral in reporting the position of the S.S. Columbus."⁵⁴

Godfrey pointed out the advantages and disadvantages of the exchanges. "The disadvantages of giving the Americans the information for which they ask are: (i) They always ask for more. (ii) Their security arrangements are not considered as good as our own. (iii) They are not forthcoming when exchange proposals are put forward, due to inter-departmental jealousies."⁵⁵ These disadvantages illustrated British fears and suspicions. On the other hand, supplying the U. S. with information would reap many benefits: "Cementing the common interests of the two countries, to whom sea power is vital," and "ensuring that the U. S. Navy should be equipped ready to work in British waters should they enter the war on our side."⁵⁶

Godfrey, then, was a strong advocate of technical exchange. "During a recent interview with Captain Kirk, he stressed that should America ever come into the war, it was to our [the British] advantage to have their fleet and Merchant Marine equipped in the most efficient manner to deal with the German U-boat and mine attack, and that, in the long run, it was to our advantage to let him have the information he desired."⁵⁷ Godfrey agreed with Kirk, and recommended that the Admiralty "be more magnanimous in complying with the U. S. Naval Attache's requests for information."⁵⁸ Godfrey also believed the British should provide information to the United States in spite of the danger of German agents intercepting the transfers. Godfrey thought that sharing information would prepare the United States for war, and that outweighed the danger that the Germans might get their hands on some useful information. Besides, Godfrey guessed that German agents were bound to acquire some technical information at some point anyway. Godfrey wanted the British to give U. S. Navy authorities any information they asked for, whether the British received anything in return or not. He was one of the first to realize the United States would eventually come into the war on the Allies' side.

The Admiralty was slow to follow Godfrey's advice, but the

Navy Department was also reluctant to share information of any value. "From copies of letters to the British Naval Attache in Washington it does not look as though much had been given him beyond routine material," Kirk noted. "We are gaining appreciably by the Admiralty's attitude towards the damage to ships..."⁵⁹ Kirk, like Godfrey, believed the U. S. should share more information.

Discussion concerning the exchange of information on Asdic, Radio Direction Finders, and the Norden bomb sight again commenced in late April. A British professor involved in the RDF project advised the Admiralty that there were excellent facilities potentially available for the development of RDF in the United States. On 23 April, the Admiralty wrote to the British Ambassador to the United States, Lord Lothian, asking him to pursue combined Anglo-American use of these facilities to improve the British radar sets. "If we wait the U. S. will probably discover the essentials for themselves," Admiral Pound observed. "I suggest we offer full information on RDF and its development in exchange for similar information on their systems and for complete facilities to obtain the latest type of instruments and equipment to our specifications...I would try to get the release of the bomb sight as part of the exchange."⁶⁰ Winston Churchill, who had become First Lord of the

Admiralty only days after Britain declared war on Germany, was the foremost advocate of unstinting Anglo-American cooperation at all levels. On 1 May, the foreign office was told that "Churchill sees no objection to an interchange of information about RDF with the American Government provided secrecy can be maintained, as they are probably only six to eight months behind us and will make up the leeway anyhow."⁶¹ Attempting to involve the United States more actively in the war, Churchill viewed technical exchanges as one way to entice American support of Britain. High-ranking British military officers also realized this. General Archibald MacKenzie of the Air Staff echoed Churchill's position on 20 May. "On the question of methods in which we could ask for further American assistance within the limits of the Neutrality Act," he wrote, "there are only two points which the Air Staff have in mind on which it might be possible to secure United States assistance within the Act. One of these is scientific and industrial collaboration in the development of RDF...the other is the Norden bomb sight."⁶²

Despite the emphasis the British placed upon technical exchange, nothing was exchanged, and the discussions about sharing technical exchange virtually ceased for a month, a casualty, perhaps, of events on the Western Front. After

several months of negotiations and inactivity in Western Europe, Germany renewed her land campaign. In April, Norway was overrun. This led to a political crisis in London, the result of which saw Churchill replacing Chamberlain on 10 May. Immediately thereafter, German panzers rolled into the Netherlands and Belgium, and turned north to the Channel coast, surrounding the British Expeditionary Force at Dunkirk in Northern France. The Royal Navy lifted the BEF off the beaches of Dunkirk, but this exposed Paris and France's politicians prepared to surrender. In June, France fell. Britain stood alone to face Hitler's might. Not until June was the time ripe for technical exchange discussions again.

The fall of France profoundly influenced informed opinion in the United States, where Churchill was already a well-known figure. "The Americans are now more willing to help us than they have been at any time since the beginning of the war." British Air Minister Sir Archibald Sinclair pointed out the day France surrendered.⁶³ And, as the Americans were ready to exchange, so too were the British becoming more pragmatic. In mid-June, a committee, headed by Admiral Sir Sydney Bailey, was established, amongst other purposes, to facilitate technical exchange. This was an admission that Godfrey had been right way back in February.

The Bailey Committee soon reported to the Prime Minister that "a policy of frankness would help in obtaining American assistance."⁶⁴ In its August and September meetings, the committee turned its emphasis to strategic operating areas for British and U. S. forces in the event of war, work that helped to facilitate the ABC-1 staff talks of early 1941. However, the committee's initial recommendations were steps towards technical exchange in mid-1940.

Sharing important technology was still months away. However, in July, the U. S. Navy sent its first team of officers to Britain as observers, and some of their work was directly related to technical exchanges. "The decision to send the extra officers here to study all the ramifications of the German mine, minesweeping, and degaussing, is very gratifying," Kirk told Admiral Anderson on 14 July.⁶⁵ This led directly to a small amount of technical exchange, and on 27 June, Kirk provided Washington with details of British minesweeping and degaussing techniques.⁶⁶

Closer Anglo-American cooperation meant to Admiral Stark that the U. S. Navy needed higher ranking representation in London than attache Kirk provided, and on 12 July the CNO decided to send the Assistant Chief of Naval Operations, Rear Admiral Robert L. Ghormley, to Britain for "exploratory

conversations" with the Admiralty.⁶⁷ Captain Kirk notified the Admiralty in late July that a special naval observer would be arriving in August, and Ghormley appeared in Britain on the 15th. He was accompanied by two Army generals--observers for the Army and the Army Air Corps. Ghormley, as Special Naval Observer, London (SPENAVO), was not to interfere with Kirk's function as Naval Attache, nor was he to engage in formal staff talks, or make any promises of any kind. Instead, Ghormley was to "obtain such information as they [the British] were willing to impart on subjects such as their future plans and Fleet disposition...and such information [as] they would not usually give an attache."⁶⁸

One of Ghormley's first tasks was to deal with the technical exchange discussions, and he focused on means for standardizing shipboard communications between British and American warships. Soon, however, his mission became almost exclusively concerned with strategic policy, while the technical exchange program reverted to Kirk. The Ghormley mission laid the foundations for high level naval talks in 1941, but, in August and September 1940, the mission provided the means for exchange of important technical information.

In London, the debate over technical exchange resumed in June and July. The plan to exchange RDF technology for the Norden bomb sight was reconsidered, but dropped. Archibald Sinclair told Churchill that the British "could persuade them [the Americans] to manufacture ordinary radio valves for English circuits. The same applies equally to special RDF valves. The Americans have been doing a great deal of research and development in RDF. Probably on the whole, they have not got as far as we have; on the other hand, they may have got further in some directions."⁶⁹ Nonetheless, the Americans refused to play.

July proved to be a month of setbacks. Not only was the Norden bomb sight project dropped, but on 27 July, Ghormley informed OpNav that "the matter of Asdic exchange has been deferred for further consideration." He had been "privately advised that the Admiralty was unanimous in approval but Cabinet decided to postpone action." Ghormley was convinced, perhaps wrongly, that "this delay was definitely due to Churchill who places collectors' valuation [on] their [the British] device hoping to get our bomb sight, [and] RDF thrown in."⁷⁰ At the same time, Royal Navy officers in Washington, in particular the British Naval Attache, Rear Admiral Pott, complained that the Americans were being uncooperative in technical exchange. Pott's complaint

involved the assertion that the Navy Department refused to provide his team with the results of American tests of British anti-mining devices.⁷¹

August was a turning point, however, because on the 5th the CNO agreed to release practically all U. S. Navy technical information to the Admiralty.⁷² Ghormley and his assistants were hard at work that month facilitating these exchanges. Ghormley thought the most important aspect of technical exchange was exchange of ideas concerning shipboard communications. By the end of August, Lieutenant Donald J. MacDonald had compiled 349 pouches of secret material. Lt. MacDonald collaborated with British signal officers to produce a series of code books, ciphers, and instructions for joint communications for British and U. S. ships.⁷³ Ghormley was also given information about British RDF. "The British Radio Direction Finding Stations are very important to the strategic end of this war. They are hooked up by cables so that they can get some cross-bearings quickly. I think ours should be the same," he told Stark on 20 September.⁷⁴

The CNO's ruling of 5 August meant that Asdic was again an issue. The following day, Ghormley informed OpNav that he was "formally advised by Secretary Board [of the] Admiralty

[of] acceptance our proposal [for] full exchange Asdics which they offer."⁷⁵ In September the Admiralty received a formal Navy Department request for information on the Asdic attack teacher and Asdic.⁷⁶ In October, a supply of Asdic pamphlets was sent to the U. S. Navy.⁷⁷ Finally in November, two U. S. Navy chief petty officers sailed to Britain to "work with Radio Electrician Geyer in Plymouth in connection with Asdic gear."⁷⁸

September also saw the first U. S. Navy officer assigned to observe British ships afloat. Commander James Fife, a submariner, arrived in London that month carrying orders to report to the Home Fleet and Western Approaches Command and observe and report on British submarine tactics. In October and November Fife spent time in a British submarine on patrol, and in December, Fife was assigned to the small aircraft carrier Argus while she escorted a Gibraltar-bound convoy. The convoy was attacked briefly by the German heavy cruiser Hipper, but she was driven off by the British cruiser escort. Upon arriving at Gibraltar, Fife was reassigned to serve in ships of the Mediterranean Fleet. He witnessed the bombing attack that severely damaged the armored-deck carrier Illustrious, and other actions. His reports detailed British submarine tactics, convoy escort tactics, and provided information about ship damage,

particularly to the Illustrious, intended to help American architects to improve their designs.⁷⁹

The prewar technical exchanges evolved slowly. Only rudimentary information about Asdic, German mines, anti-mine countermeasures, degaussing procedures, and ship damage reports and analyses were provided to the U. S. Navy in late 1940. Information on plane turrets, planes engines, anti-aircraft guns, damage control, submarine tactics, degaussing, and harbor defenses were provided in 1941. In return, the Navy Department supplied the Admiralty with some information on its sonar system, and some RDF information was exchanged owing to the efforts of Admiral Ghormley. The Americans never yielded their Norden bomb sight secret, however. There is no evidence of the extent to which either side used the technical information exchanged. Certainly, there is no evidence that the Asdic information received by the U. S. Navy revolutionized American echo-ranging (sonar) devices.

If nothing else, the long year of discussions helped affirm Anglo-American military cooperation. British distrust of American security measures lessened, and Royal Navy and U. S. Navy men increased their contacts. American officers were serving in British ships, learning British tactics, and

observing how British equipment like Asdic performed in action. The U. S. Navy was becoming more aware of its shortcomings in escort and anti-submarine warfare, which explained its interest in the Asdic exchange. The SPENAVO mission was crucial to this process, but Ghormley's most important work was to set the stage for the Anglo-American staff conversations in 1941 and to facilitate the September 1940 Destroyer-for-Bases Deal.

The surrender of France, the fear that Germany might invade Britain, and the need to defend shipping around the British Isles led to the British request that the U. S. Navy transfer some of its old destroyers to the Royal Navy. The destroyers performed several vital tasks. They patrolled the English Channel to prevent an invasion, defending minelaying craft operating in British, French, and Belgian waters, and escorted coastal convoys. The destroyers were instrumental in the war against Donitz's U-boats. The Royal Navy suffered grievous destroyer losses in the evacuation of Dunkirk in late May 1940, and at that point, British shipyards built only about twenty destroyers annually. If Britain was to survive, then the Admiralty would have to find some other way to replace her losses than by new construction.

In May, Churchill asked Roosevelt to transfer forty or fifty of the old four-stack American destroyers to the British fleet. Although these destroyers were still in the U. S. Navy's reserve fleet, Stark had asked Congress for funds to recommission these destroyers in the spring of 1940. Stark needed them owing to the shortage of ships for the Neutrality Patrol. At first, Roosevelt told Churchill that Congress would have to approve the transfer and that it was, therefore, politically impossible, but the President clearly liked the idea. In June, he tried to transfer some number of torpedo boats and submarine chasers under construction in America to the Royal Navy, but Congress put a halt to the move on the grounds that it was an illegal assumption of Presidential authority. The Congress passed a law that forbade all future transfers of naval equipment to any country unless the CNO ruled that the transfer enhanced American security.⁸⁰ This put Stark in the uneasy position of being able to legally contravene the policy of his commander-in-chief.

The increasing tempo of the German U-boat campaign made the problem more critical. Germany could now operate U-boats from bases along the French coast, thus reducing the travelling distance for U-boats to the open sea. Moreover, the U-boats could now operate in waters out of range of

British aircraft, the main U-boat nemesis at that time in the war. Not coincidentally, the first "Happy Time" for the U-boats began at this time: from June to October 1940, U-boats sank 274 merchantmen totalling 1,392,298 tons. These results were achieved despite the fact that only twenty U-boats were operational each month, and only six to eight of that number were actually on patrol.⁸¹

In mid-June, the British raised the destroyer issue again. Lord Lothian asked Roosevelt on the 17th whether it was not time to be frank with Congress about the implications of a British defeat. The destroyers, he argued, were essential to Britain's continuing resistance. Should Germany defeat Britain, she might threaten the United States. By August, Lothian was "almost tearful in his pleas for help and help quickly."⁸²

On 1 August, Frank Knox, the new Secretary of the Navy, met with Lord Lothian. Knox was reminded of a British idea proposed in May to lease base sites in Bermuda, Newfoundland, and Trinidad to the U. S. in return for the destroyers. The U. S. had been tinkering with the idea of bases in the Caribbean for a long time. In the 1930's, the "question had become linked with that of the Allied World War I debts."⁸³ Knox did not like the idea of a lease, but

considered an outright trade to be acceptable, and he proposed this to the Cabinet on the 2nd.

Roosevelt wanted to help the British, but before he did he had wanted to ensure that Britain could survive. Ghormley's and Kirk's reports helped in this respect. The British Chiefs of Staff were "confident of our ability to resist invasion successfully," Bailey told Ghormley in August. The invasion "could only have a reasonable chance of success under favorable weather conditions and after air superiority has been established...The effects of German air attacks so far show no signs of producing serious results."⁸⁴ Both Ghormley and Kirk assured Washington that the British, while shaken, were not about to surrender. This clearly increased Roosevelt's enthusiasm for the Destroyer-for-Bases trade. On the other hand, Churchill was not keen to trade away chunks of the empire as part of a "deal". Also, if there was to be a trade, the British wanted more than fifty destroyers for the bases in question. Roosevelt knew that by law, he could not directly transfer the ships to Britain and get nothing in return, at least not without asking for legislative approval. However, military necessity gave way to political appearances.

FDR told reporters on 16 August that the talks with London

over the transfer of bases from Britain to the United States were not connected to any plan to give old destroyers to Britain.⁸⁵ This was scarcely accurate. In late August, FDR decided to go forward with the trade, and on 3 September, the U. S. Navy transferred fifty old destroyers to Britain. In return, the British granted the United States ninety-nine year leases on bases in Newfoundland, Bermuda, the Bahamas, Jamaica, Antigua, St. Lucia, Trinidad, and British Guiana. One day later, the first eight American destroyers left Boston harbor, and by the 9th they were in Halifax. British crews came aboard that day. The last group of four-stackers was commissioned into the Royal Navy on 26 November 1940. All of these ships were renamed, the names being cities common to both the United States and Britain.

Roosevelt used an executive order to consummate the Destroyer Deal despite criticism that this was the very kind of transfer that Congress intended to prevent. Naturally, there was much Congressional dissatisfaction with Roosevelt's decision. Navy men were not uniformly pleased either. In August, Admiral Richardson complained that "these destroyers ... were essential if there was to be any anti-submarine protection of our coastal merchant shipping..."⁸⁶ Even Stark, who approved the transfer, pointed out "the convulsion the Fleet had to go through to

commission the 64 destroyers and some other ships recently."⁸⁷ Nonetheless, Stark concluded that the Navy needed the bases and that the old destroyers would see more action in British hands than in American, and it was on this basis that he agreed to the transfer. In this sense, Roosevelt met the terms of the Congressional law passed in June 1940. A technical assistance program complimented the Destroyer-for-Bases Deal. On 13 September, Admiral Bailey advised the Second Sea Lord that the U. S. Navy wished to send three or four senior enlisted to Britain "to assist in maintenance of the detecting gear fitted in the ex-U. S. destroyers, and also in instructional work."⁸⁸ This support was necessary owing to the differences between British and American sound gear, among others, and the program, too, contributed to increased Anglo-American collaboration.

There is some question as to how important the Destroyer Deal was to American and British interests. The United States benefitted from receiving the new bases, which were certainly invaluable. By mid-November 1940, Navy PBY patrol planes were operating out of St. Lucia, Trinidad, and Bermuda. Other bases required more work, but they also became very useful. For instance, the base built at Argentia, Newfoundland, became operational in April 1941 and soon became the main operating base for the Atlantic Fleet's

convoy escort groups in 1941. Neutrality Patrol sweeps into the Central Atlantic were staged from Bermuda. On the British end, the Admiralty was glad to have an additional fifty vessels to be used as convoy escorts, or in the Channel for anti-invasion patrols. However, the destroyers exchanged were poorly armed for anti-aircraft work, an important trait for Royal Navy warships engaged in the Channel patrols. The ships needed an increased anti-aircraft battery before they could be used there effectively. The destroyers also needed to be fitted with more anti-submarine warfare gear and depth charges, and sound equipment needed to be improved. The ships were old, and many proved to be unseaworthy in the rough Atlantic. Some saw no service at all. These discrepancies annoyed a few British admirals, since Britain had given away so much to receive the destroyers.

But Churchill was pleased with the Destroyer Deal. One reason was that it assisted the Royal Canadian Navy in their expansion plans. The Royal Canadian Navy commissioned six of the old destroyers on 24 September 1940, and unlike some of the ships sent to Britain, these vessels proved to be very seaworthy, and provided the backbone to many of the Royal Canadian Navy ocean escort groups in 1941. These new groups helped alleviate some of the stress of the escort-of-

convoy duties that had fallen solely on the Royal Navy in 1939 and 1940. Most importantly, the Destroyer Deal drew the United States closer to Britain and Canada, which had been one of Sir Winston's aims all along. For their part, the Germans considered the deal to be "an openly hostile act."⁸⁹ The Destroyer Deal helped convince the Germans to initiate and sign the Tripartite Pact in October, thus at last bringing Japan into the Axis alliance.

While the technical exchange discussions continued, and the officer liaison exchanges got underway, and the Destroyer Deal was in the works, the ships of the Atlantic Squadron were busy. In early 1940, Neutrality Patrol ships conducted patrols akin to those of late 1939. There was some Congressional skepticism as to the purpose of the patrols and what they actually accomplished. On 23 January 1940, Stark told one curious senator that "one of the goods we think it may have done...is its deterrent effect."⁹⁰ The Neutrality Patrol may even have helped to deter German warships from operating in the Western Hemisphere. One of Stark's ongoing concerns was that heavy German raiders might venture into the Western Atlantic, and he even asked Congress in late 1939 to authorize construction of cruisers with twelve-inch guns that could combat the German pocket battleships.⁹¹

The fall of France also meant that the fear of German influence in Latin America that was prevalent early in the war now resurfaced. The heavy cruiser Quincy was sent to Guantanamo Bay, Cuba in June, then to Brazil in July. The Brazilian president, Getulio Vargas, did not necessarily want closer ties to the United States, but he feared German influence. He crushed German sympathetic movements in Brazil. Satisfied that German influence would never succeed with Vargas in power, the Quincy withdrew. The CNO next ordered the Quincy to Montevideo, Uruguay, where she was greeted by thousands of pro-American supporters. Minister Edwin C. Wilson went ashore and promised Uruguay "assistance in crushing all activities which arise from non-American sources."⁹² Roosevelt also concerned that pro-Axis elements might attempt to mount a coup in Argentina. While the Quincy was in Uruguay, the cruiser Wichita was sent to Buenos Aires. When the cruiser left Argentina, the ships' officers were convinced some pro-German activity would arise in the coming months. Roosevelt was informed, but there was little that could be done.

The German occupation of Denmark in April 1940 gave the Atlantic Squadron another task. Neutral at the beginning of the war, the Danes did not want either Britain or Germany to control Greenland, and their government-in-exile asked

Washington to defend Greenland from occupation. Since Greenland was in the Western Hemisphere, it could be considered to lie within Roosevelt's Neutrality Zone. Greenland was strategically important as a weather station, and there was some suspicion as to whether there were German weather stations operating there clandestinely. Roosevelt decided to aid the Greenlanders under the pretext of investigating the rumor about German weather station. Instead of sending warships, however, he decided to use Coast Guard cutters for the job because the Coast Guard was responsible for the International Ice Patrol, and Coast Guard crews were accustomed to operating in Arctic conditions. Besides, sending warships might attract too much attention to a nation that was supposedly neutral. A civilian department, the Department of the Treasury, controlled the Coast Guard in peacetime, and the mission was made to look to be an extension of the Coast Guard's usual activities.⁹³

On 10 May, the cutter Comanche left for Greenland, arriving ten days later. From then until the end of the year, the Comanche and four other cutters shared observation duties, charted the waters, explored the coast for sites for air bases, looked for German weather stations, and even slipped supplies to the Greenlanders from time to time.⁹⁴ In

September, the cutter Northland found the German stations, then being operated by Norwegians under instructions from the German Army. The State Department promptly notified the British, who dispatched a Norwegian gunboat to arrest the Norwegian workers and shut down all three weather stations. In December, the winter ice came, and the cutters had to cease operations for a few months. Before they departed, the Coast Guardsmen supplied the Greenlanders with rifles and ammunition, and the cutter Campbell even left a party of fourteen men behind to man a 3-inch coastal defense gun.⁹⁵ Greenland represented the second step in the construction of a bridge of American naval bases across the Atlantic.

After the fall of France, the Neutrality Patrol took on a new mission. The French carrier Bearn, a light cruiser, an old training cruiser, and some support ships were stationed at Martinique and Guadeloupe. The Germans were interested in obtaining bases from the French in the Western Hemisphere, and Washington feared that the Vichy might lease these bases to Germany. The British had established a blockade of the French bases, and in July, the U. S. Navy contributed a cruiser and six destroyers to stand watch over the immobilized French ships.⁹⁶ Also in July, the U. S. Navy developed a plan to invade and capture the French bases on Martinique and Guadeloupe should the Vichy government

turn hostile or threaten western security. American diplomats and the Vichy admiral in charge of the bases, Admiral Georges Robert, arranged a compromise. The Americans promised not to invade the islands, and Robert agreed to allow American air and sea patrols in French waters. The French were also required to notify the United States ninety-six hours in advance of any ship movements, and the U. S. Navy was allowed to station a naval observer at Fort de France.⁹⁷ The French task force remained a thorn in the Allies side until late 1942, when the Germans occupied all of France and the matter resolved itself.

On 1 November 1940, Atlantic Squadron was renamed Patrol Squadron to emphasize the important duties and responsibilities of the Atlantic ships. The Patrol Squadron was strengthened by the addition of the newly commissioned carrier Wasp, plus several newly recommissioned World War I-era destroyers not transferred to Britain. By this time, there were forty destroyers in the Atlantic, and the Coast Guard had thirty-six patrol vessels that could be used for the Northern Patrol. At this time, the last of the German sorties from Gulf waters were underway, but the Neutrality Patrol foiled most of these efforts. On November 16, the destroyer McCormick's lookouts sighted two German merchantmen leaving Tampico harbor at 0015. The McCormick

shadowed the German Orinoco and eventually forced her to return to port, while two other American destroyers, the Broome and the Plunkett, watched the tanker Phyrqia. The Germans could not escape, and they scuttled the tanker. Two more German merchantmen tried to run the American blockade on 29 November. The Rhein and the Idarwald left Tampico; shadowed by American destroyers, they hugged the Mexican coastline for as long as possible while the American ships broadcast position reports. How much the British depended upon the Neutrality Patrol's assistance was demonstrated when it took a week for the Royal Navy to appear. On the afternoon of 8 December, the British cruiser Diomede intercepted the Idarwald, which was promptly scuttled by her crew. The Rhein lasted for three more days, but the Dutch destroyer Van Kingbergen found her on 11 December, and she, too, was scuttled. These were the last Nazi merchantmen to make the dash for freedom.⁹⁸

The Neutrality Patrol had cleaned the Western Hemisphere of all German merchantmen by the end of 1940. The Coast Guard had forced the Nazis out of Greenland. The efforts of Roosevelt and Churchill, Stark and Pound, Ghormley and Bailey assured close Anglo-American naval cooperation for the coming year. After staff talks early in 1941 that defined responsibilities in the Atlantic for each country's

navy, the British and Americans joined as a Grand Alliance in the struggle against Hitler. And though the United States' official position was one of neutrality until 7 December 1941, in a few short months, the U. S. and Royal navies would work together in belligerent operations against Germany's U-boats.

CHAPTER 3: Atlantic First!

The Army and Navy war planners since 1919 presupposed Japan to be their most likely enemy. Hitler's aggressive prewar diplomacy modified this view as early as 1938, but the complexity of the new alignments did not make it clear until September of 1940, when Germany and Japan signed the Tripartite Pact. Overnight, America became a nation threatened on two sides. Should the United States go to war against either Germany, Italy, or Japan, the Tripartite Pact bound the other two powers to support their ally.

How to react to the Tripartite Pact vexed Washington. Roosevelt, reelected in early November, apparently did not concern himself much with the issue. As the U. S. Navy's highest ranking officer, Stark took it upon himself to devise a plan. On the night of 4 November, Stark began putting his thoughts on the defense issue on paper. He worked until 2:00 A.M., composing a 12-page document that outlined possible American grand strategies in the event of coalition war. Stark elicited input from all of his assistants, and for ten more days, Stark, Turner, Cooke, and others worked to produce an acceptable draft for FDR. On 12 November, Stark's sixtieth birthday, the final paper, now

26-pages long, was presented to President Roosevelt.

Stark listed the four possible strategic objectives:

(a) Hemispheric defense, and a policy of exerting little influence on the outcome of the European War. (b) Concentration of offensive capabilities against Japan, coupled with a purely defensive stance in the Atlantic. (c) Attempt actively to assist Great Britain in both Oceans. (d) Build up an offensive capability in the Atlantic and maintain a defensive position in the Pacific."⁹⁹

In evaluating "the scale and nature of the effort the Navy may be called upon to exert in the Far East, Pacific, and Atlantic," Stark considered the preservation of Britain to be imperative.¹⁰⁰ Stark believed Britain "is the pillar that prevents [Nazi dominated] Europe from encroaching on the Western Hemisphere."¹⁰¹ If Britain lost the war, then the Royal Navy would no longer control the Atlantic, and Germany would be positioned to exert influence in the Western Hemisphere. Stark concluded that Germany was, therefore, the most serious threat to American interests.

In going down his list of strategies, Stark reasoned that only (d) was the correct course of action. Hemispheric defense, combined with material aid to Britain, was only a temporary means of defense. The United States could not directly aid Britain by concentrating the fleet against the

Japanese in the Pacific. Moreover, Stark added, "The issues in the Orient will be largely decided in Europe."¹⁰² Owing to the fact that the U. S. Fleet was not strong enough to deal concurrently with Germany and Japan, assisting Britain in both oceans was, for the moment, unrealistic. Only a build-up in the Atlantic would help Britain. With their limited industrial capacity, the Japanese could be held until the U. S. rearmed and mounted a Pacific offensive. Therefore, (d) -- Plan Dog -- was the best answer to the question as to where and how the Navy should concentrate its strength.¹⁰³ Though the President never formally signed the Plan Dog Memorandum, it became the basis for America's war preparation plans.

In Britain, the Bailey Committee concurred. Though originally organized to facilitate U. S.-British technical exchange, the scope of the Bailey Committee's work had expanded to include the larger question of overall, long-term Anglo-American naval cooperation. Indeed, the objectives for the committee's first meeting on 9 July 1940 were to: "a) define area of operations for British and U. S. forces, b) discuss forms of U. S. assistance, [and] c) define British and U. S. responsibilities in these areas."¹⁰⁴

Before Stark wrote Plan Dog, the Bailey Committee had concluded that a build-up in the Atlantic was in America's best strategic interests. At the 9 July meeting, Admiral Bailey announced that "the U. S. may have to be pressed to declare war on Italy as well as on Germany if she is to assist us effectively in the Atlantic."¹⁰⁵ The committee agreed that the United States might be persuaded to accept strategic responsibility for the Pacific and Far East theaters, and should be encouraged to maintain strong fleets in those waters. At the same time, the U. S. Navy should assist to the Royal Navy's operations in the Western Approaches, Northern Waters, and Northern Patrol in the Atlantic, and should assist in defending transatlantic convoys.¹⁰⁶ The British should retain strategic control of the Atlantic by reason of the Royal Navy's experience and predominant interests. This implied that U. S. forces would operate under British command, but would remain under the administrative control of U. S. Navy headquarters based in Britain. Ghormley, who participated in many of these meetings, agreed with all of these prescriptions.¹⁰⁷

On 11 September 1940, the Bailey Committee issued its first comprehensive report on U. S.-British naval cooperation. Divided into seven sections, it addressed issues such as strategic control of operational areas and information

exchange. Section Three outlined a policy to protect merchant shipping. The British wanted the Canadians to continue to organize all eastbound transatlantic convoys. The British also wanted the routing of both eastbound and westbound convoys to be kept in their hands. In addition, the Bailey Committee proposed that the Admiralty increase the number of monthly convoy sailings. If this was implemented, then U. S. Navy escorts would be needed to defend the convoys. The British also proposed that U. S. Navy officers serve as commodores of merchant convoys sailing from America. And, as a compromise, the British agreed to allow the U. S. to organize and route its own convoys, with Royal Navy and Canadian Navy officers attached to U. S. staffs as advisors, should the United States disagree with any of the above proposals. This was the first formal mention that U. S. Navy escorts might defense transatlantic convoys.¹⁰⁸

Section V dealt exclusively with escort and anti-submarine operations. The British wanted to compare U. S. and British anti-submarine warfare equipment to determine which was better, perhaps with a view to standardize some items. They believed the American depth charge Y-thrower to be a superior weapon, and wanted to install it on their own escorts. The Bailey Committee called for an early exchange

of anti-submarine school curriculums and training methods so as to standardize British and American anti-submarine warfare doctrine. The Bailey Committee proposed that the Admiralty ask the U. S. to build a factory in the United Kingdom to produce Asdic equipment, because it was in short supply. Furthermore, the committee suggested the U. S. Navy equip all its vessels involved in escort and anti-submarine operations -- cruisers, submarines, and Coast Guard cutters in addition to destroyers -- with submarine detection gear. But at the minimum, all destroyers needed sonar to effectively fight U-boats. The section closed with Bailey suggesting the U. S. initiate an escort building program. Corvettes were inexpensive and easy to produce, but very seaworthy and ideal for ASW operations.¹⁰⁹

The remainder of the report discussed material aid to Britain. Section IV proposed that the British and American navies exchange ship-to-ship wireless procedures. The Bailey Committee requested that the Admiralty "inform the U. S. that we may ask for special/secret pieces of visual signal equipment [used by the U. S. Navy] necessary to enable British ships to operate under U. S. escorts."¹¹⁰ Section VII dealt with intelligence exchange, the committee urging that the United States and Britain operate separate intelligence agencies which, nonetheless, should work in

"close liaison". To do this, the British and American naval missions would include one officer specifically for intelligence duties. The Bailey Committee also wanted to create a secret U. S.-British code for information exchange. Finally, the Bailey Committee emphasized that it was important that U. S. and British Direction Finding Stations cooperate in monitoring Axis ship movements.¹¹¹

London wanted the U. S. Fleet to ensure the security of the western position in the Far East and the Pacific, but now the Admiralty also wanted the U. S. Navy to contribute ships to the naval war in the Atlantic. As a "quid pro quo," the Royal Navy intended to offer the U. S. Navy limited operational control over British convoy escort forces. The Bailey Committee foreshadowed by only two months Admiral Stark's articulation of an Atlantic-first strategy in his Plan Dog paper. The Bailey Committee Report and the Plan Dog Memorandum both affirmed that the United States would concentrate her strength in the Atlantic. How to do this now concerned both higher naval headquarters.

The establishment of the post of SPENAVO in London marked the first step in this search. Admiral Ghormley arrived in London in mid-August, but his terms of reference were limited. He was not to engage in formal staff talks with

the Admiralty Board. For his part, Ghormley wanted it that way. "Staff talks should not be conducted without definite approval of policies being established by the Navy Department in regard to such staff talks," he told Stark a few weeks later. "It should not fall entirely upon the shoulders of one man to carry out this responsible duty in case definite commitments are to be made."¹¹² On the other hand, Stark encouraged Ghormley to attend all staff meetings to which he was invited by the Admiralty. However, the views Ghormley expressed were labeled as his own, and he pretended that they did not represent the policy of the United States. Ghormley constantly reminded the Admiralty of this small fiction. For example, on 2 September, Ghormley "informed the First Sea Lord that personally and on my own responsibility I desired information regarding the Admiralty ideas of the part that our Navy should take in cooperation with the English in the case that we would become involved in the present war."¹¹³ In effect, this allowed him to represent the Navy Department in London, speak freely, and yet not commit the CNO to measures which Roosevelt might not support.

Ghormley's mission was critical, therefore, and Pound recognized that reality. A week after he arrived, Ghormley was given a copy of the secret Bailey Committee Report. He

was the first to inform the British of Stark's Atlantic-first strategy. Soon, Ghormley began to meet regularly with the Bailey Committee. On a visit to the Admiralty on 22 November, Ghormley told his hosts that the primary object of Allies in the event that the U. S. entered the war was to defeat the Germans and Italians.¹¹⁴

Ghormley served as a liaison between the CNO and the Admiralty. He regularly conversed with the First Sea Lord, Admiral Sir Dudley Pound, and conveyed to the CNO Pound's thoughts on the U. S. role in the European conflict. In October, Ghormley received a special report by Lieutenant Commander Wellings, a U. S. naval officer who had just arrived in England on a ship that travelled across the Atlantic in a British convoy. Wellings had taken pictures, and wrote a report detailing British convoy defense procedures. Ghormley read the report, then forwarded it to ONI. Wellings' paper highlighted the danger which stragglers posed to slow convoys. Ghormley suggested that OpNav study the British system and incorporate it into U. S. Navy escort doctrine.¹¹⁵ In November, he put the Admiralty on alert that Stark was considering the Atlantic Squadron might begin to escort transatlantic convoys in early 1941. This came at an especially opportune moment, for the shortage of British escorts was increasingly evident. The

Royal Navy did not have enough ships for operations in the two primary theaters: the Northwest Approaches to the United Kingdom and the Mediterranean. Pound hoped "the American destroyers to be operating in sufficient numbers to help them on this convoy work in combatting submarines and air."¹¹⁶

While retrospect demonstrates that the U-boats posed the greater danger to transatlantic shipping, in 1940-1941 Germany's battleships and cruisers were equally feared. Pound reviewed this problem with Ghormley on 19 November, pointing out the many successful German raider operations that year and singling out the pocket-battleships as the most significant threat. Several surface raiders had successfully attacked convoys in recent months. Pound suggested that as many as three U. S. battleships be assigned as ocean escorts for transatlantic convoys. "For convoy protection there will be assigned two battleships," he explained. "Only one will go with a convoy, as was done last winter when a raider was out. This does not mean that each convoy will have a battleship, but there will be sufficient use of battleship escort to make the Germans uncertain whether there is an attached battleship or not."¹¹⁷ Ghormley told Stark that Pound wanted the Navy Department either to increase the size of the Asiatic Fleet

in the Far East, or to position more battleships in the Atlantic theater. Three days later the British proposed a plan to accomplish this: ten battleships at Singapore, five in the Atlantic, and none at Hawaii.¹¹⁸ This was entirely consistent with Stark's Plan Dog strategy and the concurrent buildup in the Atlantic, but it was at the same time entirely unacceptable to the United States. The British were soon made aware of this. On 7 December 1940, Stark replied "the [proposed] distribution of United States naval forces does not provide sufficient support of United States interests and is therefore unacceptable."¹¹⁹ This exchange was the opening round in a duel of transatlantic naval diplomacy that was played out in 1941. In short, Admiral Pound, who wanted to hold a large fraction of the British fleet in the Mediterranean, urged Stark to shift most of the U. S. Fleet -- which had been moved from San Diego to Pearl harbor in May 1940 -- from Hawaii to Singapore so as to deter Japan from attacking the Malay Barrier. Admiral Stark, on the other hand, less concerned about the Mediterranean operations, wanted the Admiralty to position its own capital ships at Singapore while the Navy Department reduced the concentration at Pearl Harbor by transfers to the Atlantic. Nonetheless, Stark wanted the American-British Conversations (ABC) to devise an overall strategic plan, and he told Pound that "representatives should come

here with instructions to discuss concepts based on equality of consideration for both the United States and the British Commonwealth."¹²⁰ The CNO had effectively invited the British to America for staff talks -- and he had done so without consulting the President.

At the time however, neither the War nor the Navy Department was in any way prepared to conduct staff talks. Ghormley's reports had helped the British and American headquarters understand how each other felt in relation to the U. S. role in the war. The information Ghormley supplied to the CNO, especially the Bailey Committee's report, helped clarify what the British perceived the American role to be. The U. S. now needed to articulate its own strategy.

Churchill at first agreed to the staff talks on the basis that they might lead to more U. S. Navy support of the British fleet, but he soon realized that he needed staff talks because he needed American help.¹²¹ On 9 October 1940, British Rear Admiral R.M. Bellairs was instructed to prepare to head a delegation to Washington for staff conversations. The arrangements went ahead apace, delayed only by the November 1940 presidential elections. President Roosevelt met with General Marshall, Admiral Stark, and

Secretaries Stimpson, Knox, and Hull to "clarify American planning in light of the staff conversations" on 9 January 1941.¹²² Roosevelt and Stark put the War Plans Division to work, preparing plans explaining how the U. S. might commit its forces should the U. S. become a belligerent. On the 17th, the Director of the Navy's War Plans Division, Rear Admiral Richmond Kelly Turner, told Stark that the Atlantic Patrol Squadron could be ready to escort convoys by 1 April 1941. Both the U. S. and Britain were ready to meet and discuss how to implement Plan Dog.

Between late January and March 1941, American and British war planners met in Washington to discuss strategy before the United States entered the war and thereafter. Ghormley, Turner, Kirk, Captain DeWitt Ramsey, and Marine Lieutenant Colonel O. T. Pfeiffer represented the Navy Department. Representing the U. S. Army were Major General Stanley D. Embick, Brigadier Generals Sherman Miles and Leonard T. Gerow, and Colonel Joseph T. McNarey. Bellairs headed the British delegation, which included Rear Admiral V.H. Dankwerts, Major General E.L. Morris, and Air Vice-Marshal J.C. Slessor.¹²³ The object of the talks was threefold: to coordinate plans for employing British and American forces against Germany and her Allies, to determine the best methods for defeating the Axis, and to agree on major

military strategy, areas of responsibility, and command arrangements. According to Stark, the delegates were to discuss "tentative agreements...should the United States be compelled to engage in war against the Axis powers."¹²⁴ The delegates codified their arrangements in a formal document signed on 27 March, and known thereafter as the ABC-1 Staff Agreement.

ABC-1 dictated what roles the American and British forces would play while the United States was still neutral. Above all, it envisioned "short-of-war" aid to Britain by the United States in the form of material assistance. The U. S. Navy was to ensure the defense of the Western Hemisphere. It was to build up an offensive capability in the Atlantic to be used in the event that the U. S. was drawn into the war. The U. S. Navy also assumed the responsibility for protecting Allied shipping in the Atlantic. The sea lines of communication linking the British to the Western Hemisphere were vital. If these lines were closed off by the German U-boat campaign, then Britain would be cut off from outside support. In addition, the U. S. Navy was charged with deterring Japanese aggression by maintaining a powerful, but defensive, Pacific Fleet. ABC-1 did not mention where this fleet might be positioned. The British had originally wanted the U. S. Fleet to base near

Singapore, so as to protect imperial interests as well as to free British ships for operations in the Mediterranean and the Atlantic, but Stark resisted this in the hope of eventually persuading the Admiralty to send ships from the Mediterranean to the Far East. The British and Americans agreed to continue to conduct informal staff conversations while the U. S. was neutral. Finally, exchanges of technical information, intelligence, and officer liaisons were to be prompt and complete. "Existing military intelligence organization of the two Powers will operate as independent intelligence agencies, but will maintain close liaison with each other in order to insure the full and prompt exchange of pertinent information concerning war operations."¹²⁵ These elements were deemed essential to final victory over the Germans.

ABC-1 provided guidelines for Anglo-American cooperation should the United States be drawn into the war. In this event, the U. S. and Britain would cooperate fully. Defeating Germany was the first priority. The British would ensure the security of the United Kingdom as a base for future operations against Germany, and British officers would command operations in the Mediterranean theater. The U. S. would guarantee the security of the Western Hemisphere, and American officers would have strategic

control of operations in the Atlantic. This meant more work for the Atlantic Fleet. Both navies would enforce the blockade of Germany and Italy. ABC-1 presupposed that a costly Allied air offensive would be launched against Germany as soon as possible, and listed the Mediterranean as an important theater. The ABC-1 Agreement was a landmark in U. S. commitment to the war.

But the Neutrality Patrol needed more ships to perform the growing number of functions. Protection of merchant shipping would soon be added to the growing list of missions for the ships in the Atlantic. Ships would have to be transferred from the Pacific to the Atlantic, and more modern destroyers from the new building program needed to be allotted to the Atlantic. Anti-submarine warfare doctrine, tactics, and equipment needed to be updated or created. German U-boats already posed a threat to all patrol ships on the fringes of the Neutrality Zone, and when the U. S. Navy undertook escort-of-convoy missions, the U-boats would be even more dangerous. The Atlantic Patrol Force was preparing to carry the fight to the enemy. The implications of the Anglo-British Staff Conversations in 1941 were far-reaching.

ABC-1 "underwrote the tenants of Plan Dog, which now became

the mutual policy of the United States and Great Britain."¹²⁶ Germany would be the first priority.

Amazingly enough, the British conceded a large amount of operational control to the U. S., though they rightfully retained control of trade routing, and command of the Mediterranean theater. The British wanted the U. S. to enter the war as soon as possible, for without the industrial and military might of the United States, the hopes of Britain winning the war alone were slim.

The American-British Conversations ended on 27 March. Four days later, according to Admiral Turner's estimate, the new U. S. Atlantic Fleet was to be ready to begin escort-of-convoy duties, but the Navy did not escort any convoys until September.

CHAPTER4: The Atlantic Fleet

Plan Dog, ABC-1, and Roosevelt's reelection told informed opinion that the United States was moving closer toward belligerency. Lend Lease was the next step. In November, 1940, while vacationing after his reelection, FDR thought about loaning war goods to Britain rather than selling them. Churchill wrote Roosevelt on 8 December, "The moment approaches when we shall no longer be able to pay cash for shipping and other supplies."¹²⁷ Under the current Neutrality Laws, however, American merchant ships could not trade with belligerent nations, nor could private American firms provide the British with credit. Only an act of Congress could legalize such transactions. At length, Roosevelt presented his plan at a press conference on 17 December 1940. In short, he intended to greatly increase American military production and "lease" it to friendly belligerents for the duration of the war.

A solid, pro-Allied majority controlled Congress, and reaction was favorable. Secretary of the Treasury Henry Morgenthau testified that Britain was "scraping the bottom of the barrel."¹²⁸ The most controversial questions

involved the use of American shipping to transport Lend Lease goods to Britain and the role of the U. S. Navy in defending transatlantic shipping of whatever nationality. Senator Charles W. Tovey of New Hampshire, a leading critic of Lend Lease, wondered whether Roosevelt would use the measure as a vehicle to transfer more warships to the Royal Navy. For a time in February, the issue assumed such importance that Roosevelt finally had to promise Congress "that there is no intention at the present writing of more warship transfers."¹²⁹ After much debate, Congress enacted the measure on 11 March 1941 by a large majority. By this time, aid to the Allies was not unpopular: Hadley Cantril's Princeton pollsters found that seventy-one per cent of one sample favored sending military assistance to Britain.¹³⁰

Lend-Lease provided new means of assisting the British within the framework of ABC-1. Eight days after the passage of the Lend-Lease legislation, shipyards in the United States began to repair British warships. Britain's repair facilities had taken a beating in the Blitz, and so many damaged British ships needed repairs that their own yards could not repair them all. Thus, the armed merchant cruiser Canton, the battleship Malaya, and the aircraft carrier Illustrious all spent time in East Coast shipyards in 1941.

ABC-1 also meant that the technical exchanges might be

transformed into broad-ranging discussions on strategy, doctrine, and tactics. In January, 1941, the British requested information on U. S. Navy anti-submarine warfare methods, different types of aerial and surface ship depth charges, particulars of the depth charge Y-gun, communications material, and United States wireless transmissions organization. The British also offered anti-submarine warfare equipment for use on American destroyers sent to British waters, and promised to send British workmen to fit Asdic sets in American ships. Moreover, the British were interested in cooperation between British and U. S. direction finding stations. In return, the Navy wanted British corvette construction plans, information on British escort-of-convoy doctrine, communications information, and any material available on the new British High Frequency Direction Finder (HF/DF) sets and their accuracy and reliability.¹³¹ In February, the British followed up their requests with an additional list. The British wanted information on HF/DF applications to ships, the uses of infra-red detection devices, shock-absorbing materials, the use of RDF (radar) for gunnery ranging, the new American 5-inch dual purpose guns, and any anti-submarine warfare weapons, particularly the Y-gun.¹³²

The exchange of much of this information was postponed

until after the ABC-1 talks were completed. Although the ABC-1 document delineated how exchanges should be done, much of the information was not exchanged until November and December 1941. Even in November, the British were still pleading for the establishment of an RDF advisory board so as to standardize American and British radar operation in escort-of-convoy functions.¹³³ However, some of the exchanges did take place earlier, facilitated by the Bailey Committee. The British received information on gun turrets, American sonar, use of Asdic in American destroyers, reports on the problems of underwater sound, U. S. anti-submarine warfare methods, and a report on a test of submarine vulnerability to depth charge attacks in February.¹³⁴ That same month, the Navy Department learned about British anti-submarine warfare methods which concentrated on the use of Asdic in attacks on U-boats.¹³⁵ And sometime in July or August, before the Americans began their own escort operations, the U. S. Navy acquired copies of the British Western Approaches Convoy Instructions, which detailed British escort-of-convoy doctrine.

In April, the Admiralty again approached the Navy Department about releasing the secret Norden bomb sight. The U. S. military doubted whether the British could use it effectively, however, and feared that it might somehow fall

into German hands.¹³⁶ Again, nothing was done. Additionally, in April, the Admiralty instructed the British ambassador in Washington to initiate further talks about exchange of more Asdic and American sound gear information. Ironically, some senior British officers, including Admiral Godfrey, were hesitant about releasing further Asdic information, owing to a renewed distrust of American security measures. Nevertheless, this information was exchanged, and in mid-May, the Admiralty released a report on the effectiveness of American sonar versus British Asdic. It concluded that American sounding devices were more complicated than their British counterparts, but "little inferior" to the British models at lower speeds at which escorts used Asdic.¹³⁷

Officer liaison exchanges became more numerous and more focused during and after the ABC staff talks. Commander Fife was already established at Gibraltar, and his report on the damage to the Illustrious influenced the decision to allow the carrier to enter a U. S. shipyard for repairs. Another significant step was taken in February. Since ABC-1 provided that the U. S. Navy was to be responsible for transatlantic shipping, establishing an American in Britain took on unprecedented importance. Captain Louis Denfeld and two assistants departed New York bound for Liverpool on the

21st. Their task was to inspect "bases and suitable base sites in Northern Ireland/Western Scotland area...for the use of United States naval forces both surface ships and patrol planes which might at a future date be employed on escort of convoys."¹³⁸ ABC-1 had not yet been signed, but Stark clearly intended to be ready to escort convoys across the Atlantic as soon as possible.

Denfeld's team talked to the Commander in Chief, Western Approaches (CinCWA), Admiral Sir Percy Noble, and in March, Denfeld toured several prospective bases and base sites. He selected bases at Gare Loch in Scotland and Londonderry in Northern Ireland for destroyers, and Loch Ryan and Lough Erne for aircraft. Gare Loch and Loch Ryan were underdeveloped, but Londonderry and Lough Erne were already being used by the Royal Navy and Air Force. Denfeld arranged for these bases to come under U. S. Navy control should the U. S. use them as escort bases. He assured the British that their destroyers could still use these bases for refuelling. In fact, he was not opposed to allowing British escorts refuel from U. S. tankers. Denfeld also wanted two British submarines to be stationed at the bases to help train U. S. ships, and suggested that two U. S. Navy submarines join the British boats.¹³⁹ The destroyer bases were large enough to handle any number of American escorts,

but the air bases could only operate forty-eight seaplanes each.¹⁴⁰ The British were clearly pleased with the outcome. "The establishment of the Americans on our side seems to me to outweigh almost every other possible consideration," the Admiralty delegation in Washington told the foreign office.¹⁴¹ Materials began arriving in June, but the bases were not used until January, 1942. Denfeld's mission was significant in demonstrating the Navy's resolve to begin escort-of-convoy operations as soon as practicable.¹⁴²

At the end of 1940, Admiral Pound became convinced that he needed his own agent in Washington to serve the Admiralty as Ghormley served the Navy Department in London. Pound's choice was the Second Sea Lord, Admiral Sir Charles Little, who established the British Admiralty Delegation (BAD) in Washington that spring. His main job was to facilitate continuous consultation and collaboration between the American and the British Chiefs of Staff.¹⁴³ Approximately 100 other British officers arrived as assistants. Rear Admiral J.A. Dorling headed the technical and supply division, and Rear Admiral French dealt with ship repair and personnel issues. Both worked closely with the Navy Department, and BAD reported directly to the First Sea Lord. The mission performed very much the same tasks that Ghormley

and his small staff performed in Britain. There may have been some concern in Washington that the collaboration was getting cozy, however, for when the British requested that one of their BAD officers be assigned to Atlantic Fleet's staff, the plan was rejected, although the Navy Department stressed that such a liaison be available in case closer cooperation became necessary.

The U. S. Navy enlarged its own mission to London in March, and the Admiralty arranged for the American delegates to have direct access to their Royal Navy counterparts. Planning officers, intelligence officers, and more were sent. The British invited the heads of the mission to attend most British Chiefs of Staff meetings. Finally, the British provided the opportunity for five officers and fifteen enlisted men to take a course at the British sound school "to familiarize themselves with certain of the types of naval RDF sets."¹⁴⁴

One more significant transfer took place in April. FDR had promised Congress he would not transfer more warships to the British, but truth-telling was not his strong suit. The British did not have enough escorts for transatlantic convoy operations, so on 4 April, Roosevelt ordered that ten 250-foot U. S. Coast Guard cutters be turned over to the Royal

Navy.¹⁴⁵ Roosevelt's reasoning must have been that the Coast Guard was not a division of the military in peace time, and that the cutters were not warships. However, they were very seaworthy, fast, and could be well-armed with depth charges and small guns for use against surfaced U-boats. Coast Guard cutters proved to be effective convoy escorts throughout World War II.

Putting Stark's Plan Dog memorandum into effect meant that the U. S. Navy had to commit more ships to the Atlantic theater, and this led to the creation of the Atlantic Fleet. In December, 1940, the Patrol Force comprised one carrier, four World War I-era battleships, four cruisers, and approximately forty destroyers. This was the same size force that had been established at the beginning of the Neutrality Patrol in 1939. Stark understood that the Navy was not "ready to carry out its wartime responsibilities under Plan Dog."¹⁴⁶ These wartime activities would include extensive anti-submarine warfare work, and escort-of-convoy operations. Stark began by concentrating more destroyers in the Atlantic. Also, a group of four light cruisers was reassigned to the Atlantic, and upon completion, the carrier Wasp was positioned on the East Coast. Submarines were transferred to the Atlantic. A motley collection of old and new warships was assembled, but the ships and their crews

needed a commander to train them well, and on 17 December 1940, the CNO appointed Rear Admiral Ernest King to command the Patrol Force.

King was arrogant. Some of the Patrol Force pilots joked that while King did not think he was God, God thought he was Admiral King. He was also brash, critical, stern, and uncompromising. But he was very competent. He loved work and responsibility. And while he was unloved by his men, they respected him. Earlier in his career, King succeeded largely by ignoring his staff and principal subordinates and doing all of the difficult work himself, but in early 1941 the idea that he could no longer do this gripped him and he renewed the habits of a professional lifetime. His new idea of command was simple. King gave the orders and the tools to accomplish the mission and left the "how" up to the subordinates. If a man could not perform the task, there were plenty of shore jobs available.¹⁴⁷

Stark reckoned that King's foul-tempered dedication was what was needed to forge a powerful Atlantic Fleet and prepare it for war. King promptly began to implement wartime practices for his new command, ordering all "ships be darkened at night, strict anti-submarine and anti-aircraft precautions be maintained at sea, and fuel and

stores be kept at high levels to permit rapid deployment" on 20 December.¹⁴⁸ He soon became maniacal about subordinates exercising initiative. A January message to Patrol Force officers stressed that individual commanders' initiative had declined in the thirties and gave two reasons for this. First, Navy men placed too much emphasis on staff decisions. Everyone had come accustomed to ensuring that more than one person agreed with a decision before it was implemented. King insisted that this would be disastrous in wartime situations, which demanded that competent decisions be made quickly. Second, commanders had become overly conservative. They earned promotions by avoiding mistakes and showing results, but they avoided taking the controversial initiative and were afraid of making mistakes. King wanted his captains to fight their ships, to take risks, to train and advise subordinates, but not "nurse" them to avoid damage to their career. To this end, he worked to improve the readiness of the Atlantic Patrol Force between December 1940 and February 1941. On 1 February, the Patrol Force became the Atlantic Fleet and King received his third star, with a promise from Stark for a fourth in mid-year.

The War Plans Division had already fleshed out Plan Dog enough to understand that the Atlantic Fleet would need to replace the limited Neutrality Patrol sweeps with more

aggressive operations, perhaps even with escort-of-convoy operations. Indeed, Turner had informed FDR on 17 January that the Atlantic Fleet would be ready to escort convoys by 1 April. This premature declaration failed to consider that King needed time to create and train escorts to carry out this mission. Two other events in early February emphasized the requirement for an American escort force to protect Atlantic shipping. On 1 February, the German battle-cruisers Scharnhorst and Gneisenau steamed into the Atlantic and sank twenty-one merchantmen--sixteen in waters 500 miles southeast of Newfoundland. Also in February, the German heavy cruiser Hipper attacked a British convoy east of the Azores and sank seven ships. These sorties alarmed the Admiralty and the Navy Department, inasmuch as any Atlantic escort scheme had to take into account the U-boat menace but also the threat from the German surface raiders.

Creating an Atlantic Fleet escort force increased Anglo-American naval cooperation. Denfeld and his assistants were sent to England in March to identify base sites for escorts operating out of the British Isles. In February, the Naval Attache's office in London began to convey to Washington details about the Royal Navy's escort groups. "Escorts are now organized into nine escort groups each composed of four or five destroyers plus four or five corvettes. Groups are

trained and worked together to develop team work and group esprit," read a report on 22 February.¹⁴⁹ The British suggested that twelve destroyers per escort group was the goal, but this standard was clearly beyond the means of either navy. The influence of the German surface raiders in this calculation could be seen in a 27 February report on the ABC-1 Staff Conversations, which asserted that each convoy needed an escort group composed of a destroyer group, and a battleship, cruiser, or armed-merchant cruiser. The British were using this system at the time. According to the Admiralty, the Atlantic Fleet would have to provide a total escort force of three battleships, four heavy cruisers, eight submarines, eight armed merchant cruisers, and several destroyer squadrons.¹⁵⁰

At the time, the Atlantic Fleet contained three old battleships, four cruisers, and eight submarines, and expected to receive eight armed merchant cruisers from the Royal Navy. While their firepower could at least challenge German raiders like the Scharnhorst and Gneisenau, the Atlantic Fleet heavy ships could by no means overwhelm new German battleships. Moreover, the Atlantic Fleet did not have nearly enough destroyers to provide task force screens and ocean escort groups, and none of its destroyers were trained for modern escort or anti-submarine operations.

King took the first step to remedy this when, on 1 March 1941, he created Support Force. Rear Admiral Arthur L. Bristol was transferred from his post as Commander, Aircraft, Scouting Force, Pacific Fleet to take command of the Support Force. Turner's 17 January paper on escort operations prescribed a force of twenty-seven destroyers, forty-two patrol planes, one destroyer tender, three aviation tenders, and a supply ship. Stark approved. On 1 March, three destroyer squadrons, four patrol plane squadrons, and four tenders were ordered to Newport, Rhode Island, and these ships and aircraft formed the nucleus of the new Support Force. By the end of March, Bristol's command counted forty-five destroyers, fifty-one patrol planes, one destroyer tender, three aircraft tenders, and ten mincraft.

Training the Support Force, drawing on British operational experience, and devising an Atlantic Fleet escort doctrine were closely related tasks. First and foremost, anti-submarine warfare methods had to be updated. On 27 February, OpNav cabled ALUSNA requesting that the British send an "aviator with experience in the Northwest Approaches and a convoy escort officer having necessary communications experience."¹⁵¹ The Americans hoped this British officer could help provide the Support Force with "intensive

instruction in combined surface and air escort." The next day, the British Director of Plans informed the Admiralty that a surface officer with destroyer escort and anti-air warfare experience, another with necessary communications experience, and a flying officer had been detailed to provide the U. S. Navy with instruction in combined surface and air escort. The trio departed Londonderry on 3 March, and arrived in the United States on the 8th. To study the organization of the Western Approaches Headquarters, and observe convoy escort operations, Lieutenant Commander W. Jones was attached to Western Approaches command in April 1941. At first, the British did not allow Jones access to certain classified information, such as convoy rendezvous points, and present convoy routes, but soon after Churchill personally intervened, the Admiralty relented, and Jones was allowed to examine and report to Washington on details which gave him a clear picture of the British convoy and convoy escort system. Unfortunately, Jones committed suicide on 2 June, but before his death, he provided the Naval Attache in London a good amount of the Royal Navy's convoy organization and escort operations.¹⁵² The CNO and Admiral Bristol both studied this important report.

In the meantime, Bristol's Support Force was training with American submarines off Newport. Sonarmen practiced how to

distinguish between submarine contacts and sea life, and how to coordinate attacks with depth charge operators. The British advisors helped supervise the development of sound ASW tactics.

Coincident with the conclusion of the ABC-1 Staff Conversations, Admiral Stark ordered King to suspend all Neutrality Patrol operations on 15 March. The Atlantic Fleet would "retain in the Caribbean one cruiser, one division of old destroyers, one patrol plane squadron with one small tender, and the Marine Defense Battalion and one Marine company in Guantanamo," and keep two patrol plane squadrons, one division of old destroyers, and a few submarines in the Canal Zone.¹⁵³ The rest of the ships assigned to the Neutrality Patrol were hastened to "mobilization ports for two weeks to dock, upkeep, to take aboard all mobilization material, and to strip ship."¹⁵⁴

Owing to the prospect of transfers of more capital ships from the Pacific, the continuance of German surface raiding operations, and the likelihood that FDR was about to institute convoying, King reorganized the Atlantic Fleet in April. He created four task forces. Commanded by Rear Admiral David M. LeBreton, Task Force One was the Ocean Escort Force. Consisting of three battleships, two heavy

cruisers, and thirteen destroyers, its mission was to provide escorts for amphibious movements and to act as a covering force for convoys against major German surface threats. Rear Admiral Arthur B. Cook's Task Force Two consisted of the two carriers, Ranger and Wasp, two heavy cruisers, and four destroyers. This mobile Striking Force was used to conduct offensive operations against surface or submarine threats. Rear Admiral Jonas H. Ingram commanded the four light cruisers and four destroyers of Task Force Three, the Scouting Force, which was responsible for patrols in the South Atlantic and Caribbean. Bristol's Support Force was dubbed Task Force Four.¹⁵⁵ Transfers from the Pacific and new construction had brought the Atlantic Fleet up to 159 ships.

King deployed the four task forces at four different major bases. Based at Bermuda, the Striking Force was positioned so that it might steam north or south, as the strategic situation dictated. Scouting Force found a home in Trinidad, another of the Destroyer-Deal base sites. Originally based at Newport, the Ocean Escort Force later moved to Halifax when the U. S. Navy finally began to escort convoys in September. Several smaller units of old destroyers, patrol vessels, and aircraft were stationed along the East Coast.¹⁵⁶

These deployments did not follow the original plan which called for the Support Force to be stationed in Britain at the bases chosen by Denfeld during his March visit. These bases would not be ready until 1942, however, so the CNO decided to base the Support Force closer to home, at Argentia, a small port on the southern coast of Newfoundland. The U. S. Navy enjoyed basing rights there from the Destroyer-Deal, and Argentia provided the Support Force with a base close to the segment of the transatlantic convoy routes where the American destroyers would be operating. Argentia's proximity to Canada made it easy for the Support Force to coordinate escort operations with the Royal Canadian Navy.

Roosevelt was not ready to involve his government in belligerent operations in April, which was just as well because the Atlantic Fleet was unprepared to escort convoys. King needed more ships, the crews needed more training, and the higher headquarters needed time to perfect coordination. The War Plans Division summarized the state of readiness of the escort forces on 1 April. "The Atlantic Fleet is unable to provide a proper degree of safety for convoys in the Western Atlantic, and to provide an important striking unit for catching raiders. The following reinforcements are necessary: three battleships (Idaho, New Mexico,

Mississippi), one carrier (preferably Lexington), six destroyer leaders, twelve destroyers, four light cruisers (new)."¹⁵⁷ Nonetheless, the transfers would not appear in the Atlantic until the summer.

As an alternative, FDR and the CNO instructed the Atlantic Fleet to initiate other "short-of-war" operations, and this led to the strategy of battleship sweeps which busied the fleet from May to August. Churchill had suggested that Atlantic Fleet ships "cruise about" so as to deter Axis surface raiders; he also wanted King's task forces to help the Royal Navy round up German supply ships.¹⁵⁸ Of immediate concern was the German move to extend their War Zone all the way to 38 W in April. The line ran south of Greenland, then slanted diagonally southeast to 20 W at the latitude of the Bay of Biscay. In 1940, FDR had suggested to Stark that the Neutrality Patrol should operate out to approximately the western boundary of the German War Zone, but at that Stark persuaded Roosevelt that such an area was too large for the Neutrality Patrol. By April 1941, however, the Atlantic Fleet was composed of some 159 ships, and three battleships, one aircraft carrier, four cruisers, and a destroyer squadron were due to be transferred by May. Thus, on April 18, Roosevelt extended the Neutrality Zone to 26 W, an area that included Greenland, Iceland, and the

Azores, but not the strategic Cape Verde Islands.

Churchill expressed his delight on 24 April that Roosevelt had decided to patrol this area, since he was especially concerned that the Scharnhorst and Gneisenau might appear again off Newfoundland, a major convoy traffic area. Roosevelt's decision, combined with the Admiralty's move to a coast-to-coast transatlantic convoy system that month, posed problems for the German Navy. Admiral Raeder pressed for Hitler to authorize U-boats to attack shipping along the Eastern Seaboard of the United States, but Hitler refused; he did not want to get entangled in an incident that might bring the United States into the war. His mind was on Operation Barbarossa, the invasion of Russia. Hitler authorized the U-boats to operate in the Western Atlantic, but not off the East Coast of the United States. The extension of U-boat operations to the western Atlantic endangered convoy routes south of Greenland, and Churchill pointed this out to Roosevelt as part of his campaign to involve the United States in the war effort.¹⁵⁹

Rising tension in the Far East disrupted Stark's plan to strengthen the Atlantic Fleet. Japan and the Soviet Union signed a Non-Aggression Pact on 13 April 1941, and Washington's attention shifted to the Pacific. Roosevelt

temporarily suspended transfer of ships from Pacific Fleet to the Atlantic, and again postponed the Navy's plans to escort transatlantic convoys.

Nonetheless, the battleship sweeps began in April. The battleships Texas, Arkansas, and New York, operating out of Newport, swept out to 50 W longitude and then steamed along a track to the northeast and the edge of the German War Zone. The battleships spent three weeks at sea, and then had a week off in port. While they rested, the heavy cruisers Tuscaloosa and Wichita conducted the sweeps. The orders for the ships were to locate and broadcast the positions of Axis ships in Neutrality Zone to the British. There was little public pretense of any hint of neutrality, even by the White House.

The patrol track covered an area near the Denmark Straits which separated Greenland and Iceland, the passage used by the Scharnhorst and the Gneisenau to pounce on the trade routes. The Admiralty greatly feared a breakout by the recently commissioned Bismarck, reportedly the most powerful battleship in the world at the time. Protected by the thickest armor, she made twenty-eight knots, and carried a battery of eight 15-inch and sixteen 6-inch guns. To prevent her from breaking out, Stark proposed a three-

layered defense in depth--the British Home Fleet, the Atlantic Fleet's battleship sweeps, and covering forces at Bermuda and Gibraltar.¹⁶⁰ The strategic concept was to prevent raiders from transiting the Denmark Strait or, if they did, to be ready to chase and engage them before they had time to attack the convoys.

The sweeps accomplished little and were merely a show of force and American sentiment. The old battleships were too old and slow to be effective against a modern, fast capital ship such as the Bismarck. The American cruisers were too lightly armed, and none of the American ships had the wartime experience to match the Germans. What was even more troublesome was the question whether they could deal with the U-boats. The disadvantages in this instance were even more pronounced. The U. S. battleships and cruisers had no ASW gear -- no sound detection devices, no depth charges. They offered big targets, while being slow to maneuver at high speeds. In the event, none of this mattered because American intelligence and sighting reports soon disclosed that the U-boats remained inside the German War Zone. Only occasionally one might venture into the Neutrality Zone to hunt for convoys heading toward the German War Zone. Roosevelt may have hoped that the American ships operating close to the German War Zone would provoke an incident that

would bring the United States into the war, but if that was the case he was frustrated.

Secretary of War Henry Stimson believed the patrols to be belligerent acts, and he wanted FDR to admit this publicly. Roosevelt "kept reverting to the fact that the force in the Atlantic was merely going to patrol to watch for any aggressor and to report to America," Stimson recalled. "I answered there, with a smile on my face, saying, 'But you are not going to report the presence of the German Fleet to the Americas. You are going to report it to the British Fleet.' I wanted him to be honest with himself..."¹⁶¹ Alluding to the 1798 Quasi-War with France, FDR suggested that the United States should fight an undeclared war against Axis powers, and on 18 April he ordered the Atlantic Fleet to attack any Axis ships found in the expanded Neutrality Zone. Stimson and Navy Secretary Frank Knox agreed that the President's tortured reasoning was too clever.

The effort to make the Atlantic Fleet battleship sweeps successful brought the Admiralty and the Navy Department one step more toward open collaboration. To help the sweeping task groups locate German shipping, the British provided Stark with a plot of their own Atlantic trade. "Reports

will be sent daily through ALUSNA London of positions of British naval vessels, convoys, and merchant ships, position being determined by grid system, " Ghormley told OpNav on 26 April. "Expect that 1st dispatch giving positions will be sent the 28th. Description of grid will be sent to Dankwerts ... at present the plan is to change grids at some definite period, say monthly."¹⁶²

In early May, attention briefly reverted to Greenland, where Navy and Army planers were interested in establishing airdromes on the southeast coast to facilitate aircraft patrols of the Denmark Strait. Stark sent the Coast Guard cutters Modoc and Algonquin to reconnaissance the area for possible base sites. Suitable ground was found near Angmagssalik in the south, and in late May, the Army and Navy coordinated a means to ship two construction battalions to Greenland to build new airdromes. In June, two Atlantic Fleet four-stackers escorted three transports of Army engineers to Greenland, where they promptly began work on a new airfield.¹⁶³ Throughout May, and for the rest of the summer, Coast Guard cutters, assisted by PBY's operating from Argentia, continued their searches for German weather stations. No weather stations were located, although the PBYs intercepted and drove off several German long-range reconnaissance aircraft.

Patrol operations in the Atlantic took on an unprecedented priority in May. Rumors of Bismarck's first sortie circled within the intelligence community. To guard against the threat, King sent his battleships sweeping north, and kept his carriers on alert in the Central Atlantic. The Texas departed Newport on 5 May, steamed to 40N 50W, then turned northeast headed for 54N 30W. The Texas patrolled the area until 23 May, when she returned to Newport. On 27 May, the Arkansas left Newport for the same area, and remained there on watch until returning home on 17 June. Further south, the Ranger, the cruiser Vincennes, and the destroyers Sampson and Eberle departed Bermuda on 9 May to patrol a long stretch of the Central Atlantic from Bermuda to 40 N latitude, 35 W longitude, just 100 miles northwest of the Azores. The group remained at sea in an alert status until 23 May, when the Wasp and her escorts relieved the Ranger's group. While the surface ship patrols continued, King sent the tender Abemarle to Argentinia to establish a seaplane base to be used to supplement the battleship sweeps with air patrols. In the midst of their training, the PBY's of Patrol Squadron 52 were called to Argentinia, and within days began searching for the Bismarck.¹⁶⁴

Early on the 24th of May, the Bismarck and her heavy cruiser escort Prinz Eugen engaged the British battleship

Prince of Wales and the battlecruiser Hood in the Denmark Straits. The Bismarck's accurate plunging fire scored a hit on the Hood's magazines, and she blew up and sank ten minutes into the battle. The Prince of Wales, having been hit by both German ships, retired. Two British cruisers on the scene continued to shadow the German raiders, however. By this time, King had put the Atlantic Fleet on alert. That day, Bristol ordered patrol plane sorties, and at 1440, the first four PBY's flew off in search of the Bismarck. Nine more went up for the search at 1720, but none of them found her in the black of night and fog.¹⁶⁵ At the same time, further south, the CNO ordered the Wasp and her escorts, the cruiser Quincy and the destroyers Livermore and Kearny to advance further north in anticipation of action with the German battleship. According to A. H. Williamson, then a lieutenant in the operations department on board the Livermore, the group "was under orders to engage and sink the Bismarck, were she sighted."¹⁶⁶

The British cruisers shadowing the Bismarck lost radar contact on the 25th. The PBY patrols therefore became even more important. British intelligence at Bletchley Park intercepted a message from the Bismarck to Raeder late on the 25th, and this provided the key to locating her. Both U. S. Navy PBYs and Royal Navy Coastal Command patrol planes

were ordered to investigate the area where British intelligence guessed the Bismarck to be. An American plane did not spot the ship, but a U. S. Navy pilot did. At 1030 on 26 May, Ensign Leonard B. Smith, serving as pilot/advisor in a Coastal Command PBY, ducked through a cloud cover and found the German battleship. Two other British PBYs flown by American "advisors" shared reconnaissance duties with Smith the rest of that day. This sighting allowed the Admiralty to put several British capital ships on converging courses with the Bismarck, and before she could reach the French coast, two British battleships, four cruisers, two aircraft carriers, and several destroyers found and sank her on 27 May.

The destruction of the Bismarck virtually ended the German surface threat for the rest of the war, although this was not obvious at the time. Hitler did not want to lose any more German capital ships for fear of breaking morale, and he refused to send out another surface raider until 1943. Opinion within the Admiralty and the Navy Department about German intentions was divided, but both headquarters agreed on the need for continued precautions. The Germans still had the Scharnhorst, the Gneisenau, two pocket battleships, and the cruisers Hipper and Prinz Eugen; any of these ships might conduct anti-trade operations from ports in France.

To impress the seriousness of the German threat on the American people, Roosevelt proclaimed a state of national emergency on 27 May 1941, the day the Bismarck went down.

FDR did not, however, put the escort-of-convoy plan into effect, with the result that Task Force One remained off the Denmark Strait, and the sweeps of the Central Atlantic by the carriers of the Striking Force continued. On 29 May, Stark ordered patrol planes from Argentia and a task group composed of the New York and three destroyers to "give convoy HX.129 any practicable surveillance" by sweeping the Davis Strait.¹⁶⁷ Soon thereafter, the New York was recalled, and the Arkansas took over patrol duties in the north until mid-June. She was relieved on 15 June by the New York, which patrolled until 6 July. The Texas also made sweeps in June. Off to the south, the Ranger and her escorts relieved the Wasp force in the Central Atlantic on 31 May. The Ranger task group patrolled there until 14 June, when once again the Wasp and her consorts sortied and relieved the Ranger. The Wasp remained on station until 25 June.¹⁶⁸

In May, FDR decided to withdraw his suspension of transfers to the Atlantic Fleet from the Pacific. There were several reasons for his decision, one being the Bismarck's sortie,

which seemed to prove true the President's suspicions that Hitler longed to infringe on American Neutrality Zone operations. Also, German-Vichy French cooperation had escalated in the course of 1941, and Roosevelt feared the Germans would receive rights to station units in Dakar on the west coast of Africa. FDR further feared German occupation of the Cape Verde Islands and the Azores, which would provide U-boats and surface ships alike with advance bases out of range of many British air and surface patrols. Hoping to offset the apparent emergency posed by these threats, Roosevelt in May bolstered the Atlantic Fleet through ship transfers from the Pacific to the Atlantic. Beginning in mid-May, and continuing at staggered intervals through June, the transfers ordered by FDR added the carrier Yorktown, the old battleships New Mexico, Idaho, and Mississippi, four new light cruisers, and two squadrons of new destroyers to the Atlantic Fleet, bringing King's forces to a strength of 355 ships.¹⁶⁹

Roosevelt also transferred the ships to the Atlantic in anticipation of amphibious operations to occupy the Azores and French Martinique in the Caribbean. While the plans to occupy Martinique were canceled, since the Caribbean patrols effectively isolated the French warships, Roosevelt continued to consider plans to take the Cape Verde Islands

and the Azores. Churchill had been interested in wresting these islands away from the Portuguese, as he feared that the Germans would occupy the islands should Hitler move into Spain and Portugal. Across the ocean, FDR believed a German base on either island group posed a threat to Western Hemispheric security, as the Germans could use the islands as bases from which to operate U-boats, surface ships, even long-range bombers against territory and ships inside the American Neutrality Zone. As a result, Roosevelt in late April saw the Portuguese ambassador and inquired as to the possibility of America occupying the islands for security measures. His intentions did not meet a warm reception, and on 1 May, FDR informed Churchill that Portugal issued "strong protests" over a possible American occupation of the Azores or Cape Verde Islands.¹⁷⁰ Roosevelt "deferred" the operation for the time being, but instructed Stark to continue work on occupation plans in the event that the Portuguese changed their minds. Roosevelt took additional steps to assure military readiness for the operation. He approved an expansion of the Marine Corps to 75,000 men, and told the Commandant, General Thomas Holcomb, to concentrate the Marines and organize and equip an overseas expeditionary force, hinting that "an expedition" against the Azores "actually may be the next step we take."¹⁷¹

On 6 May, Pound reiterated to Ghormley that the British intended to occupy the islands "if Germany attacks Spain or Portugal."¹⁷² Throughout May, Churchill tried to lure FDR into occupying the islands by suggesting that Hitler intended to attack Spain and Portugal soon. Churchill's prodding may have provoked Roosevelt's 22 May meeting with Stark, Turner, and Army Chief of Staff, General George C. Marshall to discuss the possibility of a joint Army-Navy amphibious operation to occupy both the Cape Verde Islands and the Azores. Stark maintained that the Navy would need three months to prepare for an operation of such a magnitude, but the President shot back, "We've got to be ready in one month."¹⁷³

At the end of May, Turner submitted the plan for the occupation of the Azores and Cape Verde Islands, Plan Grey. Turner envisioned a 28,000 man expeditionary force consisting of the First Marine Division and the 1st Army Division to land on the islands no later than 22 June.¹⁷⁴ On paper, this force was formidable, but in reality there was a lack of machine guns and artillery pieces to effectively and properly support a force that size. The plan itself was unsound for several reasons. Although the liner America would be available as a transport, Stark rightly pointed out that both the Navy and Army did not have

the transports available to move such a force and sustain operations that far from America for a long period of time.¹⁷⁵ Turner proposed to offset the shortage of transports by establishing a system whereby after the first wave of 10,000 men landed, the transports returned to the U. S. to pick up the reserves and ferry them back to the Azores as soon as possible, but this was ridiculously unrealistic. Other complications included the rocky coastlines of the islands, which offered many obstacles to an amphibious landing, and FDR's short timeline, which allowed the Marines and the Army troops inadequate time for proper training and preparation. Fortunately, Roosevelt called off the excursion at the end of May, after Portugal repeatedly warned that any invasion -- German, British, American, or otherwise -- would be met with resistance. Portugal had established a 13,000 man garrison on the Azores by 31 May, and Roosevelt felt satisfied that no invasion could be successful against a force this size dug in along the beaches.

Besides, Roosevelt had long been concerned with another island more strategically vital than the Azores and Cape Verdes -- Iceland. Control of Iceland meant the Allies could monitor the Denmark Straits, the key to preventing German raiders from entering the Atlantic, and operate aircraft against much of the area patrolled by U-boats in

1940 and the first part of 1941. The U. S. entertained thoughts of operating escort groups for transatlantic convoys from Iceland. Many of the old World War I-era destroyers the U. S. Navy would have to rely on in the escort duties had a relatively short range, but operating from Iceland, which was close to the convoy routes, allowed these old warships more time on station than they would have if they travelled all the way from Argentina.

The British had recognized Iceland's value as one key to bottling up Germany's surface raiders in the North Sea, away from the convoys, and welcomed Denmark's invitation to occupy the island after the fall of Denmark in April 1940. However, Iceland warranted a whole division for garrison, and by 1941, these British troops were needed elsewhere, especially in the Mediterranean. In late 1940, Churchill had indicated to Roosevelt that it would be in America's best strategic interests to occupy Iceland, and even the exiled Danish government asked Roosevelt to consider placing Iceland "under the protection of the Monroe Doctrine" in July and again in September 1940. Roosevelt refused to take such drastic action, although he ordered the War Plans Division to investigate the advantages and feasibility of having a U. S. garrison occupy Iceland.

Turner assigned two naval officers, Commanders H.W. Hill and F.P. Patterson to investigate the feasibility of operating naval forces from Iceland, and on 6 February, they submitted their report, which provided some interesting numbers concerning the U-boat war, and reached several conclusions on how Iceland fit into the U. S. Navy's escorts plans. In late 1940, the British were losing 90,000 tons of shipping per week, most of the losses the result of torpedoings by U-boats, especially those near Iceland. Though the weather at Iceland was bad year-round and limited aircraft anti-submarine operations, the island provided a base site for refueling Support Force escort ships, and for stationing a Striking Force ready to react against German surface raiders. A proper defense of the crucial island would require 25,000 troops, but on 22 April, the Navy Department told FDR that it did not possess enough transports to transport a proper number of Marines to Iceland for the initial occupation.¹⁷⁶

The delegates at the March ABC-1 conversations had placed Iceland in the British area of operations. However, in April, Stark ordered the destroyer Niblack to conduct a reconnaissance of Iceland. Enroute to Iceland, the Niblack stopped to rescue survivors of a freighter sunk days earlier by a German U-boat, then continued. The Niblack's skipper,

Commander D.L. Ryan, knew the ship was in U-boat infested waters, and it came as no surprise to him when Niblack picked up a sonar contact at 0840Z. Rather than run to escape attack, the Niblack dropped a pattern of depth charges on the contact. Post war investigations revealed no U-boats were in the vicinity at the time; the Niblack probably had attacked a large fish. But the incident became infamous at the first shot fired by the Atlantic Fleet in the war.¹⁷⁷

The Niblack arrived at Iceland on 12 April, and thereafter her crew surveyed the area for eleven days. The Niblack returned to Newport on 28 April, and on 2 May, Ryan filed his report. The report was similar to that of Hill and Patterson. Ryan described the bad weather along the north and east coast of the island, and how ice blocked the main harbors during the winter. However, the western and southern coasts averaged 32 degrees during the winter, and no ice blocked any harbor entrances. Winds could be strong, and prevent aircraft use at times, but overall the weather was good enough on the eastern and southern coasts for regular Navy operations.¹⁷⁸

Most important, Iceland was ideal for stationing convoy escort ships. "There is available at Hvalfjordur a fairly

well protected undeveloped harbor which upon the placing of proper mooring buoys is capable of accommodating seventy-two destroyers, eighteen larger men-of-war, and necessary train of two oilers, two refrigerator ships, four ships repair tenders, and a floating drydock," Ryan detailed in his report.¹⁷⁹ Behind net defenses in the inner harbor was an anchorage large enough to hold twenty-seven large merchant vessels. The British had already begun work on two airfields at Kaldadarnes and Reykjavik that could accommodate "200 medium-sized land bombers with which to maintain an anti-submarine air patrol about Iceland."¹⁸⁰ Additionally, while bad weather in winter allowed only year round operations by twelve tender-based flying boats, in the summer an additional twenty-four or thirty-six aircraft could be counted on.¹⁸¹ Moreover, the British had built housing, supply and storage facilities, and repair facilities at Reykjavik and Hvalfjordur, and the U. S. Navy might use these facilities until it could construct its own.¹⁸²

At the end of May, the War Plans Division completed work on the Iceland occupation plan. Meanwhile, Churchill renewed his requests that Roosevelt consider occupying Iceland, pleading that the U. S. Navy's occupation would release one full British division for use in the Middle East.¹⁸³ On 3

June, Churchill formally requested Roosevelt to proceed with the Iceland operation. Roosevelt vacillated while he considered the implications of Plan Dog on the U. S. Navy's role in the present war, and reflected on the Navy's escort-of-convoy responsibilities as per the ABC-1 agreement. Roosevelt reached a decision on 16 June and ordered Stark to commence Operation Indigo -- the occupation of Iceland.¹⁸⁴

June saw the Marine Corps conduct several aerial reconnaissance patrols of Iceland. In the United States, a composite Marine brigade was assembled under the command of Brigadier General John Marston, and then briefed and trained on how to conduct the occupation. In the meantime, the state department negotiated the terms of the occupation with the Icelanders themselves. Though not completely trustful of the British, the Icelanders welcomed the Americans, and on 7 July, formally invited the United States to occupy the island and take charge of its defense.¹⁸⁵

Roosevelt had instructed Stark to begin the operation under a cloud of secrecy, before receiving the formal invitation from the Icelandic government and even as the U. S. Senate debated the feasibility of the proposed Iceland operation. The 4000-man First Marine Brigade in four transports and two cargo ships steamed out of Charleston on 22 June, and later

that day were joined by Rear Admiral LeBreton's Task Force 19, which consisted of the battleships New York and Arkansas, the light cruisers Brooklyn and Nashville, thirteen destroyers, an oiler, and a fleet tug. Five destroyers formed a line 10,000 yards ahead of the convoy, and the other eight destroyers formed an inner anti-submarine screen around the transports and battlegroups. The ships stopped at Argentia on the 27th to top off with fuel, and three days later departed for Iceland.¹⁸⁶ The group arrived on the 7th, and the Marines went ashore on the 8th. The cargo ships began to unload their supplies at the limited dock space in Reykjavik Harbor, and by the evening of 12 July, all cargo had been unloaded and all 4,095 Marines were ashore. The next day, Task Force 19 and the transports departed for the States.¹⁸⁷

The Germans were furious. Raeder argued that the American landing at Iceland was an act of war. He correctly assumed that the U. S. Navy was almost ready to begin escort-of-convoy operations, and since Iceland was well within Germany's declared War Zone, he lobbied Hitler for permission to attack U. S. Navy warships operating in proximity to Iceland. Inasmuch as he was tied up with the details of the invasion of Russia that commenced on 22 June, however, Hitler chose to remain cautious. In 1941, the

German military was strong, but could not afford a two front war against Russia, Britain, and the United States. Hitler demanded that the German Navy "should continue to avoid all incidents at sea."¹⁸⁸ Roosevelt seemingly headed in the opposite direction. As soon as he realized the need to protect supply convoys to Iceland, Roosevelt told Stark to authorize all Atlantic Fleet units to attack Axis surface ships within 100 miles of the convoys, and to attack any U-boats "actually within sight or sound contact" of U. S.-Icelandic shipping or escorts.¹⁸⁹

The supply convoys and several troops convoys loaded with Army garrison units ran to Iceland throughout July and August, but there were no instances of U-boat contacts. A force of 25,000 troops was established on Iceland by the end of September. While the U. S. Navy began to establish escort base facilities on the island, the British began to withdraw their troops that might be used for action in another theater, most likely the Mediterranean. The Marines and Army troops were supported by a squadron of Army P-40 pursuit planes delivered by the carrier Wasp in early August, and twelve seaplanes operating from moorings established by the seaplane tender Goldsborough at Skerjafjordhur Harbor near Reykjavik.¹⁹⁰ Another tender, the George E. Badger, was scheduled to arrive later and

increase the size of the PBY force whose job it was to search the Denmark Straits for German surface raiders attempting a breakout into the trade lanes, and to assist convoys in locating surface and U-boat threats. When the U. S. Navy began convoy escort operations in September, Iceland became active as a haven and vital refueling point for the destroyermen on the Atlantic run.

Events in the first half of 1941 seemed to convince FDR that the U. S. would be drawn into declaring war soon. It appeared that only war could stop Japanese aggression in the Pacific, and the Tripartite Pact meant that any war with the Japanese brought Germany and Italy in on Japan's side. On the other hand, Britain's survival was assured, not only by the Royal Air Force victory in the Battle of Britain, but also, ironically, because Hitler had stretched his forces too far in starting a two-front war by invading Russia. Stark realized that with Germany occupied with the massive Soviet operation, the United States had a superb opportunity to commence more ambitious Atlantic Fleet operations, and he urged Roosevelt to "seize the psychological opportunity presented by the Russian-German clash and announce and start escorting immediately."¹⁹¹ More delays in commencing escort operations would result in a lack of U. S. Navy anti-submarine experience when war came.

Roosevelt agreed with Stark, and in late July, ordered the escort-of-convoy plan to be put into effect. Called Western Hemisphere Defense Plan No. 4, or WPL-51, it was the product of seven months of work by the War Plans Division. In that time, the War Plans Division had drafted three plans for Atlantic Fleet operations until the Plans Division, Roosevelt, Stark, Churchill and Pound finally agreed WPL-51 was the best. The first two plans, Western Hemisphere Defense Plans No. 1 and No. 2, merely outlined the types of operations the Atlantic Fleet was already conducting -- battleship sweeps, patrols off Iceland and Greenland, shadowing belligerent vessels and reporting their positions in plain English. The plans stipulated that the British and Americans would exchange intelligence information about the positions of Axis ships. However, since these plans did not provide for Atlantic Fleet escort-of-convoy operations, Roosevelt canceled them.¹⁹²

Western Hemisphere Defense Plan No. 3 was a different matter. It still tasked the Atlantic Fleet with sweeping operations, tracking belligerent vessels, and broadcasting sighting reports; in fact, Stark soon directed King to "interpret...WPL-51 as requiring the forces under his [King's] command to destroy surface raiders which attack shipping along the sea lanes between North America and

Iceland."¹⁹³ But WPL-51 also made the Atlantic Fleet, specifically the Support Force, responsible for the escort of all convoys west of 26 W. For the sake of neutral appearances, Roosevelt decided that the convoys to be escorted should include an Iceland or U. S. flagged vessel, and the War Plans Division acquiesced. In July, WPL-50 evolved into WPL-51--Western Hemisphere Defense Plan No. 4, the only difference between the two being Roosevelt's requirement that the convoys include American or Icelandic shipping. The official wording of WPL-51 was that the "United States will provide escort of its flag ships and Iceland flag ships and British vessels may join these American escorted ships. If the British follow this scheme its effect will be that the United States will escort all convoys in both directions west of longitude 26 W."¹⁹⁴

WPL-51 also detailed ship dispositions and structured escort group composition, and explained how Atlantic Fleet ships might be used to protect the convoys. All four Atlantic Fleet task forces had roles in the escort operations. In the northern trade routes, the Support Force would provide close ASW escort, and the Ocean Escort Force under LeBreton would maintain a covering force of a battleship or cruiser in close proximity to the convoy routes to deal with any German surface raiders. The South

American task force and the Striking Force based at Bermuda would escort any convoys in the southern half of the hemisphere, and continue patrol sweeps of the area when not engaged in convoy escort duties. Ideally, "five to six destroyers, two to three escort vessels, and several airplanes" would escort each convoy, and if an Axis surface ship is known to be at large, one battleship or two cruisers would supplement the close destroyer and corvette escort. The U. S. Navy hoped thirteen destroyers and twenty-seven corvettes of the Royal Canadian Navy might be available to assist in escort duties.¹⁹⁵

Admiral Raeder thought U. S. escort-of-convoy operations, like the occupation of Iceland, were an act of war. While it was true that the U. S. destroyers would protect ships laden with war material destined for Britain, WPL-51 justified the escort operations as "the policy of the United States to insure the safe arrival at destination of all the material being furnished by the United States to nations whose security was essential to the defense of the United States."¹⁹⁶ The U. S. had every right to protect its trade, and Roosevelt argued the escort operations were "short-of-war" operations, not an act of belligerency, although he warned that Axis submarines which threatened any U. S. escorted convoys would be attacked. FDR wanted escort

operations to begin as soon as possible, not only to involve the U. S. Navy more in war-like naval operations, but also to free British transatlantic escort forces for use elsewhere, such as the Mediterranean.

In August, Roosevelt requested a meeting with Churchill to discuss the strategy for fighting the war, and the escort-of-convoy plan. The two agreed to meet at Argentia, Newfoundland, the new, well-defended American escort base, on 9 August. Roosevelt boarded the Presidential yacht Potomac at New London on the 3rd, and the same day, his chief military advisors boarded the cruisers Augusta and Tuscaloosa in Martha's Vineyard. The yacht proceeded to Martha's Vineyard, and after Roosevelt transferred to the Augusta on 5 August, the two cruisers, escorted by five destroyers, headed north to Argentia. They arrived on 7 August, and two days later, in the wee hours of dawn, Churchill and his staff arrived aboard the British battleship Prince of Wales, still bearing the scars of her encounter with the Bismarck two months earlier. The Prince of Wales and Augusta exchanged honors, and the two heads of nations exchanged gifts. Then the formalities began.

Present for the United States were Stark, King, Turner, General Marshall, Admiral Ghormley, recently arrived from

London, officers of the War Plans Division, and members of the U. S. State Department, in addition to FDR. Churchill brought Pound, General Sir John Dill, the Chief of the Imperial General Staff, and several officers from the Admiralty's Plans Division. The British came well prepared for major staff talks like those of early 1941, but as Stark noted there was no U. S. agenda prepared for the meeting. Roosevelt had informed Stark and General Marshall of the meeting on 30 July, which had impaired their preparations for the meeting. The talks, nevertheless, proceeded well. In between dinner parties and luncheons on each of the flagships, the British and U. S. officers and diplomats exchanged ideas on overall strategy, ship dispositions, and escort-of-convoy duties. The political deliberations yielded the Atlantic Charter, in which both the U. S. and the British agreed that a political objective of the war would be to ensure self-determination for colonial interests, Allied and Axis alike, and to ensure a stable post-war trade policy.¹⁹⁷

The military discussions yielded several exchanges of ideas. The British seemed to convince the Americans of the feasibility of a Middle Eastern land campaign against the Axis, and the U. S. emphasized that a prolonged bombing campaign on German industries and a land war in France would

be necessary to ultimately defeating the Nazis. On the naval side, the delegates focused on the U. S. escort-of-convoy operations, and specifically that the U. S. was supposed to begin escorting by 1 September. In August, Stark explained that "the lack of merchant vessels immediately available makes it impractical to place the full escort plan (WPL-51) in effect as early as September 1st."¹⁹⁸ There was also some speculation as to whether King had enough escorts, and enough properly trained escorts.¹⁹⁹ The U. S. Navy had no standard anti-submarine warfare doctrine until June of 1941, and it took time to properly train Support Force's destroyers in escort-of-convoy doctrine. Stark estimated the U. S. would begin escort duties approximately 11 September. At Argentia, Stark and Pound agreed that the Atlantic Fleet would provide an escort group of at least five destroyers for each transatlantic convoy, plus a battleship or cruiser to act as an ocean escort that could be called to challenge any major German surface threat. The outcome of the U. S. Navy's commitment was that the Royal Navy could release fifty-two destroyers for escort service elsewhere.²⁰⁰

During the conference, the U. S. Navy representatives did not stipulate as to which convoys would be escorted under U. S. protection, since Roosevelt and the War Plans Division

would formalize that later. Nor were any significant ship dispositions agreed upon, save that the British could release a limited number of its convoy escorts for duty elsewhere. And the British came away from the discussions convinced the "Americans had a long way to go before they can plan any decisive part in the war."²⁰¹ Some historians argue the Argentinia Conference was not strategically important inasmuch as it merely repeated agreements between U. S. and Royal Navy officials made months ago at the ABC-1 talks. However, at Argentinia Roosevelt had in effect committed to the United States to the war. "The President had said that he would wage war, but not declare it, and that he would become more and more provocative. If the Germans did not like it, they could attack American forces," wrote one British delegate.²⁰² U. S. Navy vessels would attempt to provoke incidents that would lead America into the war, and the Navy's ships would fire at Axis vessels that might even appear to interfere with escort operations. The conference ended at 1657 on 12 August as the Prince of Wales steamed out of Argentinia Harbor bound for England.

Despite the emphases on events such as the Iceland occupation and the Argentinia Conference, the Atlantic Fleet did not forget its primary mission of patrolling the Neutrality Zone to deter Axis infringement on the Western

Hemisphere. June saw the continuation of the battleship sweeps to the north, with one notable incident. As the Texas, accompanied by three destroyers, was conducting an "extended" patrol sweep on the edge of the German War Zone, Kapitanleutnant Hermann Kottman in U-203 located the force. The U-boat skipper thought the battleship was in the German War Zone, although in fact it was not. Kottman chose to disregard Hitler's orders that no American ships be attacked, and he maneuvered his U-boat into firing position. Just as Kottman prepared to let loose the first torpedoes, the battleship and her escorts turned sharply away from the submerged U-boat. Kottman thought he had been sighted, but realized he was wrong when minutes later the ships resumed base course. He attempted to pursue, but the surface ships were too fast for the U-203. Though Kottman never launched his attack, he logged the incident and reported it to BdU within the next few days, and Hitler was furious. With his Russian venture well underway, Hitler wanted to avoid any incident with the United States more than ever. A directive from Hitler, Donitz ordered that all warships were to be positively identified as enemy before any further U-boat attacks were made anywhere. Additionally, Donitz stipulated that no U. S. warships would be attacked--even in the German War Zone.²⁰³

On 3 July, another incident involving a battleship occurred when lookouts aboard the Mississippi sighted what appeared to be a periscope 600 yards away. One of the escorting destroyers was detached to keep the submarine submerged, while the heavy ship lumbered away to safety. The destroyers did not pick up a sonar contact; the contact was probably false. However, Roosevelt used the incident to arouse suspicions as to whether German submarines were trying to sink American warships. The Mississippi again became the focus of attention on 14 August, when the U-43 sighted the battleship from a distance as she was escorting a convoy of U. S. cargo ships to Iceland, but the battleship was moving too fast and did not see the U-boat, and no confrontation occurred.²⁰⁴

The Navy was still active in the Central and South Atlantic. Between June and August, the carriers Wasp and Yorktown each made two more sweeps from Bermuda to eastward. In June, the Yorktown, the Vincennes, and two destroyers were sent to search a specific area at the request of the Admiralty, which believed a German supply ship was in the area. The ship was not found.²⁰⁵ Including the patrols in April and May, the Striking Force ships covered 54,568 miles, and carrier pilots flew 12,632 hours.²⁰⁶ In the South Atlantic, the four old light cruisers--Memphis, Omaha,

Cincinnati, and Milwaukee--and four modern destroyers of Ingram's Task Force 3 kept the southern half of the hemisphere "safe" from Axis aggression. The ships conducted patrols along the Trinidad-Cape Verdes-Brazil triangle, under orders to tail any Axis warships sighted in the Neutrality Zone, and await assistance from Striking Force before an engagement was forced. The routine was mundane. The first patrol was in April, conducted by the Memphis and Cincinnati. A scout plane from one of the cruisers sighted a heavily armed, flagless merchant. The cruisers gave chase, but could not catch her.²⁰⁷ From 24 April to 30 August, the ships of Task Force 3 made twenty-six patrols and steamed a total of 81,282 miles without one incident of consequence.²⁰⁸ Only Ingram's keen spirit kept morale high.

As the date when America was to begin its convoy escort duties neared, Support Force destroyers practiced anti-submarine tactics and escort doctrine with American submarines sent to Argentina in August. Roosevelt was anxious to find his "incident" that would provide Roosevelt with justification for his decision to escort convoys in the Western Atlantic, and Roosevelt got his wish on 4 September. That morning, the U. S. four-stacker Greer was steaming towards Iceland at seventeen knots, loaded with mail for the Marines at Reykjavik. The Greer's skipper, Lieutenant

Commander Laurence H. Frost, had been aboard for only thirty-five days; the Greer was Frost's first command. Ten miles away, the U-652 under Oberleutnant Georg-Werner Fraatz had just made an emergency dive to escape detection by a British Hudson patrol plane operating off Iceland. Unbeknownst to either captain, the Greer and U-652 were headed directly at one another.

At 0847Z, the emergency buzzer in Greer's wardroom sounded, and the officer of the deck informed Frost that a British Hudson had overflowed Greer, and signalled by light something about a U-boat in the vicinity. Greer was still 125 miles southwest of Iceland. Frost put his ship at general quarters, not intending to attack the submarine, but to locate the U-boat, track it, and send out position reports to direct British anti-submarine assets to the scene, typical procedure for a ship patrolling in the Neutrality Zone. At 0910, Greer reduced speed to ten knots, and Frost initiated a zig-zag patrol pattern, and conducted a sonar search of the area near 62-45 N, 27-37 W. Five minutes into the search, Radioman 2/C D. H. Shields made sonar contact with the U-652, bearing 000 degrees relative ahead 2,100 yards. The U-652 attempted underwater evasive moves to escape, but Shields and Greer hung with her.

Frost notified the British Hudson of the U-boat's presence. The pilot inquired as to Frost's intentions, and Frost replied that he would not attack, but continue to broadcast position reports. The pilot had enough fuel for one more attack, and at 1032, the Hudson swooped low and dropped four depth charges over the assumed position of the submarine, then left the scene. Though the depth charges exploded harmlessly far from the submarine, Fraatz knew he had been attacked. What he did not know was if it was the aircraft that had attacked or the destroyer. He never gained a good enough periscope angle to identify the destroyer's nationality, but he knew the aircraft was British, and so Fraatz assumed the same of the destroyer and decided to attack. At 1240 Fraatz maneuvered U-652 into a firing position off the starboard beam of the destroyer. In the Greer, Shields had noticed the change in aspect of the submarine, and informed Frost, who turned the Greer to counter the U-boat's maneuver. "The Greer had picked up his turn so quickly that Fraatz had to fire before he wanted to."²⁰⁹ The torpedo raced towards the Greer, but Frost's timely maneuver steered the destroyer clear of torpedo, which passed 100 yards off the beam. Frost counterattacked, dropping a pattern of eight depth charges. The explosions knocked out the submarine's light bulbs, but did no serious damage. At 1300, Fraatz came around and fired another

torpedo, but Frost turned the Greer destroyer inside the torpedo's wake, and again avoided being hit.

The rough seas affected sonar performance, and the Greer did not reacquire the sound contact. She continued to search the area, joined by a British destroyer one hour later. The British captain asked "if Greer wished to join her in a coordinated search," but Frost refused the offer and continued on his own pattern.²¹⁰ At 1507, Shields found the U-652 again, and Frost attacked with eleven depth charges, which yielded no results. The destroyer and U-boat remained at odds throughout the day, until Greer was ordered to cease searching and head for Iceland.

Frost had handled the destroyer well, having "located the U-boat in the first five minutes of her search, then maintained contact for three and a half hours," and then reacquiring the submarine later and maintaining contact for three more hours.²¹¹ The depth charge attacks were aggressive, although the boat was not damaged because the depth settings for the charges were too shallow. Still, Frost wondered if he had done the right thing in attacking. Roosevelt was very reassuring of his actions.

"The Greer incident provided the President with a

convenient opportunity to announce what had already been decided, that the U. S. would soon commence escort operations in the Western Atlantic."²¹² The President addressed the nation over the radio on 11 September, describing the incident as an unprovoked German attack. He carefully omitted the details of Greer's own attacks, and the eleven hour search and tracking of the submarine that followed. In the end, Roosevelt authorized Atlantic Fleet ships to "shoot on sight" when encountered by an Axis U-boat or surface raider, and ordered the long-awaited U. S. Navy escort program to commence operations.

In Germany, Raeder, as usual, was furious, while Hitler remained cautious. Hitler did not permit Raeder to extend the U-boat War Zone, and insisted that German vessels continue to avoid all incidents with the U. S. Navy. He refused to play into Roosevelt's hands by making "belligerent pronouncements and issuing provocative orders" to his navy.²¹³ But Roosevelt had already done that in his hemisphere, and so the war Hitler had hoped to avoid was now ready to begin.

At the beginning of the year, the United States had been a neutral nation aiding the Allied cause with technical information and moral support. By September 1941, the

United States was a belligerent, fighting an undeclared war versus the German Navy in the Northwestern Atlantic. The time for adhering to neutrality legislation had passed. The Atlantic Fleet cooperated with the Canadians and British to make the transatlantic escort-of-convoy operations successful. Months before Pearl Harbor even occurred, Atlantic sailors would fire at the enemy and themselves be fired upon. And some would die.

Chapter 5: Cooperating with Canadians

The Navy Department understood from the time that Stark drafted Plan Dog that successful Atlantic Fleet operations would involve a high level of coordination not only with the British, but also with the Royal Canadian Navy. And, American-Canadian collaboration assumed importance once Roosevelt decided that the Atlantic Fleet should participate in escort-of-convoy operations in September. ABC-1 and ABC-22 provided that Canadians share with the U. S. Navy in the responsibility for escorting convoys in the Western Atlantic, but accomplishing this proved quite difficult.

The Royal Canadian Navy's role in World War II is a tortured tale. The Canadian Navy had become independent of the British Royal Navy in only 1910, and only a few small vessels participated in World War I. After the war, Ottawa acquired a cruiser, two destroyers, and a few submarines from Britain, but in 1929 the Canadian government cut spending on its Navy so much that the fleet was reduced to only two destroyers and four trawlers. Soon after Canada declared war on Germany in 1939, these vessels joined the British Channel anti-invasion patrol owing to the "extreme emergency."²¹⁴ Prime Minister MacKenzie King granted

permission for the Canadian assets to be based in Britain, and in June Admiral Nelles ordered the four Canadian destroyers to be stationed on the east coast to the United Kingdom. Nelles placed these ships under British operational command, and by October 1940, virtually the entire Canadian Navy was under British control.²¹⁵

The success of the U-boat campaign in late 1940 put the Admiralty on notice that it would soon have to institute a transatlantic convoy system, and in this light improving and enlarging the Canadian Navy became an important policy. In late 1940, the British transferred ten corvettes to the Canadian Navy, and after the Destroyer-Deal, six ex-U. S. Navy destroyers were added to the Royal Canadian Navy. The British organized these ships into ocean escort groups for convoy duty. The British destroyer losses in the first year of the war had reduced their own convoy escort pool, so the Admiralty used the Canadian vessels to help in the North Atlantic trade routes. The Canadian Navy was expanding so rapidly, however, that most of its crews were poorly trained, so the British also instituted a training system. Royal Navy advisors were sent to Canada to train the new recruits in British ASW methods. Each Canadian escort group was commanded by a Royal Navy officer, who trained the escorts in British ASW routines and methods. The Canadian

escort groups operated on their own starting in May 1941.

The important thing was that the Canadian Navy had established itself as a virtual subsidiary of the Royal Navy by this time. As for a history of American-Canadian cooperation, it did not exist. No established channels of communications existed, leading figures did not know and understand one another, and the triangular aspect of the relationships was altogether vexing. In short, Anglo-American naval cooperation brought the U. S. Navy into contact with Naval Service Headquarters, Ottawa, simply by reason of necessity. The Canadian CNO, Admiral Percy Nelles, and his staff welcomed the new relationship in the hope that the Navy Department would someday give them ships and equipment under the Lend Lease program. Responsibilities and even control of Canadian naval units in the Western Hemisphere were a part of staff conversations and Anglo-American naval agreements in 1940 and 1941, but Ottawa was not invited to join the ABC talks nor rule on its report.

The seeds of American-Canadian naval cooperation were planted in August 1939 when British Captain Eric Brand was "loaned" to the Canadian Navy to be the Director of Naval Intelligence and Trade at Naval Headquarters in Ottawa.

Brand established a clearinghouse for shipping intelligence for North America, and throughout 1939-1940, much of the intelligence fed to the Navy Department concerning British ships' movements and estimates of German movements came via his Ottawa office. This intelligence may have been useful to the U. S. Navy's Neutrality Patrol.

There was a trace of hostility that infected naval relations between Ottawa and Washington, however, and it first surfaced during the Destroyer-Deal. MacKenzie King asked Nelles if the Canadian Navy had any use for the old American destroyers, and Nelles replied that the four-stackers were too old to be of any value. King agreed that the Destroyer-Deal was necessary, but made it clear that he did not want the British to lease or give base sites in Canada to the United States. However, Washington insisted on a Canadian base, with the result that London convinced the King cabinet to agree to the transfer of the Argentia base to the U. S. Navy in return for six destroyers. Thus, one consequence of the Canadians allowing the British to control the Royal Canadian Navy was that Canada was forced to accept the unpopular deal and provide the U. S. with a base at Argentia. The Canadians were bitter because Washington had pressed so hard for the Newfoundland site.²¹⁶ In a strategic sense, the deal was good for the Canadians,

who found it easy to cooperate with the Support Force escort groups when combined Canadian-American operations got underway in September 1941. Moreover, the six old destroyers transferred to the Canadian Navy proved to be very seaworthy and became the backbone of the Royal Canadian Navy escort-of-convoy effort. The Navy Department sent an attache, Commander Lothrop, to Ottawa in the summer of 1940, tasked with reporting Canada's contribution to the convoy system and the war effort as a whole. Lothrop also approached the Canadians about establishing military staff discussions, and his reports indicated the Canadians wanted to discuss a range of defense measures for the Western Hemisphere.

Lothrop's work led to the formation of the U. S.-Canadian Joint Board of Defense in August 1940, whose first product was War Plan Black. It proposed a German defeat of Britain, and outlined ways in which Canada and the United States might defend North America and the rest of the British empire. The U. S. and Canadian representatives agreed that the United States, with its larger fleet and capital ships, would assume control of the Western Atlantic and that the U. S. Navy capital ships would conduct sweeps not unlike those being conducted by the Neutrality Patrol. Canadian corvettes would patrol the coast and defend harbors and

escort some of the convoys outbound from Halifax. While Plan Black did not result in any immediate naval cooperation, by devising a war plan at their first conference, the Americans and Canadians showed that they were capable of efficient and fast naval cooperation.²¹⁷

The Canadians naturally resented not being invited to participate in the ABC Staff talks in January 1941, but Ottawa had little choice but to agree with the result. The ABC-1 Staff Conversations worsened USN-Royal Canadian Navy relations, but also set the stage for more cooperation. The Canadians were not invited to attend. The British and Americans split the Atlantic into two strategic operational areas, and the U.S Atlantic Fleet would command escort-of-convoy operations in the Western Atlantic. When escort operations commenced, the British promised that the Canadian Navy would effectively be placed under the operational control of the U. S. Navy. In effect, the Royal Canadian Navy, which had been waging a declared war for over a year, would be a subsidiary to a neutral nation.

ABC-1 infuriated the Canadians because it relegated the Royal Canadian Navy to a coastal defense role. Nonetheless, Prime Minister King and Nelles wanted to get the Royal Canadian Navy involved in ocean escorting, and to be given

strategic responsibility for some part of the Western Atlantic. Having built up a small fleet of destroyers and corvettes equipped for ASW, the Royal Canadian Navy could organize three or four ocean escort groups. However, with the British handling most operational aspects of the Royal Canadian Navy, Nelles was powerless to expand the Canadian Navy's role.²¹⁸

The Canadians demanded that ABC-1 be revised or that another agreement between the United States and Canada provide for Royal Canadian Navy operations under Canadian operational control. Soon after the ABC-1 talks ended, Ottawa called another meeting of the Permanent Joint Defense Board and when it convened, U. S. Navy and Royal Canadian Navy representatives discussed the role of the Canadian ships and the command structure for the Western Atlantic as laid out in ABC-1. The delegates drafted an agreement that outlined U. S.-Canadian naval cooperation. The agreement was forwarded to President Roosevelt and Prime Minister King, and they signed. This agreement, dubbed ABC-22, was added as an addendum to the ABC-1 agreement.²¹⁹

ABC-22 ensured the Royal Canadian Navy's role had grown from one of pure coastal defense and port protection to ocean escort. The Canadian's would still be responsible for

defense of their own coastal waters. However, the agreement required the Royal Canadian Navy to commit five destroyers and fifteen corvettes to cooperate with USN forces in Western Atlantic convoy escort duties. Whether Canada had regained operational control of her Navy was unclear. ABC-22 stipulated that the Royal Canadian Navy retained control of its own forces and that coordination with U. S. forces was to be by "mutual cooperation." On the other hand, the agreement stressed the need for a unified command, but never stated who would be in command of directing the escort forces. The Canadians kept high ranking officers at Newfoundland once escort operations began, hoping their rank would warrant overall command. However, it was the U. S. Navy with its larger commitment of ships that ran the show. While the Canadians accepted being under operational control in a defensive, worst case type war as described in Plan Black, King and Nelles resented that Royal Canadian Navy would not have control over its own Navy in what it considered was offensive operations, like escort of convoys.²²⁰

ABC-22 guaranteed the Canadian Navy responsibility for organizing and assembling convoys in North America. Naval Service Headquarters had assisted in organizing many convoys outbound from Halifax for Britain in 1939 and 1940. The

Canadians created the Naval Control Service (NSC) to organize the merchantmen into convoys at ports of embarkation in North America, usually Halifax or Sydney. NSC was organized into Naval Control Service Offices (NCSO's) at eight main ports and fifteen reporting areas in Canada and the United States. Additionally, Canadian officers serving as Consular Shipping Advisors (CSA's) were placed in thirteen other major U. S. ports. The CSA's advised the American shipping authorities, although in reality, until 1942, the CSA's did the work and the American officers observed to learn the job. The NSCO's and CSA's organized the merchant ships in their ports into small convoys for the journey to the main port of embarkation in Newfoundland, where Commanding Officer Atlantic Coast (COAC) and his staff combined these smaller to assemble to the larger, transatlantic convoy. This efficient process mirrored the British practice in the United Kingdom.²²¹

Not only did the Canadian Naval Control Service assemble and organize all convoys departing North American ports, they passed all information concerning route and orders for these convoys. The suggested routes for convoys westbound from Britain to North America would be promulgated by the Admiralty through Ottawa. When the U. S. Navy began convoy operations in September 1941, Ottawa was the middleman

between the Admiralty and OpNav for all route proposals and intelligence information travelling to Washington. This was one of the most important aspects of U. S.-Canadian cooperation.²²²

American-Canadian cooperation came to a stalemate as the Canadian Navy began to prepare for her upcoming escort-of-convoy operations. The Admiralty asked Nelles in April to begin organizing the Royal Canadian Navy into escort groups. Some weeks later, the Admiralty requested Nelles to develop a base for the Canadian escort groups, begin training there, and then start escort operations in cooperation with the British in May. Nelles began to assemble the Canadian Navy's destroyers and corvettes into escort groups of four to five ships. He briefed his escort commanders on the part they would play in assisting in escorting convoys. The Admiralty had decided to establish a completely transatlantic escort system. British escorts operating from Britain would stay with the convoy until a rendezvous point south of Iceland. There, Canadian and British units from Halifax or Sydney would guide the convoys to North America.

Nelles became obsessed with establishing base sites for his Canadian ocean groups and for the British groups who would be attached to Newfoundland. Newfoundland Airport, Botwood,

Yarmouth, Sydney, St. Johns in Newfoundland, Debert, Moncton, and Dartmouth were all developed into superb aviation facilities. The Canadian Air Force was as small as the Navy, but Nelles and other staff officer realized that patrol planes would be invaluable in convoy escort, and therefore placed a great deal of emphasis on sites for these aircraft. Nelles concluded Newfoundland would be the best place for a base for the escort groups. Despite in close proximity with Argentinia, St. John's was chosen as the main site in May. Canadians resented having to share their own territory with the U. S. Navy, but realized they had no choice in the matter, and accepted the situation. Although it was the main escort base, St. Johns was small and lacking in facilities in 1941, having only a few repair facilities and housing arrangements. Within two years, however, it was a totally self-sufficient base.²²³

The first flotilla of seven corvettes arrived at St. Johns in mid-May. Five of these ships had Royal Canadian Navy commanding officers, the others being Royal Navy volunteers. The senior officer was one Commander J.P. Prentice, a regular in the Royal Canadian Navy who proved to be one of the brightest escort commanders of the war. Commander L.W. Murray, Royal Canadian Navy, was selected as Commodore Commanding Newfoundland Escort Force (CCNF), and soon put

his escorts through intensive ASW tactics training. By 20 May 1941, the Canadian escort force, named the Newfoundland Escort Force (NEF), was eager to commence escort operations. Although Murray was ultimately responsible for the training and performance of NEF ships, operational control of NEF remained under CincWA in Britain.²²⁴

The Canadians were eager to jump into the fight, although they were not necessarily ready for full escort operations. The British had spent months training the Canadians in escort doctrine and ASW tactics, and the last maneuvers, conducted in May off the coast of Northern Ireland, exposed several failings in Canadian tactical doctrine. Royal Navy officers criticized the Royal Canadian Navy officers for being too conservative and lacking initiative in combat situations. The Canadians lacked understanding of group operations, and the skippers did not comprehend the relationship between the Asdic, navigation, and depth charge teams, which was vital to performing correct attacks on U-boats. The Canadians were poor at gunnery, and their radio discipline was appalling. The British hoped the weeks spent at St. Johns provided the smoothing the Canadians needed to put together an effective escort doctrine.²²⁵

The Canadian Navy's first assignment was HX.129 in June of

1941. Three corvettes met the convoy south of Iceland, and brought the convoy to Halifax without incident. On 23 June, Royal Canadian Navy corvettes took responsibility for HX.133 bound for Halifax. U-203 sighted the convoy that same day, and U-boats converged to the scene. The U-boats scored six sinkings in coordinated attacks that lasted throughout the day. Of course, Canada's lack of an efficient escort-of-convoy doctrine frustrated Atlantic Fleet leaders, who had hoped to learn ASW techniques from a nation that had been in the war for nearly two years. Despite all the British training, the Canadians could offer only mediocre advice on ASW tactics and convoy escort doctrine.

Canadian and U. S. cooperation renewed in July when Roosevelt put WPL-51 into effect. Under WPL-51, "approximately eight Canadian destroyers, nineteen Canadian corvettes, and three French corvettes will be engaged in escorting convoys in the Western Atlantic Area ... In addition to these forces, approximately five Canadian destroyers and eight Canadian corvettes will operate in Canadian Coastal Zones."²²⁶ Furthermore, "Canadian aircraft amounting approximately to twenty-one patrol planes and sixty-three land-type bombers will operate in the Canadian Coastal Zone in the protection of shipping."²²⁷ Halifax and Shelbourne would be available as operating bases for U. S.

naval vessels and patrol planes, and Sydney would be available for use by naval vessels.

Though Nelles made his frustration be known over the British operational control of the Royal Canadian Navy, WPL-51 placed the Royal Canadian Navy under operational control of the U. S. Navy, as soon as the Americans commenced escort duties. The Canadians were infuriated that now their ships could be placed under a neutral nation's command to carry out wartime operations. Furthermore, it was under the terms of ABC-1 -- the scourge of American-Canadian and Canadian-British relations -- that the British had guaranteed the Americans that the Royal Canadian Navy would come under the U. S. area of strategic control once the escort plan was promulgated. But since the Canadians had offered the Royal Navy control of the Royal Canadian Navy before ABC-1, the Canadians were forced to accept the terms.

On 1 August, the CNO directed the U. S. Naval Attache in Ottawa to deliver a copy of WPL-51 to Nelles.²²⁸ The Canadians were quick with a list of questions concerning operational control and autonomy in Western Atlantic waters. They wondered who would be senior officer of escorts in the event that U. S. and Canadian units worked together in one convoy, and which W/T organization would be used for ships

to ship communications. They inquired as to which convoys the Canadians would escort, and which convoys were the responsibility of the U. S. Navy. Stark provided prompt replies, and they may have helped ease a tension that had started to fester between the Canadians and U. S. Navy leaders. When Royal Canadian Navy, U. S. Navy and even Royal Navy ships worked in conjunction, the most senior officer present, regardless of nation, would assume overall command of the escort forces.²²⁹ Also, the WT organization of the SOE's nation would be utilized in the event of joint escort operations.²³⁰

In regards to convoys responsibilities, the answer was more complicated. There were three types of convoys operating in the Western Atlantic in 1941. The TC convoys were troop convoys, which transported Canadian military personnel eastward to Britain. ON convoys were eastbound, fast cargo convoys capable of seven to nine knots. There were two types of westbound convoys: fast HX convoys westbound from Britain to Halifax, and SC convoys, the slow convoys that crawled across the Atlantic bound for Halifax at a sluggish five to six knots. The convoys sailed every six days on average. By the terms of WPL-51, the Canadians would be responsible for their own troops convoys, and all slow (SC) convoys bound for Halifax from Britain, while the U. S.

Support Force escorted the fast HX convoys from MOMP to Halifax.²³¹ Though U. S. Navy battleship escorts for troop convoys was not addressed in WPL-51, Stark assured Nelles that "if surface raiders appear these task forces of heavy units will put to sea and deploy as seems best."²³² To reciprocate, the Canadians agreed to assist the Support Force in escorting ON convoys once the Royal Canadian Navy had gained some confidence in their escort doctrine, and received more ships to bolster the still tiny NEF.

By 20 August, Nelles had assembled a total of thirteen Royal Canadian Navy and Royal Navy destroyers and twenty-five Royal Canadian Navy corvettes at St. Johns. These ships were organized into eleven ASW groups of four ships each -- one or two destroyers and two or three corvettes. This was exactly what was required of the Royal Canadian Navy in ABC-1 and WPL-51.²³³ However, the numbers were deceiving. Only eight of the destroyers were seaworthy enough to make the North Atlantic convoy run, relegating the other five destroyers to coastal ASW work and local escort duty for the small convoys sailing from the various North American ports to main embarkation port, either Sydney or Halifax. That left eight destroyers and twenty-five corvettes for ocean convoy escort operations, and of this number, Nelles could only guarantee that five destroyers and

fifteen corvettes would be operational at any one time. Refit, training, repair and rest requirements necessitated a schedule to rotate the escorts and their exhausted crews in and out of front-line escort duty. When escort operations began in September, the Royal Canadian Navy could effectively put only five ASW groups to sea at once.²³⁴ However, Nelles assured Admiral King that the Royal Canadian Navy was "quite prepared to accept the responsibility of providing anti-submarine escort for SC convoys with the above force."²³⁵

Until now, Nelles and Admiral King had remained fairly aloof of one another. Neither had communicated in regards to U. S. and Royal Canadian Navy escort responsibilities. However, the low number of Royal Canadian Navy escorts available for escort duty disturbed King, who had been promised all along eight destroyers and twenty corvettes to supplement Support Force. On 26 August, he ordered a liaison officer to Ottawa to investigate Royal Canadian Navy readiness. The officer arrived at 1100 on the 27th, spent that whole day inspecting Royal Canadian Navy readiness, and wrote his report that night. On 28 August, King received the forwarded report, which confirmed that the Canadians could only provide five destroyers and fifteen corvettes operating at one time. With only four ships per escort

group, the groups were considerably weaker than U. S. Navy's groups, each with five destroyers. However enthusiastic the Canadians were about being responsible for SC convoys and their own troop convoys, the Canadians would be hard pressed to handle them both.²³⁶

The report initiated period of strained relations between the U. S. Navy and the Royal Canadian Navy. King ridiculed the NEF as incompetent, untrained, undisciplined, and poorly-led, and demanded that Nelles and Murray increase their efforts to provide King with a properly equipped force he could rely on to conduct capable escort operations. In the meantime, the U. S. Navy would train for and accept its escort responsibilities -- no thanks to the Canadians for their assistance. On 29 August, King told Stark that everything concerning the plan to begin escort operations was "well on the road except the inability of the Canadians to furnish escort units that are adequate in number and in composition."²³⁷ King refused to allow the Royal Canadian Navy derail any U. S. preparations for the convoy operations, and so he resisted efforts by the British and some U. S. Navy planners to integrate Royal Canadian Navy escorts into U. S. Navy escort groups for the purpose of exchanging information on escort doctrine and tactics. King also denied a request by the Canadians to send a Royal

Canadian Navy officer to Washington as an observer on King's staff.²³⁸

King blamed some of the problems of Canadian readiness on the British, who were supposed to help provide the Canadians with enough escorts to furnish six operational escort groups of five or six ships each. The Royal Canadian Navy could put to sea only five groups of a measly four ships each. On 29 August, King asked Stark to "put all possible pressure on the British and Canadians to provide and maintain a net of thirty escort vessels (6 units of five or five units of six), instead of the net twenty which they say only are available."²³⁹

King was harsh in his criticism, but unfortunately the battle for convoy SC.42 proved that King was right concerning Canadian unpreparedness. A Canadian escort group of one destroyer and three corvettes assumed responsibility of SC.42, a sixty-three ship, Halifax-bound slow convoy, on 5 September. That same day, a U-boat sighted the convoy, and began to shadow and draw other U-boats to the scene. Approximately four U-boats arrived just before dusk, and commenced attacks after nightfall. For the next several days and nights, the scrawny escort force attempted to harness the might of the well-coordinated U-

boat attack. In the meantime, CCFNF detached two more corvettes, Moosejaw and Chambly, from Halifax to speed to the convoy's assistance. On 13 September, Roosevelt even ordered King to detach three Support Force destroyers from Iceland to aid the defense of the convoy. Though the American escorts arrived after the battle, the two Canadian corvettes arrived the last day of the running fight, and Moosejaw actually sank U-501 on the 13th. But one destroyed U-boat could not offset the embarrassment the Royal Canadian Navy had incurred, not to mention the appalling losses the merchantmen suffered. SC.42 lost sixteen ships -- the worst convoy disaster since the war had begun.²⁴⁰

The SC.42 operation highlighted what was wrong with Canadian ASW tactics and escort doctrine. The skippers lacked aggressiveness in chasing U-boats, and did not use Asdic effectively. Not everything could be blamed on a lack of training and aggressiveness, as radar was not yet installed on any Royal Canadian Navy ships, and this would have aided the escorts in detecting the surfaced U-boats attacking at night. The most significant lesson SC.42 taught was that it was impossible to properly defend a large convoy from a pack of elusive U-boats with only four U-boats. As King had argued, the Canadians needed more ships

per escort group to effectively defend a convoy from attack.

Ironically, King's harsh criticism of the Canadians' effectiveness, and the aftermath of SC.42, influenced the growth of the Royal Canadian Navy. King asked the CNO in September and then again in October to pester Pound to transfer Royal Navy escorts to the Royal Canadian Navy.²⁴¹ The British finally obliged, and met King's demands by transferring nine destroyers in September then five in October to bolster Canadian escort groups. More corvettes were also transferred to NEF, and by mid-October and thereafter, the Royal Canadian Navy could furnish an acceptable five to six destroyers and corvettes to escort each convoy.²⁴² By the end of 1941, the Canadians could operate at any time a force of thirteen destroyers and fifty-four corvettes.²⁴³ And in December, Murray even requested that King allow him to reorganize NEF into seven escort groups of six ships each--a far cry from the five groups of four ships each that the Canadians had started with at the end of August.²⁴⁴

For all of King's criticism and distrust of the Canadians, by September 1941, the U. S. Navy and the Royal Canadian Navy were a team. In the first two weeks of September, the two navies completed arrangements in anticipation of the U.

S. commencing its own escort operations. The NSC would continue to organize and pre-route convoys in North America, while OpNav would issue any underway route amendments as per Admiralty and NSC suggestions. The Canadians would furnish the CNO with daily intelligence of U-boat estimated positions, to aid in evasive routing decisions. Canadian and U. S. patrol aircraft operated in conjunction as air escorts for convoys, weather permitting. But still, CinCLant retained operational control of the NEF, and once the U. S. began its operations, the Royal Canadian Navy would begin to learn Support Force ASW tactics.²⁴⁵

On 11 September, as per WPL-51, the Americans began their escort of convoy operations. While their ships operated in conjunction in the North Atlantic, Nelles and Stark continued to entertain ideas on how to better Canadian-American cooperation. In late September, the State Department considered asking the Canadians to establish a military mission in Washington, although the plan never came to fruition.²⁴⁶ In October, Admiral Nelles paid a visit to Washington to discuss the progress of escort operations with Admiral King.²⁴⁷ Later the same month, U. S. liaison officers were sent to observe the Canadian operations at St. Johns.²⁴⁸ In November, Stark asked King and Bristol to consider mixing U. S. and Canadian ships in escort groups,

to improve tactical cooperation between the navies in the event of war.²⁴⁹ Both Bristol and King opposed the idea owing to the fact that the Americans themselves had finally established a working team within their units, and disrupting those teams could jeopardize successful escort operations.²⁵⁰ Ironically, the Canadians felt the same way about the Americans, and on their own side opposed the mixing.

In September 1941, both the U. S. Navy and the Royal Canadian Navy had a lot to learn about ASW tactics and escort-of-convoy doctrine. Convoys such as HX.133 and SC.42 proved the Canadians were not yet efficient in convoy defense routines, and several convoy operations in October would reveal U. S. tactical and doctrinal weaknesses. But the important part of U. S.-Canadian naval cooperation prior to America's entry into the war was that it established an efficient system for convoy operations. The Canadians and Americans devised a remarkably good plan for operating convoys in the northern half of the Western Hemisphere. The Canadians accepted administrative responsibility for routing, organization and assembling convoys, and controlled the dissemination of intelligence. The Atlantic Fleet, supported by the fledgling Royal Canadian Navy, escorted the merchantmen across the Atlantic. Both country's roles in

the war and consequently their roles in combating the U-boats expanded in 1942, and in the spring of 1943, Canada would win her battle for autonomy over her own naval forces, and assume operational command of the entire Northwest Atlantic region. Her fleet would grow so large that she would provide forty-eight percent of all escorts for transatlantic convoys.²⁵¹

The Canadians and the U. S. Navy would drive the U-boats from the Northwest Atlantic by the summer of 1943. The roots of success for both navies were conceived during the initial struggles against the U-boats in the North Atlantic in 1941. The limited success of these early struggles would not have been made possible except for a year-long process of cooperation between two neighbors, one neutral and one at war, who realized they must fight together to drive a vile enemy from the ocean near their home.

CHAPTER 6: The Special Intelligence Bonanza

Cooperating with Canada contributed greatly to the successful American escort-of-convoy operations in 1941. Another important factor was the use of "Special Intelligence" provided by the Admiralty's Operational Intelligence Center (OIC). Whether the Americans knew it or not, the British fed the U. S. Navy invaluable information about U-boat positions and strategic intentions, and this helped immeasurably during the "short-of-war" escort period from September to December 1941.

A large fraction of the Special Intelligence material was derived from decrypts of messages in the German naval cipher. The British did not open their files on the use of Special Intelligence until 1974, but since then, about a dozen serious histories have described Special Intelligence's influence on the war against Germany. In the two years prior to 1977, two retired British intelligence officers, F.W. Winterbotham and Patrick Beesly, published memoirs which described their experiences in OIC, and explained how Special Intelligence contributed to the Allied war effort. However, neither Winterbotham, Beesly, nor the more recent scholarship address the role played by Special

Intelligence in shaping U. S. Atlantic Fleet escort-of-convoy operations in late 1941.

A vital part of the British naval war effort, the OIC served as the center for the collection, coordination, and evaluation of information on "movements and intentions of enemy maritime forces."²⁵² Intelligence gathered by Secret Service agents, cryptanalysts, Direction Finder stations, and sightings by Royal Navy warships, merchant vessels, or Royal Air Force reconnaissance aircraft, was fed to OIC, processed there, and transfigured into a format useful for operational commanders. In August 1939, on the eve of the German invasion of Poland, the Admiralty put OIC on a war footing, and thirty-six men and women were organized into four sections, each section cognizant of a certain type of intelligence. The four sections were D/F plotting, Submarine Tracking Room, German surface ships, and Italian/Japanese.²⁵³

Perhaps the British took the collection of naval intelligence seriously because of the history of the intelligence disasters of World War I. Naval historians asserted that the British Fleet might have defeated the German High Seas Fleet at Jutland in 1916 had the fleet commanders not ignored information supplied by the

Admiralty's codebreakers.²⁵⁴ Criticism like this may have driven the British to pay especial attention to its intelligence community between the wars. Spies were planted throughout Germany. Direction Finder stations, established along the English and French coasts, could pick up radio waves of transmissions by ships at sea, and cross-bearings yielded by different stations monitoring the same transmission produced a fix on the broadcasting ship. Finally, and ultimately most importantly, before the war broke out, the British secured a duplicate of the German encryption machine. Polish scientists working in Germany had memorized the construction plans for the Enigma machine, and on 24 July 1939, they met with British and French intelligence officers in France. Over the next few days, the team reproduced two Enigma machines for British intelligence use, and the machines were transported to Britain before Germany invaded Poland on 1 September.²⁵⁵

The German Enigma machine resembled a typewriter with rotatable drums or rotors approximately .5-inches wide "around which were engraved the letters of the alphabet. The rotors were mechanically geared together so that when one was moved by depressing a key, the movements of the others was irregular." The Germans set the rotors in unique arrangements at the beginning of each day, so that they

would decode the particular code prescribed for that day.²⁵⁶

The Enigma machines given to the British by the Polish intelligence officers duplicated the device used by the German Army, with the result that the British read the German Army code almost from the first day of the war. The Luftwaffe used a setup that was nearly identical, and its codes were broken by April 1940.²⁵⁷ The German Navy, however, was more innovative, and it modified the rotors on its version of the Enigma design and so created 120 different settings for each rotor. As a result, German naval rotors had 160 trillion combinations of settings available to disguise German naval traffic, a number so great as to be considered unbreakable.

The British attack on the German Navy's Enigma-generated codes was unrelenting. Cryptanalysts, led by Roger Winn and Lieutenant Commander Norman Denning, were housed in a building at Bletchley Park outside of London. Denning, who headed the intelligence section, was a brilliant planner and superb organizer, and it was owing to his prewar work that OIC was established and ready at Bletchley once the war erupted. Denning established communications among the British Army, the Royal Air Force's Coastal Command, and the Admiralty so that intelligence could be quickly disseminated

and put to use by all branched of Britain's armed services.²⁵⁸

The four sections of naval OIC were also rich in talent. Patrick Kemp headed the D/F Plotting section, and the Submarine Tracking Room (STR) was headed by Roger Winn, a barrister who was called up by the Royal Navy reserve as a commander to head the STR. Winn, four watch keepers, and two women volunteers kept watch over the large charts of the Atlantic and Indian Oceans displayed in the center of the room. All known U-boat positions were plotted here, as well as all positions and routes of British and Allied vessels and convoys. At the beginning of the war, Winn received information on U-boats from the D/F plotters and sighting reports, plus any unconventional intelligence gathered by agents. He then translated the bits of information and pieced together a general picture of the U-boat situation in the Atlantic. Comparing this to the convoy routes and British warship positions allowed Winn to predict which convoys might be attacked. This information was passed on to the Admiralty, which altered a convoy's route so that it might escape the threat, and to CincWA, which alerted nearby escorts for action.

Despite the organization and talent available in OIC and

STR in particular, the British lost the first round of the war with the U-boats. Sinkings so steadily increased after September 1939 that the Germans called the summer of 1940 the first "Happy Time." In August, Hitler issued a declaration of unrestricted submarine warfare; Admiral Raeder identified a formal War Zone surrounding the British Isles, and Berlin issued appropriate blockade proclamations, instructions to neutral shipping, and warnings to mariners to avoid the prohibited zone. The U-boats sank an average of 300,000 tons of shipping per month from July until November, when the winter weather curtailed U-boat operations.

Few U-boats were effectively tracked by STR during this period, and even fewer convoys were successfully diverted by the Admiralty so as to avoid the submarines. The initial inability to track the U-boats was not only the result of the difficulty of attacking naval Enigma, but also due to the fact that D/F stations could not intercept enough radio message traffic to make effective use of their ability to fix U-boat positions at sea. As a result, during the first twelve months of the war, according to Beesly, "Virtually nothing but tentative studies of the patterns of German W/T traffic was available from Bletchley."²⁵⁹

In 1939 and throughout most of 1940, Donitz did not employ wolfpack tactics. Wolfpack tactics required one U-boat to home other submarines to the scene of a convoy sighting by radio communications to BdU headquarters. Once the U-boats were concentrated, simultaneous attacks by several U-boats would be launched against the hapless convoy and her escorts. However, the amount of radio traffic involved in making pack tactics work was tremendous. Wolfpack tactics became standard U-boat procedure in September 1940, and thereafter the D/F stations found it easier to fix U-boat positions owing to the increased volume of enemy message traffic. Winn's group in STR began to more effectively employ evasive routing of convoys to steer the merchantmen clear of known U-boat patrol areas. Nonetheless, until Donitz initiated pack tactics, the only sources for British intelligence about the U-boats came from sighting reports by ships at sea, and, after the fall of France, spies on the western coast of France who could only report when a U-boat was leaving and could not ascertain her steaming orders.²⁶⁰

For the first year and a half of the war, Bletchley Park failed in its attack on the German naval U-boat code.²⁶¹ In May, a curious sequence of events changed British fortunes. On the 7th, a boarding party from a Royal Navy destroyer captured several naval Enigma rotors in a successful attack

on the armed trawler Munchen, although the German crew threw the Enigma machine overboard before the boarding party arrived. The following day Kapitanleutnant Lemp in the U-110, attacked convoy OB.318 south of Greenland. The initial attack was unsuccessful, and the U-110 was immediately counterattacked by one of the escorts, the British destroyer Bulldog, which forced the submarine to the surface. Lemp ordered that charges be set to scuttle vessel, and told his men to abandon ship. He neglected one aspect of scuttling procedure, which was to destroy all of the code books and secret material and to throw the Enigma machine overboard. This became more important when the scuttling charges failed to explode. While the entire crew of the submarine was in the water awaiting rescue, a British whaler from the Bulldog approached the U-110 carrying a boarding party. Sub-Lieutenant David Balme led the party aboard. Expecting the boat to explode any moment, Balme and his party nevertheless clamored below to search the submarine.²⁶²

What Balme found changed the course of the war against U-boats, for he opened several drawers and discovered all of Lemp's code books and cipher materials, including an overlay of the German naval grid chart of the Atlantic. The Germans divided the North Atlantic into forty-seven large square boxes, each box assigned a two letter description. Within

these larger boxes were up to eighty-one smaller boxes, each labeled by a double-digit number. All coordinates and position reports were sent by submarines and surface ships using this alpha-numeric system, so the grid was necessary to understand the deciphered position reports. Then, one of Balme's party broke the lock to the communications department and found the Enigma cipher machine. For the next four hours, the documents and the machine were transferred to the Bulldog. Her captain had wisely kept the German crew below decks, and they did not even know whether the U-boat had eventually sunk, nor did they know that the British had captured the Enigma machine. The Bulldog took the U-110 in tow and steamed for Iceland, but the U-boat sank in transit. The Bulldog's crew was, of course, sworn to secrecy about the captured material. Donitz assumed the U-boat had been lost, but he was unaware that her Enigma machine was in British hands.²⁶³

The capture of this Enigma machine did not allow the British to read all German naval traffic. There were a half dozen German naval codes; one code was for ships sailing in the Mediterranean, one for U-boats training in the Baltic, one for large ships of the surface fleet, another for cruisers and blockade runners, and finally one for the U-boats in the Atlantic. The codes for the large German

surface ships and the cruisers and blockade runners were attacked but never broken in the course of the war. However, in May 1941, the British captured the code books for "Hydra," the Atlantic U-boat code. At the time, "Hydra" doubled as the code for ships in the Baltic and North Seas, and for anti-submarine craft based in occupied Norway and France. Thus, Balme had uncovered only a portion of the overall German naval code system, but at the time it was the most important single code as far as the British were concerned.²⁶⁴

Possessing the Enigma, the Atlantic grid, and the code books did not provide Bletchley Park with the means to effortlessly read all German transmissions to their ships for the rest of the war. One problem was that the Germans changed the rotor settings on the Enigma daily. Every morning, OIC had to discover a new day's rotor settings. More major changes to settings were made at the end of each month, and new codes books were issued every three months or so. Since these new code books contained amendments and changes, British cryptanalysts had to reconstruct the new books, and this took anywhere from days to several weeks.

Nevertheless, the British put the Enigma machine to quick use in mid-1941 to decipher German naval signals to U-boats

in the Atlantic and to ships operating elsewhere, and they labelled all the information whose source was the Enigma machine "Special Intelligence." "Ultra," a term also used to refer to the system, was in reality the typed heading on the messages issued by OIC to alert the recipient to the fact that the message contained Special Intelligence. Special Intelligence first assumed strategic importance in mid-May. After the Bismarck affair, Bletchley Park decrypted several "Hydra" messages from U-boats to BdU which helped the Royal Navy to hunt down and destroy the German surface supply fleet. U-boats requesting resupply of fuel and torpedoes were given rendezvous points with supply ships, and the British intercepted and decrypted these transmissions beginning in May and deployed warships to areas near the rendezvous points. They "coincidentally" found these supply ships and sank many of them; by 15 June, these operations eliminated six enemy tankers and one supply ship.²⁶⁵ The same system helped the British to sink several German armed merchant raiders which prowled the seas disguised as merchantmen. U-boat requests to BdU asking for rendezvous positions with these raiders gave Bletchley information concerning their whereabouts, and in November, three raiders were located and sunk, two by British cruisers, one by and Australian warship.²⁶⁶

But the capture of Enigma and the "Hydra" code books led to even more success in the convoy war. By the end of May, British radio stations were intercepting every transmission between BdU and its U-boats at sea. Donitz communicated with his U-boats often to set up patrol lines and organize wolfpacks, and the U-boats broadcast periodic position and weather reports at regular times throughout the day. STR used the decrypted information from Bletchley to conduct evasive routing operations, but successive evasive routing schemes depended on the timely arrival of Special Intelligence. By mid-year, Bletchley was able to decrypt the German messages with a time lag of one to three days. Tactically, this usually did not help if the convoy was already under attack, or if the convoy was less than one day's sailing time away from the nearest U-boat picket or concentration. However, after some weeks, the British cryptanalysts perfected a method of recognizing the short signals which characterized the German sighting reports. Bletchley Park learned that any U-boat signal starting with "BBB" meant that the submarine had sighted a convoy, intended to shadow it, and wanted to home other submarines to the scene. The British could use these signals tactically by detaching a nearby escort to attack the shadowing U-boat and force her to break off contact with the convoy. Convoys escaped in this manner.²⁶⁷

Special Intelligence was an invaluable strategic tool. Bletchley's decrypts gave Winn in STR a general picture of where the large U-boat concentrations were located, and clues as to German intentions. Using this information, Winn could recommend to Western Approaches Command a course for one or more convoys that would steer them clear of the submarine concentrations. In the event that an intercept was decrypted with a day or less lag time, STR still could recommend course amendments to convcys at sea so convoys might evade the newly emerging threats. This strategy was called evasive routing, and it formed the basis for the Allied war against the U-boats until 1943. Western Approaches might also divert escorts from nearby convoys not in danger to speed to the threatened convoy. Indeed, Winn became so good at using Special Intelligence and D/F intelligence to anticipate Donitz' moves that Western Approaches eventually rubber-stamped all of his suggestions.

The passage of convoy HX.133 demonstrated Ultra's importance. Bletchley Park decrypted intercepts confirming that convoy HX.133 had been sighted and was being shadowed by U-boats. As the U-boats massed preparing to strike at the convoy, Western Approaches reinforced the escort group with destroyers and corvettes from two nearby westbound convoys; these convoys were in no danger according to Winn

and the plot in STR. Thus, when the U-boats attacked HX.133, the escorts outnumbered them. Though five merchantmen were sunk, two U-boats joined them at the bottom of the North Atlantic.

Anglo-American cooperation involving Special Intelligence evolved in the few months between the capture of the Enigma machine and the commencement of U. S. Navy escort-of-convoy operations in September. The U. S. Navy and Army had established small intelligence missions in London in March and April 1941, but the British were reluctant to allow these teams access to Special Intelligence owing to their ongoing concern about American security methods. The matter was now urgent, however, inasmuch as WPL-51 provided for Atlantic Fleet participation in convoy operations and the Admiralty wondered how this might be done without sharing Ultra. At length, Churchill directed Sir Robert Menzies, who controlled the dissemination of Special Intelligence, to give the U. S. Navy details about German U-boat plans and operations once the United States entered the war.

As a result, the Admiralty settled on giving the Navy Department intelligence derived from Special Intelligence without disclosing its source. The Admiralty passed on Daily Intelligence Summaries to the CNO, which described

German recognition signals for aircraft and U-boats, and predicted U-boat patrol lines and attack sectors for the day and for coming days. Most important, the summaries detailed all known U-boat positions in the North Atlantic. In order to maintain security, the British claimed that these positions were gleaned from sighting reports by aircraft and surface ships, and from shore-based D/F fixes. Since it was conceivable that exact U-boat positions might be obtained by direction finding, the British often used D/F as a pretense to hide the fact that certain information was derived from Enigma decryptions.²⁶⁸

The Atlantic Fleet was not without strategic choices of its own to make -- as between evasive routing and a more aggressive strategy of fighting through U-boat concentrations -- but the first of these summaries reached Washington on 25 August, detailing all submarine positions "as estimated by Admiralty," and seems to have influenced the decision.²⁶⁹ Evasive routing was a part of Atlantic Fleet doctrine when it began to escort convoys in September, and the Daily Intelligence Summaries provided the reasoning for all Admiralty course changes for convoys at sea. OpNav received recommended route alterations from the Admiralty, and then checked these changes against U-boat positions as reported in the Daily Summary. If the CNO concurred with

the change of course, OpNav ordered the SOE of the American ocean escort group to carry it out. The secret was closely held within the Navy Department, and most of the high ranking officers in the U. S. Navy did not learn of Special Intelligence and the Enigma decryptions until the United States formally declared war on Germany in December. Stark knew that the British were decrypting some German broadcasts, although he did not know how. As late as 2 December, Admiral Little informed Pound that Stark referenced "our [the British] cryptographic work in the case of the German codes" at a meeting with Little in November.²⁷⁰ Admiral King did not know about the British system, although he clearly understood that the Admiralty's tactical intelligence was quite accurate. Thus, in effect, the U. S. Navy used Special Intelligence even before it knew that the Enigma decryption system existed.

Canadian officers provided the liaison through which the intelligence summaries were transferred to OpNav. Special Intelligence was shipped to the Royal Canadian Navy freely because Canada was a Commonwealth partner in the war effort. The Royal Canadian Navy staffs at Halifax and Sydney organized the eastbound convoys from America, and these convoys included many U. S. flagged merchantmen. In fact, with the help of the Trade and Routing section of the

Admiralty, the Canadian NSC's used Special Intelligence in planning convoy routes across the Northern Atlantic.²⁷¹

In addition to assisting the U. S. Navy-escorted convoys, the British also used Special Intelligence to warn the U. S. Atlantic Fleet of any major German surface ship activity. In September, the Admiralty informed CNO that Admiral Sheer and Tirpitz, Bismarck's sister, were possibly preparing for operations out of Norway.²⁷² Though this proved to be a false alarm, it demonstrated the British were serious about using Special Intelligence to prepare America for the war.

So long as Ultra was available, OpNav received the intelligence summaries. The Germans, however, continued to change their code system monthly, complicating the decryption procedure, and often creating greater time lags for the dissemination of Special Intelligence. Furthermore, the Germans began to encode the grid square coordinates on 11 September, a double precaution to ensure U-boat positions would not be intercepted by the British. By 1 October, Bletchley solved the mystery of the grid code, and the lag time for decryption of intercepted transmissions reverted to being a mere 36 hours.

There were times when the Germans were suspicious of

British intelligence sources, that "Ultra secret" the British possessed was endangered of being discovered by the enemy. After the slaughter of his supply fleet in June and July, Raeder suspected a leak in the Enigma system, and ordered that the security of the enciphering system be investigated. The report, filed by intelligence officers, however, provided no indications that the code had been broken, although this conclusion was based more on arrogance than appropriate facts, as the Germans, including Donitz, believed their ciphers were not capable of being broken. The report argued, "If they [the German codes] have been broken, this is only temporary, and the British would have to work on so vast a number of intercepts to establish a continuing break that possibility does not arise."²⁷³ The Germans believed that the temporary break, if there indeed was one, stemmed from German carelessness in operating procedure, and could not have resulted from the British actually cracking the code. Both Raeder and Donitz were satisfied with this explanation, Donitz adding that the successful British intelligence most likely was the product of work done by the D/F stations. Thus, Enigma continued to be used with great frequency in the U-boat community, and "Hydra" continued to be broken by the British.

In October, the Admiralty conducted fifteen successful

evasive routing operations; only three transatlantic convoys were sighted, and one of these was a chance sighting by a U-boat out of position. In November, only convoy HX.156 was sighted and attacked, again by a submarine operating out of its reported position. But by this time, Hitler had instructed Donitz to move the U-boats south to support operations in the Mediterranean. Indeed, on 15 December, OIC reported, "There is still no sign of any renewal of attacks in the North Atlantic on any scale comparable with that of the recent campaign or 'blockade' and the primary objective seems, at least temporarily, to be no longer the destruction of merchant shipping."²⁷⁴

The U-boats returned to the North Atlantic in January, operating off the East Coast of the United States. In addition to six boats off Argentia and St. Johns, five boats would reach attack areas off points between New York and Portland, Maine by 13 January.²⁷⁵ Operation Paukenschlag would exact a terrible toll on U. S. shipping in the next four months. In January alone, with only five U-boats off the U. S. East Coast, submarines sank 276,000 tons of shipping.²⁷⁶ In addition to the U. S. Navy's failure to establish a coastal convoy system to protect ships sailing from port to port on the coast, German success during that second "Happy Time" was attributed to the change in U-boat

codes in January from "Hydra" to "Triton," for which the British had no rotor settings.

Special Intelligence was a war winner. Though the real tactical U-boat killer was a combination of D/F, radar, and combined aircraft-surface tactics against U-boats, strategically, Special Intelligence was vital. The evasive routing performed by Winn and officers in Canada prevented the convoys from being detected, allowing them to make the passage to Britain unscathed, which was the primary convoy objective in the first place. In May and June, before Special Intelligence reached its peak operating efficiency, U-boats sank 300,000 tons per month, but in July and August, as Winn and his advisors became more accustomed to the Special Intelligence process, sinkings dropped to 100,000 tons each month. The increase, in September and October sinkings, to 150,000 tons each month was primarily due to better German aerial reconnaissance on the Gibraltar convoy route. In November, only 50,000 tons of shipping were sunk by German U-boats, a tribute to the effectiveness of Special Intelligence and the diligent work done by Winn and his special group in STR.²⁷⁷

The British had uncovered an irreplaceable piece of equipment off U-110 in May 1941, an Enigma machine that gave

the British an advantage over the U-boats that Donitz was never able to overcome. The Admiralty made sure to share it with their Canadian allies, so that it benefitted their war effort as well. Although most U. S. Navy officials had no knowledge that Special Intelligence was being passed, the Admiralty shared the "Ultra secret" with the Americans, and it greatly contributed to the success of the U. S. escort-of-convoy operations in the "short-of-war" months prior to Pearl Harbor.

CHAPTER 7: Learning to Kill U-boats

Special Intelligence provided strategic intelligence, but it did little to inform Allied escort doctrine or tactics. Escort doctrine had two tactical objectives: to prevent the U-boats from attacking the convoy, or, failing this, to sink an attacking U-boat. Developing the best doctrine and tactics to protect the convoys began in 1939 and did not end until late 1944. While the Royal Navy pioneered the wartime escort-of-convoy system, as the day neared when the U. S. Navy would commit the Support Force to North Atlantic, the Atlantic Fleet began to develop tactics and doctrine for its escort groups. Between late 1939 and 1941, the Allies experimented with different tactics and doctrines to combat the U-boats. However, whenever the Allies changed their tactics, Donitz seemed to remain one step ahead of them by altering his U-boat tactics, and this made it difficult for the Allies to adjust their tactics to defeat the submarines.

The U-boats were extremely successful during the first two years of the war. From September 1939 to April 1940, the U-boats operated independently and achieved dazzling success. U-boat skippers Gunther Prien, Otto Kretschmer, Hermann

Krech, and Julius Lemp prowled the seas and established records as aces before what the Germans called the first "Happy Time" even began. Though the Germans had no more than sixty U-boats operational at any one time during these months, and, more often than not, could only put to sea fifteen to twenty vessels at any given time, the German aces sent millions of tons of Allied shipping to the bottom of the Atlantic. Donitz had wanted 300 U-boats available before the war began -- 100 operating against convoys, 100 returning to refuel, and 100 refitting or training -- but the war started earlier than he expected, and he did not have a force that size available to him until 1943.

The early U-boat tactics aimed at maximizing their ability to conduct submerged attacks during daylight hours. They fired spreads of three or four torpedoes so as to ensure that they hit their targets. Favorite German targets were ships travelling alone.²⁷⁸ Though the Admiralty had an efficient convoy system instituted by the end of September 1939, ships making less than five knots or more than fifteen knots were still routed independently. The Admiralty reasoned that the slower vessels would slow down the convoy and increase its exposure, whereas the faster ships could outrun submerged U-boats. The first German attacks against the British convoys met with only limited success.

Nonetheless, the U-boat skippers learned some important lessons, chief among them being that Asdic, the British underwater sound gear, swept an area .5 to .75 miles from the set. Moreover, Asdic only provided its operator with ranges and could not discern the depth of a target. The best U-boat commanders learned how to fire at convoys from a distance, and then "take their boats [down] to 400 feet to avoid the depth charge patterns." Once the U-boat rode out the depth charge counterattack, it could maneuver away from the escorts.²⁷⁹

Most of the early U-boat attacks took place along the coasts of England and Ireland. Then operating from bases in Germany, few U-boats had the range to make the long trip out to the North Atlantic trade lanes and back. This allowed the British escort groups to leave their outbound convoys in mid-ocean and pick up other convoys inbound to Britain only 100 miles off the Irish coast. Nevertheless, counting attacks against convoys and, especially against slow ships travelling singly, the Germans exacted a high toll on merchant shipping. By the end of 1939, U-boats had sunk 100 Allied merchant ships.

The U-boats also conducted successful attacks against the Royal Navy's capital ships. In September, the U-29 sank the

carrier Courageous while she was on patrol in the Western Approaches, waters which the Royal Navy thought to be secure. Then, on 14 October, Prien sneaked into the Royal Navy's main fleet base at Scapa Flow and sank the battleship Royal Oak while she was riding at anchor. Donitz was pleased with these victories, but his long-term strategy of "tonnage warfare" presupposed that the British would guard their heavy ships with adequate screens and identified merchant shipping as the best target for the U-boat arm.

The Royal Navy's escorts were quite capable of dealing with the U-boats. Armed with four to six 5-inch guns, torpedo tubes, and over fifty depth charges, and capable of speeds up to thirty knots, British destroyers were ideally suited for ASW work. The Admiralty was short of destroyers by mid-1940, however, and so turned to the smaller, austere corvette for escort-of-convoy work. Though it was armed with only one 4-inch gun and an anti-aircraft "pom-pom" gun, and made 16 knots at best, the corvette carried the same depth charge load and same Asdic system as a destroyer. Moreover, corvettes carried enough fuel to be used for open ocean escort groups, and they were extremely seaworthy, even for the rough North Atlantic. They were cheap and easy to mass produce. Corvettes proved to be the best escorts available for convoy escort.

In early 1940, U-boat commanders became bold and decided to forgo hunting ships travelling independently and concentrate instead on the convoys, and they quickly met with considerable success. British ASW tactics and escort doctrine proved to be inadequate to properly defend the convoys. For one thing, at the beginning of the war, British escort doctrine was not clearly defined. The convoys were escorted by two destroyers and four to six corvettes, and sometimes even two to five trawlers armed with few machine guns and depth charges, but there was no published doctrine to explain how SOE's were to position these vessels to provide the most effective defense of the convoy.

As the U-boats began to be successful against the convoy system, the British realized that their tactics and doctrine needed to be revised, and by November 1939, the Admiralty had developed a crude escort-of-convoy doctrine. The escorts were to be arrayed around the convoy, although no specific positions and patrol distances were defined. Asdic searches were to be carried out, with each escort responsible for a specific sector of the convoy's perimeter. When a contact was gained, the U-boat was to be "hunted continuously and relentlessly until destroyed."²⁸⁰ British doctrine required depth charges to be set for between 250

and 350 feet, with the aim of exploding them beneath the submarine so as to force her to the surface.²⁸¹ If the contact was lost, the escorts would continue to search the area until contact was regained, or was classified as "non-sub."²⁸²

Several tactical innovations that originated in early 1940 assisted the escorts in destroying U-boats, the most important being the Direction Finder stations which became operational in January 1940. The D/F stations were electronic transmission detectors which intercepted radio broadcasts by German submarines to BdU. Two or three of the systems homing in on the same signal could fix the position of a broadcasting U-boat; then, aircraft from the Royal Air Force's Coastal Command were sent to the area to attack any submarines there. Aircraft were ideal for these missions as they could easily surprise a surfaced submarine and destroy her with gunfire or air-dropped depth charges before she could dive deep enough to escape. In mid-1940, this air offensive forced Donitz to move his submarines westward, out of range of the British aircraft.

Though the Royal Navy had taken steps to develop an effective defense of convoy doctrine, it was still primitive, and at the end of 1939 it was clear the U-boats

held the upper hand against the convoys. There were few sinkings in January and February of 1940 as bad weather hampered operations, and in March, when the U-boats were recalled from the Atlantic to support the German invasion of Norway. In late April, however, the U-boats returned to the trade routes looking to equal the success they had achieved at the end of 1939.

In May and June, the British convoy system came under attack from U-boats again. The capture of France marked a turning point in the Battle of the Atlantic, inasmuch as U-boats could now operate from bases closer to the North Atlantic, and thereby penetrate deeper into the British trade routes. June marked the beginning of the first "Happy Time" for the U-boats. The number of U-boats available in the Atlantic theater increased, and by June, fifteen U-boats were on patrol in those waters. At the time, many British convoys sailed without protection because the Royal Navy's escort pool had been decimated off Norway and Dunkirk and most of the remaining ships were committed to Channel defense, leaving many convoys underprotected. And improved German tactics were added to the growing list of disadvantages mounting against the Royal Navy.

After the fall of France, the German Navy acquired French

documents which detailed British ASW methods, and these reports "increased [Germany's] knowledge of British anti-submarine methods."²⁸³ Donitz and his U-boat commanders changed their tactics to exploit the weaknesses inherent in British escort-of-convoy doctrine. The submarines began to attack at night and on the surface, where they were more maneuverable and faster than the British escort corvettes; moreover, only the most experienced lookout could identify the low silhouette of a U-boat on the surface.²⁸⁴ As radar was not yet standard equipment on British escort ships, and patrol stations for convoy escorts not well defined, the German skippers could sneak up on a convoy and maneuver through the escort screen undetected. U-boat commanders brought their submarines inside the convoy formation, and ran between columns of the merchant ships, firing at targets from such close ranges that it was almost impossible to miss. Then, when the escorts would arrive, the U-boats dove beneath the convoy, where ambient noise from the merchant ships' propellers frustrated Asdic operators in their search for the attacker. The convoy would pass over the U-boat, while the submarine escaped to the rear.²⁸⁵ To counter the night surface tactic, the British began to set their depth charges to more shallow settings, between 150 and 350 feet, believing that should a U-boat be forced to make an emergency dive to avoid attack, the submarine would not get

very deep before the escort was on top of her.²⁸⁶

Still, the U-boats were winning; in June, Donitz' aces sent 268,000 tons of shipping to the bottom of the Atlantic, and until September they averaged 300,000 tons monthly. This moved the Admiralty to seriously reconsider its ASW tactics and doctrine in mid-1940. At the beginning of the war, British escort doctrine was very offensive, the main purpose of the ocean escort groups being to sink submarines. By prosecuting these aggressive attacks, however, the British escorts often stripped their convoys of protection, which allowed other U-boats the opportunity to sink a large number of the merchantmen. With the U-boats concentrating on convoys after early 1940, the British realized they needed to adjust their tactics to prevent U-boats from attacking convoys, and in June and July, the Royal Navy shifted its emphasis in escort-of-convoy operations from sinking U-boats to ensuring the safe arrival of the merchant ships to ports in Britain.

In July and August, the British adopted a more defensive, although well-defined, escort-of-convoy doctrine. Six escorts were placed around the convoy, two along each flank and two to the rear, each positioned only 1,000 to 2,000 yards off the convoy. The two ships stationed to the rear

of the convoy were tasked with attacking U-boats which tried to escape detection by hiding beneath the formation following an attack. In the van, a fast merchantman patrolled forward, so as to prevent U-boats from entering the convoy formation and attacking down between columns. The escorts patrolled their stations at 15 knots, each being responsible for searching a 60-degree Asdic sector, although escorts were instructed to rely on lookouts for sighting reports of surfaced U-boats. Signalling was kept to a minimum until a contact was made. Finally, before each change of course by the convoy, one of the escorts swept forward of the convoy to clear the area of any submarines.²⁸⁷

In the event of a U-boat attack, the escort nearest to the submarine turned and charged at a speed of fifteen knots in the direction of the torpedo's wake. When she was four to five miles from the convoy, her skipper reduced speed to five knots, which the British had discovered was the escorts' best Asdic speed, and began a deliberate sweep of the area between herself and the convoy. The other escorts, remaining nearby the merchantmen, would "make a sweep of either side of the convoy about 3,000 yards off the wings," firing starshells to illuminate the area and thereby increase the chances of sighting the submarine on the

surface.²⁸⁸ When a U-boat was found, "the Royal Navy was trained to stalk a U-boat from an initial range of 1,200 yards, tracking the U-boat at the ship's best Asdic speed."²⁸⁹ At 800 yards from the contact, the escort increased speed to fifteen knots so as to close the submarine quickly, and a course was set slightly ahead of the U-boat, so that depth charges might be dropped directly overhead of the predicted U-boat position. Later in 1941, Commander Prentice of the Royal Canadian Navy realized that by increasing the escort's attack speed when she was 400 yards from the target, the depth charges could be dropped more accurately, and this became standard doctrine.²⁹⁰ Perhaps the most important aspect of the new system was that no escort could spend more than two hours chasing a submarine, highlighting the Royal Navy's new insistence on convoy protection rather than sinking U-boats.²⁹¹

The new British tactics and doctrine were a tremendous improvement over the earlier methods, but just when the British thought they had a system to defeat the U-boats, Donitz added another twist to his campaign in September 1940 by adopting "wolfpack" tactics. These tactics aimed to concentrate a number of U-boats against one convoy before attacking, to increase the chances for a large number of sinkings. Donitz formed his boats in patrol lines

perpendicular to the British trade routes. Each patrol line was manned by five to six boats spaced several miles apart, near enough so that no convoy could pass through the patrol line without being spotted. The boats patrolled on the surface in box-shaped patterns, looking for smoke on the horizon that might be a convoy. Once a U-boat identified a convoy, the submarine signalled the position to BdU headquarters, then continued to shadow, keeping out of sight and broadcasting position reports on the hour. Donitz himself directed the U-boat packs to the scene from his headquarters in France, and once three to four boats were assembled, the U-boat skippers would attack.

The drawback to the wolfpack tactics was they meant an increase in radio traffic between submarines at sea and Donitz's headquarters, and although the British did not yet have the benefit of Special Intelligence, their D/F stations could pick up the signals and fix positions on U-boats. This may have been one reason that deterred Donitz from employing wolfpack tactics earlier, but it was more likely that he had been reluctant to start the tactics because his U-boats were doing quite well against ships travelling independently. This was different in the spring of 1940, as the new night surface tactic guaranteed greater success against a convoy despite the new British escort plan.

In addition to the wolfpacks, Donitz ordered his submarine commanders to attack convoys from a distance, approximately two miles. Because the new British doctrine kept the escorts near the merchantmen, Donitz reckoned that his submarine commanders might safely fire at the merchant ships from several thousand yards off the convoy, and escape more easily should an escort counterattack.

In 1940, the British did not master the new German tactics. The STR did its best to use the now abundant D/F fixes to route convoys clear of U-boat concentrations, and Winn's efforts in this regard were largely successful. However, many convoys encountered the wolfpacks, and when a convoy was attacked, the escorts were largely helpless. Surfaced U-boats were a very poor Asdic target, and at 4,000 to 5,000 yards off the convoy, a U-boat's low silhouette could not be seen at night. If by chance a U-boat was sighted, she already had a two-mile jump on any pursuing escort.²⁹²

The British seemed dumbfounded by the new German tactics, but nonetheless did their best to counter them. In September 1940, CICWA began to train escort groups as teams with the thought that the ships would operate together throughout the war, with only replacements or additions being added. In this way, the escorts could learn to work

together as a team; this proved to be a very successful training scheme.²⁹³ Also, by late 1940, all British escorts were fitted with open bridges, which provided the lookouts with better overall field of vision, and increased their chances of sighting U-boats standing off the convoy.²⁹⁴

Moreover, to combat the wolfpacks, the British instructed the convoys to zigzag continuously in dangerous waters, so as to deny any group of submarines time to set up for a good, coordinated attack.²⁹⁵ The Royal Navy also began to adjust the patrol distance of their escorts, so that by day, the escorts remained close to the formation of merchantmen whereas at night, the escorts positioned themselves "at maximum visibility distance from the body of the convoy" to deter the U-boats' long-range firing tactics.²⁹⁶ Finally, to further afford the convoys protection, the time escorts were permitted to spend engaging a submarine away from the convoy was reduced from two hours to one.²⁹⁷

Perhaps the most important change in tactics was the number of depth charges used in prosecuting attacks. Six to seven was standard throughout 1940, but HMS Highlander deviated from this policy on 30 October 1940; after an unsuccessful attack with a six-charge pattern, the Highlander circled again and dropped fourteen charges in the vicinity of the U-

boat. After a tremendous underwater explosion, the U-boat rose to the surface. The Highlander closed and fired her guns, forced the German crew to abandon their boat, and sank the submarine. Survivors who were questioned afterwards said that the most frightening aspect of the attack had been the massive depth charge explosion. In fact, several of the German prisoners explained that the fourteen-depth charge attack had such a disparaging effect on the crew that the captain, afraid that his U-boat was sinking, decided to surface although the submarine was not badly damaged.²⁹⁸ In November, another British corvette, the HMS Havelock, attacked a U-boat with fourteen charges with the same effect.²⁹⁹ Thereafter, British escorts were directed to be extremely liberal in their use of depth charges. Though fourteen never became standard, ten to a dozen became a common measure.³⁰⁰

The Royal Navy had established an effective convoy escort doctrine by late 1940, and were ready to put it to use. Owing to the onset of winter, however, the period from November 1940 to February 1941 saw a dramatic decrease in the tempo of U-boat operations, and, consequently, sinkings of merchantmen. The wolves returned to the trade lanes in March, and immediately began to score. That summer, Donitz was aided by the German intelligence agency b.Dienst, which

had broken part of the British Navy Code No. 2, the cipher used to transmit convoy routes and other instructions. As a result, b.Dienst provided Donitz with valuable information regarding convoy routes and escorts provided, which assisted in positioning the submarine patrol lines. Monthly merchantmen sinkings by U-boats rose to a staggering 350,000 tons.

In early 1941, the British developed several more tactical improvements, and by March they were eager to put their new doctrine to the test against the new German submarine offensive. Extensive use of D/F fixes assisted Winn in his evasive routing strategy which aimed at keeping convoys away from wolfpack concentrations. The escort groups -- nine total, each with four destroyers and four or five corvettes -- had all been formed and trained, and were ready to challenge the lethal U-boats for control of the trade lanes. Although the U-boats sank a large number of merchantmen in the first half of 1941, the British, with their revised tactics and escort group organization, scored some successes of their own. In March, for instance, one British escort group bagged three aces in a matter of weeks -- Prien, Kretschmer, and Schepke.³⁰¹

By mid-1941, the British had achieved a slight edge over

the German Navy in technology. By April, forty British escorts had been equipped with radar which could detect surface ships -- including low-silhouette, surfaced submarines -- at a distance of two to three miles. This provided the British escorts with the equipment necessary to effectively combat the deadly German night surface attack tactics. In May, the British gained the benefit of Special Intelligence, and this greatly aided STR in routing and rerouting convoys around U-boat concentrations. In short, the Royal Navy was beginning to realize what needed to be done in the way of anti-submarine warfare tactics and escort-of-convoy doctrine to defeat the German submarines and ensure that the Lend-Lease shipments reached Britain.

The same could hardly be said of the U. S. Navy in 1941. Though the Americans had promised the British at the ABC-1 talks in March that the Navy was preparing to undertake escort-of-convoy operations in the summer of 1941, U. S. Navy doctrine and tactics for defense of convoys was still woefully inadequate.

In 1939, the U. S. Navy had no anti-submarine warfare doctrine. However, when the U-boats began to exact a high toll of British shipping in the September and October, the U. S. Navy turned some of its attention to preparing its

ships for anti-submarine warfare. The first sign of this change in emphasis came soon after the war began, when the War Plans Division developed blueprints for an ideal anti-submarine warfare platform: a destroyer design, armed with four 5-inch dual-purpose guns, torpedo tubes, two stern depth charge racks and two Y-guns. The destroyer could keep twenty-four depth charges ready topside, and twenty-five stored below decks. This new design envisioned a vessel with a range of 6,000 miles at 12 knots, a ship with enough endurance to perform escort duties for a long period without the need of refuelling.³⁰² Four days later, the first five mothballed World War I-era four-stackers were recommissioned. Recognizing "their role in time of war as anti-submarine warfare," Stark ordered that one 5-inch gun aft be removed to make room for more depth charge racks and storage.³⁰³

The Navy continued its interest in ASW well into October and November. The Director of the War Plans Division, Captain Russell Crenshaw, recognized the need for a better sonar than the old-postwar set still employed by the fleet. He remembered that the Army in 1938 had tested some gear in Hawaii which detected submarines at a distance of 2,500 to 4,000 yards under realistic sea conditions, and he asked the CNO if the Navy might be interested in such a set. Stark

agreed, and by November 1939, plans were in hand to design a modern sonar.³⁰⁴

Still, there was no ASW doctrine available for the destroyers by the end of 1939, and not until the summer of 1940 did the Navy publish its first Tactical Orders, which, among other things, described the destroyer's role in an anti-submarine warfare operation, and were therefore considered to be the Navy's standard ASW doctrine at the time. The Orders described a defensive ASW regime. For convoy protection, the escort forces were arrayed in a three-layer defense-in-depth configuration surrounding the main body to be protected. Escorts comprising the inner screen were positioned 1,000 to 1,500 yards off the main body. These ships would patrol the flanks, providing close escort for the convoy. Although ideally all escorts would operate sonar, if there was a shortage, the escorts of the inner screen would be those without sonar.³⁰⁵

The rest of the escorts were placed in the intermediate and outer rings of the escort screen. The intermediate screen worked in conjunction with the inner screen, while the escorts further out served as a distant sound screen. There was no set distance off the main formation at which escorts in these screens were placed--the senior officer of the

escorts made this decision, taking into account such factors as sea state and visibility. The destroyers of the inner and intermediate screens patrolled constantly, operating sonar and utilizing lookouts to search for surfaced submarines. The escorts of the inner and intermediate screens zig-zagged in accordance with the main body of escorted ships, while the destroyers in the outer screen were permitted to roam as necessary in order to carry out their sonar sweeps of large areas.³⁰⁶

In the event that a submarine was sighted, the nearest escort would signal the rest of the formation, and then proceed full speed towards the contact. If the submarine was on the surface, the destroyer was to open fire with its battery of guns, and close with intent to ram. If the contact was a sonar contact, the destroyer was to work in tandem with another sonar-equipped destroyer to attack the target. One destroyer would track the submarine, while the other carried out depth charge attacks. The escorts were to "remain with the enemy submarine until it is sunk or forced to surface, or until heavy ships of the fleet are clear of the area," after which the escort would race to rejoin the formation and return to its patrol station. Thus, unlike the original British tactics, the escorts were not to desert the main body they were protecting.³⁰⁷

These first ASW tactics were designed for destroyers assigned to protect the main battle fleet consisting of battleships, carriers, and cruisers. Although the tactics did not envision the destroyers' mission as providing protection for merchant convoys, the doctrine might easily be adapted to this role by simply replacing the battleships with merchant ships in the center of the ASW rings. The Navy may not have known it at the time, but in mid-1940 it had planted the seed of its future escort-of-convoy doctrine.

There were certain aspects of the Navy's ASW doctrine that were sound. For instance, two destroyers working in tandem to locate and destroy a U-boat was a very effective strategy -- in this case, one escort would always maintain contact so as to prevent the submarine from making an easy escape. The doctrine was greatly flawed, however, and did not take into account British experiences in combatting U-boats. For one thing, there was no specification as to how many escorts would form each screen. For another, the escorts' patrol patterns were seemingly random and were devised by the destroyer skippers, and did not establish a configuration that guaranteed complete sonar protection around the perimeter of the convoy. Furthermore, the U. S. doctrine did not explain how to counter present U-boat tactics, such

as attacking on the surface and at night. Navy planners seemed to assume that escorts would catch the U-boats on the surface and sink them by gunfire or ramming, but more often than not, U-boats had time enough to dive in the face of charging escorts. There was too much reliance on sonar -- in fact, the Navy almost ignored the fact that ambient noise present during a convoy battle would seriously inhibit sonar operation. Also, the Navy did not have a defined depth charge pattern, nor suggested depth settings. The destroyer skippers were expected to prosecute effective attacks as they saw fit, but were given no guidelines as to how to do this.

The success of the U-boats during the first "Happy Time" prompted Navy planners to work harder to improve the Atlantic Fleet's ASW capabilities. In the waning months of 1940, the Navy fitted all destroyers with more Y-guns and depth charge racks, and also equipped every destroyer with sonar. In February 1941, Admiral King created the Support Force that the Navy assembled and trained; its sole responsibility would be convoy protection against submarines. Support Force's commander, Rear Admiral Arthur Bristol, arranged his destroyers into six groups of five destroyers each, and although this was not the number of escorts envisioned by WPL-51, it was all King and Bristol

could muster for the moment. In March, the Support Force began tactical training which emphasized "convoy protection, zigzag, anti-submarine hunting, screen tactics to protect convoy from air attack, communications under convoy conditions...and anti-raider battle plans."³⁰⁸ The ASW planners revised their 1940 tactics, and issued a new set of Tactical Orders in March 1941, which were clearly influenced by British after-action reports made available by Ghormley's mission. The planners analyzed these reports, decided which tactics were effective, and incorporated those ideas into Navy doctrine.

The Tactical Orders standardized doctrine and tactics, established the first escort configuration for convoy defense, and set correct guidelines for prosecuting an attack against a U-boat. American escorts were to be stationed at each of the four corners of the convoy, 1,000 to 1,500 yards distant from the nearest merchant ships, and the fifth destroyer was to patrol astern at approximately the same distance from the main body. Each escort was to patrol station at no less than twelve knots, its sonar in constant operation, and its lookouts on watch, scanning the horizon to identify any surfaced U-boats. Two hours before dark, the trailing destroyer was to conduct "a sound search in waters at estimated range of visibility of a submarine

lookout."³⁰⁹ Also, one escort on each flank was to sweep to the starboard and port extremes of visibility off the convoy.

The Americans used voice communications as much as possible, as King did not like the idea of using lights, especially at night, and thought that careless radio communication might be detected by German wireless equipment and used to help find the convoy. Therefore, radio silence was to be maintained until a contact was made; then, the escorts communicated to prosecute an effective attack.³¹⁰

Upon sighting a U-boat or gaining a contact on sonar, the destroyers were to commence an attack as prescribed in the Tactical Orders. The attack was to be carried out in the same manner be it day or night, the only difference being that at night, escorts and merchantmen were to fire off "star shell" flares so as to illuminate the attack area.³¹¹ Escorts were also encouraged to use searchlights to illuminate any surfaced submarines. The Tactical Orders dictated that the counterattack sequence begin with the escort nearest the contact swinging out towards the suspected U-boat position and racing towards the contact at twenty knots. The skipper of the attacking destroyer was to designate another destroyer to assist him in maintaining

sound contact to coordinate the attack.³¹² The assist ship was to sweep the area with sonar, while maintain a speed of five knots to ensure maximum clarity of sound.³¹³ The remaining escorts "will promptly take steps to equalize intervals without signal ... to cover the space left vacant."³¹⁴

The captain of the attacking destroyer had two attack options -- an "emergency" attack, or a "deliberate" attack. He was to call for an "emergency" attack if the submarine is within 1,000 yards, or in a position to attack the convoy. If the U-boat was on the surface, then the destroyer was to engage the submarine immediately, attempting to "ram, depth charge, and machine gun the submarine using searchlight to illuminate."³¹⁵ If the submarine dove, or if the target was a sonar contact, then the destroyers were to attack it with depth charges. The navigation and sonar teams worked together to approximate the distance from the destroyer to the U-boat and then to determine the depth charge release point, usually 400 yards aft of the enemy's position. Once the escort had closed to within 800 yards, her skipper was to increase speed to twenty-five knots. Moments later, beginning at the release point, the escort was to drop six depth charges at ten second intervals. The first charge was set to explode at 150 feet, the second at 300 feet, and they

alternated thereafter. After the last depth charge was dropped, the destroyer would continue on course for one minute, then was to reverse course and attempt to regain contact and launch another attack.³¹⁶

The objective of an "emergency" attack was "to break up the submarine attack." This hasty depth charge attack was intended to scare the submarine's crew, throw off their aim, disrupt the attack angle, and possibly force the enemy to the surface where she might be engaged by the escort's guns or sunk by ramming.³¹⁷ Often, commanding officers referred to this type of "emergency" or "scare" attack as an embarrassing barrage of depth charges -- inasmuch as the attack was supposed to "embarrass" the submarine to the surface.

When there was no urgency to counterattack, or after an "emergency" attack had been finished and the destroyer had circled back for the killing blow, destroyer skippers were to conduct deliberate attacks. These were well-aimed depth charge attacks, whose object was "the destruction of the submarine."³¹⁸ Once sonar contact was obtained, the destroyer's speed was increased to fifteen knots and she steamed towards her target. The idea was to keep the bearing of the target dead ahead, so that a run could be

made directly over the submarine. At 800 yards, the destroyer increased speed to eighteen knots. Sonar contact was soon lost due to minimum range limitations on American sonar gear, however, so it was important to have high speed on the last leg of the attack to close the distance before the submarine could maneuver away. At 400 yards to target, the depth charge crew started a stop watch, and thirty seconds later, they dropped the first charge. Every five seconds thereafter, another charge was dropped.³¹⁹

The Tactical Orders dictated that six depth charges in a spread be dropped in a standard diamond-shaped pattern. This pattern was to be created by dropping four 600-pound depth charges in a line off the stern racks and simultaneously using the Y-gun to throw two other 300-pound charges on the flanks. If the target was a firm sonar contact, doctrine dictated that the charges be dropped at five second intervals so as to keep approximately forty yards distance between each charge. However, the Tactical Orders stressed that should there be doubt about the contact, the time elapsing between drops might be increased, so that there would exist more spacing between the charges, and so that the pattern would cover a larger area.³²⁰

The Tactical Orders also prescribed that the depth charges

be dropped at depths correlating to the estimated depth of the submarine. The depth of the submarine could be estimated by using the distance between the destroyer and the U-boat at the moment the contact was lost. If the sonar operator lost contact at 350 yards from the target, for instance, this indicated that the submarine had gone deep, and the charges were accordingly set for 300 feet. Similarly, a contact lost at 250 yards meant that the U-boat was at an intermediate depth, and so some charges were set for 150 feet and some for 300 feet. Finally, if the sonarman lost the submarine 150 yards from the target, then it was assumed that the submarine was still running shallow, and so all six charges were set for 150 feet. Once an attack run was complete, the destroyer was to maintain her course for one minute, then to circle around for another sonar sweep, and, if need be, another attack.³²¹

The Tactical Orders even included procedures for destroyers to follow in dealing with an enemy raider. Once visual contact was established, the destroyer laid smoke, and then commenced attack runs from two separate directions so as to split the enemy's fire. The destroyers were to close to within torpedo firing range as fast as possible. As with depth charge runs, the destroyers worked in pairs, each cross-checking the adjacent ship's firing. In the meantime,

the convoy commodore was to sail the merchantmen away from the action.³²²

These, then, were the tactics and doctrine to be used by the Atlantic Fleet for escort-of-convoy duties in mid-1941. Like the British, the U. S. Navy's planners had devised tactics and a doctrine that had good and bad points. The Americans seemed to have a good understanding of how to prosecute a depth charge attack, and the instruction regarding depth settings would serve them well against the night surface attacks, during which submarines tended to submerge once sighted by an escort, thus placing the submarines at a shallow depth where a depth-charge spread was sure to do damage. However, the Americans had erred in choosing to keep the escorts close by the convoy formation because there they were in no position to carry out the aggressive attacks prescribed by their tactics. It had become evident in October 1940 that to combat German U-boats firing from ranges of 4,000 to 5,000 yards off the convoy, escorts needed to be stationed 3,000 to 4,000 yards away, both to give their lookouts a chance to locate the submarines at night, and to provide the escort with an opportunity to attack the U-boat before she fired at the merchantmen. But, perhaps, the weakest aspect of these ASW tactics was the absence of any mention of air support.

British air patrols in 1940 had forced the U-boats to move westward, out of range of the land-based patrol bombers, but away from the shipping lanes off the Irish coast. Yet the U. S. planners failed in 1941 to recognize that aircraft endowed the defense of convoys with a tremendous advantage over the U-boat.

The fleet, especially the destroyers of the Support Force, needed to learn the tactics before September, and so King and Bristol initiated an extensive training program in April. In February, King had attached a squadron of submarines to the Support Force, and now he used these vessels to train Bristol's destroyermen in ASW tactics.³²³ After escort operations began, King realized the need for more tactical training, and in November he sent an additional six submarines to Argentia to assist with ASW training for convoy escort groups, although Bristol also used the submarines to patrol the coast of Newfoundland for U-boats thought to be in the area.³²⁴ The Support Force was given priority for anti-submarine warfare equipment, especially for depth charges.³²⁵ By September, the American escorts were ready to take the fight to the enemy.

Atlantic Fleet tactics remained unchanged throughout the first month of U. S. escort-of-convoy, but then experience

dictated that improvements had to be made. For example, in November 1941 the U. S. Navy revised its depth charge procedure; while the attack procedure remained the same, the standard number of charges dropped in each pattern was reduced from six to five, but the standard distance between the charges was increased to fifty yards, so that the five-charge pattern would cover the same area as the old six-charge array. The main tactical improvement was a change in prescribed depth settings. Destroyer captains had found that in attacking a submarine which had just dived to escape surface gun-fire, it was better to set the charges between 150 and 250 feet, while in prosecuting an attack on a U-boat which had gone deep, depth charges should be set to explode at various depths ranging from 150 to 300 feet. According to Bristol, the "patterns must be of such a type as to provide an appropriate spread, both in the horizontal and vertical. This spread will somewhat compensate for variations in depths and for the probable evasive tactics of the submarine in the horizontal."³²⁶ Of course, the tactical orders gave the on-the-scene commander the authority to make a judgment call on the depth settings. "The officer at the scene is in the best position to estimate the situation," Bristol directed. "Hence, the foregoing patterns are not to be considered mandatory but as a guide to the purpose intended."³²⁷

Also in November, the Atlantic Fleet began to make more use of British information about U-boat dispositions, most of which was derived from D/F fixes. The D/F fixes alerted American escorts to the whereabouts of U-boats shadowing or in the vicinity of escorted convoys. In November and December, American SOE's frequently detached destroyers from their ocean escort screens to harass these U-boats; this forced the U-boats to submerge so as to avoid the pursuing destroyers, and allowed the convoys to steam past the danger zones.

Furthermore, much more radar gear became available, and by November, every escort group included at least one radar-capable destroyer. These sets could "detect a U-boat on the surface at 12,000 yards."³²⁸ Destroyer commanders often reported that U-boat skippers tended to fire at convoys at distances of 4,000 to 6,000 off the convoy, farther than lookouts could see at night.³²⁹ Radar might warn the escorts of this danger, however, in which case the SOE could detach a destroyer to deal with them, at least before the U-boats had a chance to fire well-aimed shots. Furthermore, the escorts' patrol distance off the convoy formation was increased to 3,000 in late October, and even further in November, so as to decrease the time it took for an escort to identify a target and rush out to conduct an attack.³³⁰

The Navy had developed crude escort-of-convoy tactics and doctrine in the five to six months before the first convoy was escorted in September 1941. Combined with British Special Intelligence and rerouting methods, these tactics were instrumental in successfully escorting hundreds of merchantmen across U-boat infested waters. Between September and December, several changes to the doctrine and tactics were made as the result of experiences with U-boat attacks in October and November. These changes corrected many of the flaws inherent in the system adopted in September.

CHAPTER 8: The First Convoy

In September, the Support Force commenced escort-of-convoy operations. The concentration of more U-boats in the North Atlantic, and likewise the Allied build-up of escort forces, seemed to foreshadow a tough ride for the Atlantic Fleet escorts. In the end, most of the convoys shepherded by American escort groups passed through the North Atlantic without being sighted, but the few convoys that were attacked provided the U. S. Navy escorts with some important experience in fighting what would remain the Atlantic Fleet's nemesis for the rest of the war -- Germany's U-boats.

Before the operations began, the Canadians, British, and Americans reviewed the escort program once again to ensure that each navy understood its role in the upcoming operations. The American and Canadian escort groups would accompany the convoys from Halifax and Sydney to a Mid-Ocean Meeting Point (MOMP) somewhere south of Iceland, along the 26 W longitude line, where they turned the convoy over to a British escort force. At the same time, the Canadian and American ocean groups relieved the British of their

westbound convoy.³³¹ The battleships and cruisers of the Atlantic Fleet were poised at Halifax and Iceland, ready to put to sea to provide a covering force for convoys in the case of German surface fleet sorties.

On 15 September, Roosevelt modified previous convoy escort instructions and authorized U. S. warships to "escort convoys in which there are no U. S. or Iceland flag vessels."³³² This permitted the Support Force to escort any of the convoys that left Sydney or Halifax every six days, which guaranteed that eventually, United States warships would come to blows with German submarines.

While the Allies prepared for escort duties, Donitz established his U-boat patrol lines in anticipation of the upcoming fight. In September, German intelligence began to read the Royal Navy's Naval Cipher No. 2, which was used to code British convoy communications and routing orders. Making reference to this intelligence, Donitz positioned his U-boats in areas where contact with convoys seemed likely, and by early September, he had concentrated a dozen U-boats in a line extending from "southwest of Iceland in a westerly direction via the southern tip of Greenland and Belle Isle Strait to Cape Race," perpendicular to the Allied North Atlantic trade routes.³³³ Donitz knew D/F stations fixed

positions of his boats, and he suspected that the Admiralty's Trade and Routing Section used the D/F intelligence to attempt to route the convoys around the submarine concentrations.³³⁴ Bletchley Park deciphered a message to U-boats that confirmed these German suspicions: "The British attach great importance to direction finding U-boat transmissions and can now attempt bearings even of short signals, and it must be assumed that every recognizable short signal will be D/Fed."³³⁵ Yet radio communications were the sole means by which Donitz could form wolfpacks, and so he continued the practice despite the advantage it gave the British.

The U-boats were positioned, and the Americans ready for the challenge. September then was the first time the U. S. Navy put its escort-of-convoy tactics and doctrine into practice, and convoy HX.150 was the first transatlantic convoy escorted by an American ocean group employing these methods.

The Canadians and Admiralty's Convoy and Routing Section developed the convoy's intended route in early September, taking into account Special Intelligence. The 9 September decrypts of "Hydra" placed approximately five U-boats of "Group Markgraf" stretched in a line between the southern

tip of Greenland and 62N 22W, south of Iceland. The U-85 and five to six other U-boats were concentrated only sixty miles east of Greenland near 60.20N 41.30W; this pack was shadowing and preparing to attack convoy SC.42. Two other submarines of Group Markgraf, the U-552 and the U-38, were positioned further east and south.³³⁶

The British and Canadian planners routed HX.150 around these U-boat concentrations. The first leg of HX.150 was a 1,350-mile stretch from Newfoundland to a point midway between the southern tips of Greenland and Iceland, a track that kept the convoy south and east of the pack forming to attack SC.42, and well north and west of the U-552 and the U-38. At the point 62N 32W, the convoy would change course eastward, on a heading of 090 degrees true. About 380 miles later at 62N 22W, and after a British escort group relieved the American escorts at the MOMP, the convoy turned southeast towards the dispersal point off the east coast of northern Britain. This last leg helped the convoy to steer clear of the U-38 patrolling south of Iceland.³³⁷ The Admiralty's routing personnel hoped the U-boat dispositions would not change too much after HX.150 sailed, and in fact, the convoy did not have to alter course for several days. However, HX.150 was forced to make two minor course alterations to avoid U-boats.

The convoy stood out of Halifax on 16 September, its fifty merchantmen arrayed in eight columns of six ships and one column of two. Early engine trouble forced six merchant ships to return to Halifax for repairs, but the remaining forty-two pressed onward. The ships ranged in size from a 17,000 ton liner to a 1500 ton freighter. The convoy proceeded northeast at 9 knots, the Canadian destroyer Annapolis and two Royal Canadian Navy corvettes acting as local escorts from Halifax to Argentina.³³⁸ Captain Morton L. Deyo's Task Unit 4.1.1 joined the convoy late on the 16th. Deyo formed his five destroyers into a scouting line at 1630, made contact soon thereafter, and relieved the Canadians.³³⁹

Deyo arrayed his groups according to standard Navy escort doctrine for the time. He positioned the modern destroyer Ericsson, his flagship, 1,500 to 2,000 yards ahead of the convoy. The Ellis, a four-stacker, was ordered to patrol station 500 to 2,000 yards off the starboard bow of the convoy. The Eberle, the other modern destroyer of the group, took station "500 to 2,000 yards abreast of the next to last and last ship of the right column." The four-stacker Upshur patrolled 500 to 2,000 yards at 310 to 280 degrees on the bow of the left column. Finally, Deyo ordered the old destroyer Dallas to patrol 500 to 2,000

yards off the next to last ship of the port column. Though U. S. doctrine called for a destroyer to be stationed aft of the convoy, Deyo believed it more important to place Ericsson forward of the formation, where she could deter U-boats from entering the body of the formation from ahead of the convoy, and then attacking the merchantmen at point blank range while between columns. Also, in accordance with standard doctrine, Deyo instructed his rear escorts to perform 20 knot sweeps five miles aft of the convoy before dusk, so as to identify and attack any "shadowing submarines on the surface." And at night, he brought his destroyers in 500 to 1,000 yards closer to the formation, to ensure a more tight defense.³⁴⁰

The destroyers patrolled their stations at twelve to fifteen knots, each echo-ranging with sonar, "except when visibility of convoy from submarine is less than five miles in which case listen in order to avoid disclosing position." When a contact was identified by sonar or lookouts, the destroyers went into action according to doctrine published in the Tactical Orders for 1941. The escort nearest the U-boat attack position became the attacking vessel. Her captain designated another destroyer to assist in sonar tracking of the submarine. Immediately after the U-boat was reported, the escort tandem raced towards the contact, while

the other escorts filled in the holes in the escort screen left vacant by the attacking pair of destroyers. Deyo reminded his destroyer skippers that only if they were certain of a contact were they to fire a full barrage of six depth charges. If the captain was uncertain of the exact position, one or two charges were to be dropped as an embarrassing barrage to force the U-boat to the surface. Should an attack occur at night -- and there was a good chance the U-boats would wait until nightfall to attack -- the destroyers fired star shells to illuminate the area, although ironically Deyo ordered his destroyer commanders to use searchlights only when the destroyer was ready to open fire on a surfaced submarine.³⁴¹

Deyo had one luxury afforded him that apparently no other convoy before him had -- one merchant ship equipped with a shipboard Direction Finding set. The Admiralty had discovered U-boats signalled BdU "at intervals of possibly 15 and 45 minutes past the hour."³⁴² The British guessed correctly that bearings taken by shipboard D/F sets of broadcasting U-boats in the convoy's vicinity would be more accurate than bearings provided by shore-based stations. These shipboard D/F bearings could be put to good tactical use, as SOE's could detach destroyers to investigate bearings and perhaps defeat a shadowing attempt, or disrupt

an attack before the U-boats could close the convoy. The merchantman designated to carry the set maintained a twenty-four hour D/F watch, with instructions to pass bearings reports during the day and by visual signalling, so as to maintain radio silence.³⁴³

Deyo concluded his standing attack orders with, "Since each escort is 20% of the escort and the mission is to get the convoy through safely, the search and attack should be continued only until the convoy is well clear [of danger], about one hour."³⁴ Recognizing the need to afford the convoy maximum protection, Deyo would not permit his escorts to wander off from the convoy on a wild chase. Finally, he reminded his destroyer captains that typically, German U-boats attacked on the surface, at night, and from long ranges off the convoy formation, and that alert lookouts would be the key to identifying these submarines before they could launch their attacks.

With the convoy defense established, the convoy began its journey through the U-boat infested waters in the North Atlantic. HX.150 continued on the original route for days without incident, a tribute to the routing job done by the Admiralty. For the first 400 miles of the voyage, the convoy benefitted from air cover by PBYs of Patrol Wing

Seven operating out of Argentia. Then, weather conditions and range limitations forced the PBYS to retire. By 19 September, HX.150 was on its own.³⁴⁵

On 18 September, HX.150 made its first "evasive maneuver" to avoid a pack of U-boats. Decrypts from "Hydra" and D/F fixes alerted Admiralty that HX.150 may be in danger of being detected by U-boats in Group Markgraf that were reconstructing the patrol line south of Iceland. The Admiralty passed the information to OpNav, and recommended that the convoy be rerouted south to avoid any chance sightings by U-boats. OpNav approved the recommendation, and that same day, Deyo ordered the convoy to alter course to the south for a few hours. The U-boats found nothing that day, and the next morning, HX.150 returned to base course, headed for the MOMP south of Iceland.³⁴⁶

On the 19th, rough seas, high winds, and squalls slowed the convoy's progress. Several merchantmen began to straggle. The next day, the escorts made their first contact of the new war when one of the Ericsson's lookouts, "a very reliable boatswain mate," spotted a conning tower "very distinctly in the heavy sea ahead." The Ericsson prepared to attack, but the conning tower disappeared, and though sonar operators reported two uncertain sound contacts within

the next few minutes, the "heavy rolling made any sound work unreliable." Still, the Ericsson's captain ordered an embarrassing barrage of two depth charges be dropped. There were no signs of damage, nor any indication that a U-boat was in the vicinity.³⁴⁷ More than likely, the lookout had been a little on edge, and had mistaken a swell or sealife for the conning tower.

Before dawn on 22 September, OpNav, once again acting on the Admiralty's advice, ordered the convoy to alter her course to a more easterly heading, so as to steer clear of another pack of U-boats. HX.150 returned to base course at 0800Z.³⁴⁸ The weather continued to deteriorate, and in late afternoon, one more merchantman dropped out of the formation. The Eberle was detached to look for the hapless ship, but the merchantman was never found.

The 23rd passed without incident, but on the morning of 24 September, one of the merchantmen reported a fire in her engineroom. She soon dropped out of the convoy, and again Deyo detailed Eberle to assist the ship. The destroyer found the merchantman early after sunrise, and began to help the merchantman's crew fight the fire raging aft near the ship's engines. In spite of valiant efforts, the fire became out of control, and at 0835 the Eberle's skipper

ordered abandon ship. The Eberle spent three and a half hours searching for survivors, but every one of the ship's crew was rescued, and in mid-afternoon, the Eberle returned.³⁴⁹

At 0854Z on 25 September, the thirty-six remaining merchantmen in the convoy and their escorts arrived at the MOMP, somewhere near 62 degrees North, 26 degrees West. Amazingly, the group was only one hour late, despite the bad weather and the route amendments. The British relief, however, was not so prompt. Finally, at 1338Z, lookouts aboard the Eberle spotted smoke on the horizon, and in minutes, three British destroyers and four corvettes appeared in the distance. The British escort group commander and Deyo exchanged formalities, and at 1400Z, Deyo passed on HX.150 to the Royal Navy escorts.³⁵⁰ Accompanying two merchantmen bound for Reykjavik, Task Unit 4.1.1 steamed north towards Iceland for fuel replenishment, and arrived at Reykjavik Harbor on 26 September. The British escorts and the other thirty-four ships of HX.150 completed the last leg of the journey to Britain without incident.

Captain Deyo's after action report was insightful. He offered several suggestions that were valuable for future convoy operations. The Navy adopted some of these

suggestions immediately, but procrastinated on others. Deyo argued "the use of radio is so very inadvisable that the escort will not and should not have to use it." British escort commanders still complained of U. S. wireless traffic during convoy operations in November and December, but the problem was rectified in 1942. Deyo also suggested the turnover of the convoy from American and Canadian hands to the British should be much less complicated and formal -- both the American and British escorts groups should arrive promptly, and a brief exchange take place before the other group took responsibility for the convoy and proceeded onward. Additionally, Deyo complained that instructions for route amendments were too confusing for his liking. In the future, Deyo remarked, rerouting instructions passed to SOE's should be brief and "unmistakably worded to avoid misinterpretation."³⁵¹ The Admiralty and OpNav corrected this problem immediately.

Moreover, Deyo warned the U. S. that the old four-stackers were too "short-legged" to be of use in a running convoy battle. Deyo's escorts made to the MOMP with just enough fuel left to get them to Iceland. HX.150 performed minimal zig-zagging and evasive maneuvers, and since there was little action against contacts, the destroyers did minimal patrolling. Deyo hypothesized that old destroyers of a

convoy which was forced to change course many times and became involved in a large battle, would run out of fuel before the operation was finished. The Navy would have to enlarge the fuel tanks of the old destroyers, shorten the escort legs for the escort, or provide a refuelling at sea for the older escorts.³⁵²

On the other hand, the experience learned during the passage of HX.150 influenced American escort doctrine. Anti-submarine tactics and defense of convoy doctrine were improved as the result of Deyo's resourcefulness during the operation and farsightedness in his after-action report. Deyo had apparently studied British doctrine. His decision to sweep five miles astern before dusk in search of German shadowers became part of American escort doctrine by the end of 1941. Five miles proved to be an excellent distance for the sweeps; German submarines fired from ranges of two to three miles away, and so long as they were conducted properly, the sweeps would undoubtedly pick up submarines trailing the convoy. The five miles was also not too far as to keep the escorts away from the convoy for a long time, something Deyo stressed in his orders before sailing. Deyo was also smart to limit the use of searchlights. Though use of searchlights was part of standard U. S. Navy doctrine, they provided a good aiming point for U-boat skippers

searching for targets. Unfortunately, Deyo did not realize the same problem existed in star shell illumination, and many merchantmen were sunk and many sailors killed before the Navy ceased to use star shells.

Perhaps most important was that the HX.150 operation helped establish the practice of having ships fitted with D/F sets travel with convoys at sea. If enough ships were fitted with D/F sets, the fixes could be taken at sea, and an extremely accurate plot of a U-boat position could be obtained. The information could be disseminated to the escort forces faster than shore-based stations could relay the information, and as a result, the escorts could react much more quickly to a threat. Shipboard D/F sets, especially high frequency sets, became one of the most important tactical killers of U-boats in the war; the origins of the system were in HX.150.

HX.150 was one of the easiest escort-of-convoy operations during the war. But the U. S. escort doctrine, and the escorts themselves, remained untested. The U. S. destroyers had yet to cooperate with their Canadian neighbors in extended escort operations. Cooperation with allies, and actually fighting U-boats complicated escort operations, but were more common occurrences in escort duty than the "milk

run" that Deyo had experienced. In fact, though HX.150 was a success in regards to bringing merchantmen to their destination safely, the escort of the convoy was a failure in that many flaws in U. S. ASW tactics and doctrine remained unseen. These flaws became evident one month later, when the Atlantic Fleet received its baptism of fire in escorting convoy SC.48.

CHAPTER 9: The Kearny Incident

The passage of convoy HX.150 from Argentia to the CHOP south of Iceland represented a "milk run" for Captain Morton Deyo's ocean escort group and a successful evasive routing operation for the higher headquarters. No U-boats were encountered, no ships were lost, and the formation appeared at the MOMP only one hour late. Another U. S. Navy escort group met the westbound convoy ON.18 on the 24th of September and, after one major evasive routing direction, arrived at the prearranged rendezvous with the Canadian local escort force off Argentia without incident. A third four-destroyer Support Force escort group accompanied convoy HX.151 from Argentia to the MOMP in late September and early October; these ships, too, encountered no opposition. Defending the movement of SC.48 was a different matter.

The assemblage, routing, and assignment of escorts for convoy SC.48, a slow eastbound convoy, followed the procedures arranged earlier. The Admiralty's Trade Division cabled the proposed route for SC.48 to OpNav on September 26th, and the Navy's Convoy and Routing Section, OpNav 38S, approved the proposed route two days later. The Canadian

naval headquarters in Ottawa, and the Newfoundland Escort Force Headquarters (NEF) both concurred soon thereafter. The Canadians briefed the convoy commodore and the senior officer of escorts (SOE), Canadian Lieutenant Commander Davis. The convoy stood out of Sydney, Nova Scotia at 1430Z on 5 October 1941.

SC.48, which made only five knots, consisted of fifty-two merchant ships formed up in ten columns of five ships, and one column of two ships. Davis' command, Task Unit 4.1.15, consisted of the destroyer Columbia, an ex-U. S. Navy four-stacker that was transferred to the Canadians in September 1940 as part of the Destroyer Deal, and the four Canadian corvettes Witaskiwin, Gladiolus, Mimosa, and Braddock. Like many old ships, Columbia's material condition was not good, and just before the convoy got underway the destroyer's boilers failed and she could not sail with the escort group. Davis arranged for her to be repaired and to join the convoy at sea. Although it had no destroyer escort, SC.48 sailed anyway, passing through the Belle Isle Straits on 8 October and entering the North Atlantic.³⁵³

For another evasive routing operation to succeed, both London and Washington had to react quickly to any changes in U-boat dispositions depicted by special intelligence. The

experience of September demonstrated that the Anglo-American arrangements for sharing Special Intelligence were working well. But one of the many reasons for the easy transatlantic convoy passages in September was that in August and September, Donitz concentrated his U-boats along the Gibraltar convoy routes, and left few boats in the North Atlantic. However, when he learned that the Atlantic Fleet had entered the fray in early September, Donitz quickly adjusted his strategy, and began to reposition U-boats across the North Atlantic trade routes.

This strategy was evident in October's decrypts. Though with a three- to four- day time lag, the STR read the U-boat traffic for October and produced a fairly accurate daily plot of U-boat positions. On 1 October, the British intelligence summary noted only four U-boats in a line of bearing 123 degrees off Cape Farewell, Greenland to thirty-two degrees West longitude. Two other U-boats lay in south of Iceland. These were the only boats on the great circle route. On the other hand, sixteen U-boats were within 500 miles of Cape Finisterre, Spain, ready to pounce on Gibraltar convoys. Four more boats patrolled just south of the Cape Verde Islands, and another four were steaming near the Equator or in the South Atlantic. However, the Special Intelligence report for October 2nd changed the picture.

Three British merchant ships, all independently routed, were torpedoed by German U-boats. The Admiralty concluded that this "indicating that subs southeast of Greenland may be moving southeast in an attempt to contact convoys."³⁵⁴

The situation darkened again the following day, when STR failed to fix the location of sixteen U-boats known earlier to be off Cape Finisterre. STR placed four boats on the Northwest Atlantic along trade routes, and four to six boats off the Cape Verde Islands preparing for operations against convoys bound to and from Freetown, South Africa. On the 5th, the day SC.48 departed Halifax, the British Intelligence Summary reported ten U-boat transmissions from an area around 50 N 35 W, and three near 51 N 21 W. OpNav learned that only four U-boats remained in vicinity of Gibraltar. Up to ten were in or near the Freetown shipping lanes. This left no doubt that Donitz intended to concentrate his submarines in the North Atlantic in preparation to attack convoys in the Atlantic Fleet's area of operations.³⁵⁵

On 9 October, the British decrypted messages from BdU to U-boats in the North Atlantic to mass at a point near 26 W. The British Intelligence Summary sent to the CNO that day identified seven U-boats whose positions demonstrated

Donitz's attempt to form a patrol pack near the CHOP line.³⁵⁶ The Admiralty reasoned that Donitz planned to obstruct the next set of transatlantic convoys in the vicinity of the CHOP line, the position where American and Canadian escort groups rendezvoused with their counterparts from the British Isles and the navies handed off convoys to one another.³⁵⁷ On 9 October, the British sent the CNO a suggested course change south to allow the convoy to pass south of the forming U-boat line.³⁵⁸ OpNav concurred and relayed the course change to the Canadian SOE. The Canadian SOE received and executed the course change on 10 October.³⁵⁹

What at first appeared to be a successful evasive routing operation of eastbound SC.48 now got entangled with movements of three other convoys. A fast Canadian troop convoy TC.14 was steaming for Britain. Two fast westbound merchant convoys, ON.24 and ON.25, had recently rendezvoused with their Support Force escort groups at the CHOP line, and were headed for Halifax. The Admiralty had issued course changes to all three of these convoys, diverting them to the south of the known U-boat "heading point." Once this had been accomplished, however, it became clear that the four convoys would sail very close to one another, but the Admiralty welcomed this on the grounds that it would make

escorts form one convoy available should a nearby convoy be attacked.

On 12 October, the British deciphered a message broadcast by BdU which defined attack squares for each U-boat on the 26 W patrol line. Donitz used his grid system containing attack squares to move his U-boats about, and knowing the location and alphanumeric keys to the German grid was what made naval "Ultra" useful to the Allies. A U-boat swept its assigned area, and attacked any enemy merchant shipping it came upon. Should the boat locate a convoy, the submarine would shadow the formation, sending position reports every hour so as to put nearby U-boats on the patrol line on courses that would intercept the enemy's movement. Knowledge of the coordinates of the attack squares identified in the message of the 12th led Admiralty to conclude that the four mid-Atlantic convoys were in no imminent danger because none of them had been routed through one of the attack squares. Just to be certain, the Admiralty issued another evasive routing order that day. OpNav received it at 1230Z, approved the change, and at 1315Z instructed the Canadian SOE of SC.48 to shape a course for 53 N, 33 S.³⁶⁰ Lag time now came into play. The Intelligence Summary for 12 October did not reach OpNav Convoy and Routing until the 13th, and it contained the

unhappy news that four U-boats had been assigned to attack squares just north of the track amendment issued only hours earlier. Moreover, two U-boats were on patrol between 52 N 27 W and 55 N 31 W. This meant these two submarines had a good chance of locating SC.48.³⁶¹

The Admiralty, alert to this danger, decided on one more evasive routing. Unfortunately, it was also time to arrange transfer of escort responsibility for SC.48 at the CHOP line. On 13 October, the Admiralty informed OpNav that a British escort group consisting of five destroyers, one corvette, and four trawlers would rendezvous at the pre-arranged MOMP and relieve the Canadian escort.³⁶² The Admiralty advised OpNav to reroute SC.48 to the south, and the MOMP was altered to keep pace with the course change.³⁶³ Another evasive routing order was sent by OpNav the next day. The MOMP was changed to 57N 22.30W at 1700Z on 17 October.

Despite the hard efforts by the Admiralty, the subsequent order to divert SC.48 south was broadcast too late. Shrewd, rapid use of Special Intelligence had provided the basis for a thusfar successful evasive routing operation, but radio intelligence was so limited at this time that chance encounters remained a constant menace. SC.48 steamed past

the German patrol line between Cape Farewell and 56N 36W where, according to Special Intelligence, six U-boats lay in wait. However, the Intelligence Summary sent to OpNav on the 15th pointed to concentrated U-boat radio activity in the vicinity of 53.30N, 29W. A pack of three to four boats was forming another patrol line that lay near convoy SC.48's new route. While the Germans did not know the whereabouts of any convoy in the area, luck was on their side. When dawn rose on 15 October, Kapitainleutnant Thurmon in U-533 saw SC.48 crossing his bow. He submerged, closed the convoy, and torpedoed two merchantmen; then he withdrew and surfaced to radio a position report to BdU and shadow the formation.

This German transmission brought the British network of shore-based Direction Finding stations which ringed the North Atlantic into play. The purpose of the U-boat position reports was to attract nearby submarines to the convoy and to enable Donitz to put other U-boats on intercepting courses. All the U-533's transmissions were received by the Direction Finding stations and reported to the Admiralty, and the sheer increase in the volume of traffic suggested that the submarine had located a convoy and that she was calling other U-boats to the scene. Special Intelligence still had a role, however. The Germans

prefixed their U-boat position reports with a unique "B-bar" combination, a protocol that alerted Bletchley Park to the contents of many undeciphered messages. At 1448Z on 15 October, Admiralty informed OpNav that, "D/F bearings at 0840Z/15, 0943Z/15, 1046Z/15, 1158Z/15, 1244Z/15, and 1358Z/15 indicate that convoy SC.48 is being shadowed and reported by one or more U-boats."³⁶⁴ The regularity of the transmissions following the initial attack proved that the U-553 had not lost contact with SC.48.

The Admiralty and the Navy Department now had to make a strategic decision as to how to allocate escorts among the four convoys. Special Intelligence and the Summary reports convinced both headquarters that convoys ON.25, ON.24, and TC.14 were in no danger of attack from those U-boats concentrating against SC.48. Not only were these three convoys steaming too far south of the U-boat patrol line to have much risk of a chance encounter, but also none of the German "B-bar" prefixed messages mentioned sighting a convoy other than SC.48.³⁶⁵ For these reasons OpNav agreed with the Admiralty's assessment that escorts from the other convoys might be safely shifted to the defense of SC.48 without incurring too much risk. At 1537Z on 15 October, Admiralty informed OpNav that the corvettes Veronica and Abelia had been detached from ON.25 and were proceeding to

assist SC.48's Canadian escort group. Three hours later, the British detached the destroyers Broadwater and Highlander from TC.14.³⁶⁶ A few days earlier, the destroyer Columbia, her engines now repaired, had put out of Halifax at full speed to catch up with the convoy, and she joined the escort group on the afternoon of the 15th.

Admiral Bristol decided to shift some Support Force ships to reinforce SC.48 Captain L. H. Thebaud, who commanded Task Unit 4.1.4, and was at the time escorting the westbound ON.24 from the MOMP to Halifax. His escort group consisted of the new destroyers Plunkett, Livermore, and Kearny, and the four-stackers Decatur and Greer. "At 2135 on 15 October while escorting convoy ON.24, I received OpNav dispatch 152,000 directing that convoy ON.24 be dispersed and that this escort unit proceed to assistance of convoy SC.48." Leaving ON.24 without an escort, Thebaud "proceeded with an escort unit at 25 knots."³⁶⁷ This unexpected turn of events found the Greer low on fuel, and unable to steam at flank speed, and she fell behind, but Thebaud sailed for SC.48 with the other four destroyers.

On 16 October, anticipating sighting the convoy, and since the convoy was hidden by radio silence, Thebaud positioned his ships in a scouting line six miles distant from each

other, as per American doctrine at the time. At this distance, the ships covered a considerable area, yet the ships could still communicate with blinkers and did not have to break radio silence themselves. At 1225Z, one of the destroyers made contact with SC.48. At 1240Z, Thebaud and his ships joined forces with the Canadian escort group.³⁶⁸

Command, control, tactics, and doctrine now came into play. The March 1941 ABC-1 strategic agreement had organized the Atlantic theater into operating areas for purposes of command. Despite the presence of Canadian escort groups with convoys, the Royal Canadian Navy had agreed at that time to operate in the Western Atlantic under the strategic direction of the U. S. Navy's Atlantic Fleet. In effect, this put the Canadian transatlantic ocean escort groups under the operational command of Support Force. The immediate importance of this for SC.48 was that, once he rendezvoused with the convoy, Thebaud assumed command of the entire escort force as SOE. Although the British destroyers Broadwater and Highlander from convoy TC.14 were still a day's steaming time from SC.48, Thebaud's arrival meant SC.48 had a formidable escort force of five destroyers and four corvettes.

Thebaud's biggest problem was that the Canadians and

Americans had never worked together before. Their differing escort and anti-submarine doctrines made cooperation difficult. When the British escorts arrived, they would lend more confusion to the defense scheme. Nevertheless, SC.48 was the first occasion in World War II when the U. S. Navy worked tactically with an Allied navy in defense of a convoy movement, and Thebaud would do his best to see that it was successful.

As SOE, Thebaud took control of the formation immediately and disposed the escorts in a screen according to Atlantic Fleet doctrine. He stationed the Plunkett 2,500 yards ahead of the convoy. The Plunkett's job, therefore, was to patrol off the van of the convoy so as to prevent any U-boats from entering the convoy from that direction and passing between columns of merchant ships. Thebaud stationed his other four destroyers on the wings of the convoy at a distance of 1,500 yards. The Livermore took the starboard bow, and the Decatur, the starboard flank. The Canadian Columbia patrolled the port bow, and the Kearny took station off the port flank. U. S. Navy doctrine specified that these ships on the flanks were to patrol 1,000 to 1,500 yards off the convoy formation. Individual escort commanders could prescribe the patrol pattern, but doctrine dictated that it must always be in the direction of the convoy's heading.

Sonar searches would shield the convoy from any submerged attack.³⁶⁹

Finally, Thebaud put one Canadian corvette 4,000 yards abeam of each flank, and placed the remaining two approximately 3,000 yards astern of the convoy. The corvettes on the beams, which could use star shells to illuminate their areas quickly, were placed far out in order to help trap a U-boat between two escorts. If a U-boat was located at a distance from the convoy, the corvette would be the first to deliver a counterattack. Thebaud's decision to position the corvettes at the rear may reflect some American appreciation of this British practice, but they were also disposed there to serve as rescue ships for any torpedoed merchantmen.³⁷⁰

Thebaud made one other decision soon after which influenced the conduct of the upcoming battle. A World War I-era four-stacker, the Plunkett's range was limited by her small fuel tank, so Thebaud repositioned her to the starboard bow and assigned the Columbia the job of defending the van.

The screen was consistent with existing U. S. Navy escort doctrine in that the escort ships steamed close to the outer convoy columns to prevent an attacking U-boat from slipping

through and making her way inside the columns. The close escort also kept straggling to a minimum.

The deficiencies in the U. S. Navy screening doctrine would soon be apparent, and some evidence suggests that the Allied navies might have been aware of this by October. Above all, illumination by star shell was no substitute for radar as a means to locate an attacking U-boat on the surface, and few Allied escorts in 1941 were equipped with radar. There were a variety of other serious deficiencies. For one thing, U. S. Navy illumination tactics often silhouetted the convoy and its escorts more than it exposed an attacking U-boat. Clearly, lighting up the dark sky put the escorts at a disadvantage. For another, Atlantic Fleet escort doctrine did not permit individual escorts much time off station to prosecute a proper search. If an escort could locate an attacking U-boat within a span of a few minutes, the escort was to return to her station and resume patrolling. Moreover, even if the escort fixed the position of an escaping U-boat underwater, the U. S. Navy, unlike the Royal Navy, was very conservative in prescribing the use of depth charges.

The stationing of the escorts close to the convoy formation was the most significant flaw. By the beginning of 1941,

the Germans had abandoned submerged tactics in favor of surfaced, night attacks, where the U-boats had a smaller turning radius to outmaneuver destroyers, and could make up to twenty knots speed to outrun corvettes. The U-boats could effectively attack a convoy some 4,000-5,000 yards away. This was well out of range of sonar, which in good conditions could detect submarines awash. The low-silhouette of a U-boat awash at night could hardly be seen by a lookout on an escort over 3,000 yards away. And none of SC.48's escorts possessed radar, the only instrument that could locate a U-boat distant 5,000 yards at night. The U-boats could attack from a distance at night, with little danger of being detected, and even if by some chance the submarines were located, they still had a 3,000 yard head start on any pursuing escort.

With Thebaud's escorts on station and ready to fight, SC.48 proceeded at seven knots. The weather was mild for the North Atlantic, and sound conditions were good throughout the day. The large number of D/F fixes on U-boat transmissions signalled an impending attack that night. When sunset came at 1837, Thebaud, adhering to Atlantic Fleet doctrine, instructed the Kearny to sweep five miles astern of the convoy so as to force under any U-boats which had been shadowing the convoy during the day. Once darkness

fell, the SOE had the authority to make tactical course changes to further inhibit shadowing and prevent night attacks. On this occasion, the Kearny swept astern, and dropped four depth charges at the far end of the sweep just to scare off any lurking submarines. The Livermore made a similar sweep five miles ahead of the convoy, dropping two depth charges to discourage tracking submarines.³⁷¹

For reasons not altogether clear, Thebaud made no tactical change of course immediately at nightfall. His first move did not come until 2120, when he changed course to 054 degrees true. At any rate, neither the sweeps astern of the convoy nor the course changes that night inhibited the attackers. Thebaud's failure to maneuver just after dark may have permitted the nearby U-553 to continue shadowing SC.48. Thebaud changed course once again at 2135, this time eastward to 093 degrees true, a course she was on when the first salvo of German torpedoes struck the convoy.

The first attack occurred at 2211 on the 16th. The sea was moderate, the winds force four from west-southwest, and a broken cloud cover floated at 1,000 feet. Sound conditions were good. However, none of the escorts picked-up U-553 as she approached the convoy on the surface. Thurman's first spread of torpedoes from U-553 sank a Norwegian tanker in

the starboard center of the convoy. Thebaud was convinced that the submarine had delivered the attack from several thousand yards off the port quarter. U. S. Navy doctrine told the escorts to react quickly. The Kearny, the nearest American escort at 1,500 yards off the port quarter, turned to port, fired off several star shell canisters for illumination, and dropped a pattern of five depth charges. Lieutenant Commander Anthony L. Danis in the Kearny was by now convinced that Captain Thebaud had positioned the escorts too close to the convoy. Danis had no idea where the U-boat was, but she hoped to scare the U-boat to the surface with her depth charges, and hunt her on the surface under the illuminating star shell light.

At the same time Kearny dropped her depth charges, the Canadian corvette stationed 4,000 yards off the port beam of the convoy fired off her own star shells. She zig-zagged and searched the area near her patrol station vigorously. The Plunkett also fired off star shells, but she was ordered not to leave her station, 1500 yards off the port bow. About 2,500 yards ahead of the convoy, the Columbia maintained station and kept a lookout for other attackers. The two American destroyers Livermore and Decatur also kept station 1,500 yards off the starboard corners. Both of these ships fired star shells to illuminate their patrolling

areas. The Canadian corvette 4,000 yards off the starboard beam also lit up the area, but did not search as did her sister on the opposite side. The two corvettes to the rear fired off star shells, and stood by to pick up survivors from the torpedoed ship. Having escaped detection, the U-553 continued to shadow the convoy and attract other submarines to her position.³⁷²

Kapitanleutnant Krech in U-558 had just arrived on the scene, and at 2230 he conducted a surface attack, firing his torpedoes from several thousand yards out. Two merchantmen in the port center of the convoy were hit. The ocean escort group reacted to this attack as it had to the earlier loss. The Plunkett, Decatur, and Columbia remained on station and fired star shells, as did the two trailing corvettes and the corvette defending the starboard beam. On this occasion, however, the Livermore's skipper was more aggressive. Although the attack was suspected to have originated off the port stern, the Livermore made a wide sweep to starboard off the starboard bow. At the same time, the Canadian corvette off the port beam made a high speed sweep around the convoy's port bow towards Columbia's position, firing star shells all the way. And the Kearny, again nearest to the U-boat's suspected location, tailed off to port and began to sweep that area. The Kearny swept between 2,000 and 2,500

yards off her station, fired off star shells, and dropped an "embarrassing barrage" of three deep set depth charges in an attempt to bring the U-boat to the surface.³⁷³ The escorts again found nothing. Two U-boats had two sinkings each and the attack had yet to fully develop. British Special Intelligence put Thebaud on alert that Donitz was sending more U-boats to intercept SC.48. Special Intelligence could only be used to route convoys clear of upcoming packs. Once a convoy was sighted and attacked, it had to shake its shadower before radio intelligence and evasive routing could again be brought into play.

Thurman in U-533, immune from a counterattack because the escorts were hugging the convoy, stayed close to SC.48 all that night. The German attack was just starting to develop. A few minutes before midnight, Thebaud ordered the Decatur to steam to a position five miles to the rear of the convoy and sweep for shadowers. Looping back around the convoy, the Decatur acquired three separate sound contacts, and conducted "three depth charge attacks dropping five three-hundred pound charges on each," but she reported that "there were no visible results."³⁷⁴ The Decatur encountered the two Canadian corvettes to the rear of the convoy at 0100; they were rescuing survivors from the ships torpedoed several hours earlier. Thebaud's order to the Decatur,

which put her at the rear of the convoy until 0200, made the Livermore responsible for the convoy's entire starboard flank, and she began to aggressively patrol this large area once the Decatur left her station. While the Decatur was off station, the U-boats struck again. As many as three submarines fired torpedoes between 0147 and 0210 on the 17th. At 0147 GCT, Kapitanleutnant Schultze in U-432 torpedoed two ships to the rear center of the convoy. The escorts once again fired star shells, but the attacker escaped.

Thebaud's problems now began to multiply. Keeping convoy discipline, never easy, created particular problems for the ocean escort group during an attack. The number of stragglers from SC.48 increased after the midnight attack. Then, while on patrol off the convoy's port bow, the Plunkett lost steering control and began to zigzag at 0150. Barely under control, the destroyer was effectively out of action for twenty minutes. Her plight, and the increasing number of stragglers, added to the "fog of war" engulfing the convoy. With Decatur to the rear of the convoy and the rear Canadian corvettes rescuing survivors, Thebaud was left with only the destroyer Livermore and one corvette to starboard, Kearny and one corvette to port, and the Columbia ahead of the entire formation. The Germans chose this

moment for another attack, and at 0200, the U-432 fired a torpedo into the hull of a Norwegian tanker which blew up in such a "colossal flash" that "the whole convoy was lit up by its brilliance."³⁷⁵

Danis in the Kearny, assuming that the attacking U-boat was off the port quarter, swung his ship to port to sweep the area. He dropped one depth charge to "embarrass" the enemy to the surface. Then, while Danis was looping back toward the convoy to regain his patrolling station, the Canadian corvette Baddeck increased speed to catch up with the crippled tanker and rescue any survivors. This put the Baddeck and the Kearny on a collision course. When he realized what was afoot, Danis ordered all engines back full, emergency, to prevent collision, with the result that Kearny went dead in the water and the Baddeck passed ahead safely. At this moment, a torpedo entered another merchantman in the convoy and she exploded, exposing the Kearny's momentarily helpless position. She presented a magnificent target for U-568. Kapitanleutnant Preuss quickly fired three torpedoes. One passed ahead of Kearny, one astern, but the third torpedo struck the American destroyer amidships near the waterline at 0210.³⁷⁶

Danis worked now had to save his ship. The Kearny lost

radio communications with the SOE. She began to take on water. Damage control parties went to work. In the meantime, Thebaud continued to fight the U-boats. The Livermore began lighting off more star shells, and the Decatur returned to the convoy at 0200. She patrolled near the Kearny, both to protect her from another attack and perhaps to find the submarine that had scored the hit. At 0240, Kearny had secured the flooded compartment; radio communications were restored with Thebaud, and Danis reported his plight. He had no choice but to break off from the convoy and limp away to the North to escape further damage to his ship.³⁷⁷

Thebaud ordered Danis to take the Kearny to safety at Reykjavik. By daybreak, her speed was back up to ten knots and she was heading for Iceland. Later in the day, the Greer, which Thebaud had left behind, reported that she was at last making full speed on a course converging with SC.48. Thebaud changed her orders, telling her captain to locate the Kearny and escort the crippled ship to Iceland. That afternoon, the Greer rendezvoused with the Kearny and both ships shaped a course for Iceland. PBYs from Iceland met the destroyers at sea and patrolled for submarines as the two vessels made for port. Kearny stood into Reykjavik on the morning of 19 October.³⁷⁸

While the Kearny was withdrawing to Iceland, the attacks on convoy SC.48 continued. At 0258 GCT, another merchant went down. The reduced escort illuminated the area as before. They also continued to stay close to the convoy formation. Again, the attackers escaped detection.³⁷⁹ As the convoy steamed into the night, more merchantmen were straggling and the two corvettes in the rear were busy rescuing survivors. The three remaining American destroyers and the Columbia maintained their perimeter defense, although Thebaud now positioned Columbia approximately 2,500 yards off the convoy columns. At Thebaud's orders, the Plunkett took station off the port bow. She patrolled the port bow and flank throughout the night. The Decatur was stationed on the starboard quarter, and the Livermore covered the starboard bow. He kept two corvettes on the rear flanks.

Although no ships were lost for the rest of the night, the escorts kept busy. At 0345, a Canadian corvette chased a surface contact which it located 4,000 yards off the convoy. The submarine dived, and the corvette attacked with depth charges, but with no result. The Livermore made "four certain and one probable sound contacts" that night. The first came at 0320, the last at 0710. Each contact was followed by a depth charge attack. All told, Livermore "expended seventeen 600-pound depth charges and five 300-

pound charges." Her skipper "considered all attacks effective..."³⁸⁰ Livermore was not credited with a kill, but she did keep the wolfpack away for the rest of the night.

Daylight meant the end of the attacks, at least until sunset, but Thebaud had been told to expect to be relieved sometime on the 17th by a British ocean escort group. Nonetheless, U-boats continued to shadow the convoy. But now, Special Intelligence again became available. The Special Intelligence Summary for 17 October reported "eight or nine [U-boats] in area 54/58 North, 21/29 West, eight ships torpedoed."³⁸¹ Moreover, at 1219 on 17 October, the Admiralty informed OpNav, "D/F bearings have been obtained of a number of transmissions indicating that several submarines are still in the vicinity of convoy SC.48."³⁸² SC.48 was still being watched.

Dealing with the shadowers was about to be a British task. At 1200Z, the Columbia, badly in need of fuel, left the convoy for St. Johns, Newfoundland. At roughly the same time, the British escorts appeared on the scene. The destroyers Highlander, Bulldog, Amazon, Richmond, Georgetown and Broadwater, plus three Canadian corvettes attached to the British group, found SC.48. Thebaud stayed with the

convoy until the British vessels had taken up their positions, and then he turned the convoy over to the British SOE, Commander Voucher.

The U. S. Navy escort group was effectively relieved of escort duties at 1500 GCT. Before departing, Thebaud directed his ships to sweep the track of the convoy one last time to look for wreckage, survivors, and, of course, any trailing U-boats. Nothing was found.³⁸³

The ordeal was over for the American escorts. SC 48 continued eastward at seven knots escorted by the British group. Although a handful of U-boats shadowed the convoy throughout the night of the 17th, they made no successful attacks. However, on the 18th, the U-101 torpedoed the Broadwater, and that same day, the corvette Gladiolus was blown apart by a torpedo from U-558. The Gladiolus, packed with men just rescued from sunken merchantmen, had been sweeping astern of the convoy for survivors, and all hands on board went down with her.³⁸⁴ The following day, Royal Air Force Coastal Command patrol aircraft flew over SC.48 and began to provide her with continuous air cover, with the result that the U-boats withdrew. The merchantmen dispersed shortly thereafter, with each ship proceeding to its destination port in the British Isles.

The defense of the movement of SC.48 had been a disaster. One destroyer and one corvette were sunk, and the Kearny had been badly damaged. The convoy lost ten merchant ships, and several others straggled so far behind the convoy that only 32 ships of the original 52 were dismissed at the dispersal point off the United Kingdom. While the Atlantic Fleet escort group was defending the convoy, U-boats had sunk eight merchantmen and damaged the Kearny in less than five hours.³⁸⁵

Part of the reason was Thebaud's handling of his escorts. Danis had been right; the escorts were far too close to the convoy to launch effective counterattacks. Although Thebaud had the authority to allow the escorts more freedom of movement, he demanded that the escort formation be kept tight; whenever they steamed away from the convoy to prosecute contacts, the escorts were quickly ordered to return to their patrol stations. The result was ironic in that it prevented the escorts from running down contacts in pairs, something the U. S. Navy anti-submarine doctrine explicitly encouraged. Furthermore, Thebaud's decision to tightly pack his escorts prevented them from using ramming tactics, another pillar of the U. S. Navy's anti-submarine warfare doctrine. And Thebaud relied too heavily on the corvettes stationed far off on the flanks to warn the convoy

of any surfaced submarines in the distance. German records proved that U-boats often fired shots from distances as great as 4,000-5,000 yards, and destroyers on station 1,500 yards off the convoy could do nothing to disrupt such an attack.

In Thebaud's defense, he was following U. S. Navy anti-submarine warfare doctrine in positioning his escorts in the manner he did. To his great credit, Thebaud's analysis of the battle illustrated those gifts as a tactical commander which would be recognized later in the war. "It is hard to avoid the conclusion," he wrote on 20 October, "that the torpedoes were fired from positions well outside of the screening ships and well beyond the effective range of their listening gear."³⁸⁶ Thebaud's escort skippers and other ocean escort group commanders agreed with him on the need to position the escorts at greater distances from the convoy, and by late October these were embodied in a revised fleet doctrine that recommended separations of 3,000-4,000 yards between the escorts and the outer columns of the convoy.

Thebaud's voluminous report on the defense of SC.48 contained several other recommendations that the Navy later translated into doctrine. His practice of ordering periodic sweeps astern of the convoy to force shadowing U-boats to

dive was adopted as standard escort group doctrine, although in 1942 the sweeps were conducted as far as twelve miles astern as opposed to Thebaud's five miles. This tactic proved to be quite effective in shaking shadowers. More importantly, Thebaud understood that successful defense of the convoy did not necessarily involve sinking U-boats; in short, the strategic function of the ocean escort group was tactically defensive. The best tactics, he argued, were those that kept the submarines away from the convoy. "The answer -- if there is one -- is to prevent shadowing. This can best be achieved by the use of air patrols in the wake, on the flanks, and ahead of the convoy."³⁸⁷ Only a U-boat running surfaced could keep up with and shadow a convoy, and the U-boat had to surface to transmit position reports to their shore-based headquarters and to home other U-boats to the scene of an attack. One obvious answer was the use of long-range maritime patrol planes and larger ocean escort groups which, acting in concert, could hold the U-boats under while the convoy escaped. The recommendation became one of the cornerstones of the U. S. Navy's anti-submarine doctrine in 1942. Aircraft, even surface ships, could be used to scare a U-boat under the water. Aircraft armed with depth charges could surprise and quickly sink a surface U-boat. Though Thebaud did not himself use this tactic, his suggestion became another cornerstone of American ASW in

1942.

The defense of SC.48 added considerably to the body of experience needed to perfect the Navy's escort and anti-submarine doctrine. Starshell illumination served only to provide the U-boat skippers with a better view of their targets, and was soon discontinued. Sonars with longer ranges were badly needed, as were surface search radars. Equipping the escorts was especially important owing to the German decision to adopt night surface tactics. Moreover, the U. S. Navy had to learn to be less conservative in its use of depth charges. A pattern of five charges had little chance of damaging a U-boat unless they were thrown directly on top of the submarine, which was seldom the case. The British had adopted a saturation tactic that, according to captured German submariners, rattled all but the most elite U-boat captains and forced them to reconsider any attack. Thebaud found that coordinating the defense of the convoy involved constant communications amongst the escorts, but it was clear even in October 1941 that something had to be done to reduce this radio traffic. The overzealous communications between ships and between nationalities made the tactical environment even more confusing for destroyer captains.

Perhaps the most important lesson to be drawn from the early Atlantic Fleet convoys, especially, SC.48, was that the escorts needed shipboard D/F instruments. Special Intelligence provided up to date information on U-boat concentrations, but Special Intelligence often had a three or four day lag. D/F sets picked up U-boat transmissions immediately, and while these messages could not be deciphered, two or three shipbased D/F assets could fix a U-boat position. An aircraft or surface asset could be sent to that position to sink the enemy submarine, or at least keep him submerged and prevent him from making further transmissions. D/F sets on ships would enable an escort commander to make prompt tactical decisions. An SOE would not have to await transmissions from the shore-based stations to Admiralty, and then to the escort group.

The Atlantic Fleet's defense of SC.48 and the Kearny incident carried political ramifications as well. Roosevelt used it to justify his decision to participate in the Battle of the Atlantic without asking Congress to declare war against Germany. "The shooting has started, and history has recorded who has fired the first shot," he declared in his Navy Day speech in November. "Our ships have been sunk and our sailors have been killed. I say that we do not propose to take this lying down."³⁸⁸ In short, the Kearny provided

Roosevelt with a model of German behavior that reinforced his own prejudices and justified his policies.

Convoy SC.48 also provided the Navy with a strategic and tactical model. Roosevelt's war policy was leading to ever closer Anglo-American-Canadian naval cooperation, at least in the North Atlantic theater, along the lines articulated in Plan Dog and ABC-1. While earlier convoys demonstrated the utility of Special Intelligence and the evasive routing strategy, the passage of SC.48 highlighted their limitations. Tactical doctrine needed changing and material deficiencies needed improving before convoy defenses could be substantially perfected. While SC.48 was a milestone in the Battle of the Atlantic, further unhappy experiences in November and December 1941 would demonstrate how much more had to be learned and done.

CHAPTER 10: The Reuben James Incident

Had convoy SC.48 not been the victim of a chance sighting by a U-boat, the Admiralty might have pointed to its passage as evidence that evasive routing was defeating the German submarine campaign. For most of the distance it sailed, SC.48 provided an excellent example of how Special Intelligence might be used to conduct an evasive routing operation. The passage of SC.48 was one of the few wartime occasions when American and Canadian ocean escort groups escorted the same convoy at the same time. The lessons learned from the attack on SC.48 were articulated in an after action report by Captain Thebaud which profoundly influenced Atlantic Fleet escort-of-convoy doctrine. Some skippers adopted Thebaud's suggestions immediately, and convoy HX.156 clearly benefitted from the new tactics.

While SC.48 and her Canadian and American escorts fought their way to Iceland, the Admiralty's Routing Section was preparing the route for HX.156 using Special Intelligence to plot a course that distanced the merchantmen from known U-boat positions. The route was ready on or about 14 October, eight to nine days before the convoy was scheduled to leave Halifax, and the Admiralty transmitted it to OpNav for

approval. Even as this was happening, the strategic picture in the North Atlantic was changing. "Hydra" decrypts for the 14th and 15th placed U-boats far north and far east of the proposed routes. To the north, the U-boats were beginning to concentrate for attacks on SC.48. Six U-boats were concentrated between Cape Farewell on the southern tip of Greenland and 54.30N 34W. Moreover, "concentrated activity" in the vicinity "53 degrees 30 minutes North, 29 degrees West" indicated that more U-boats were heading toward SC.48. There was a lone U-boat on patrol at 51.30N 31W. There were other submarines to the east, some 260 miles east of the Irish coast where they were out of range of British air patrols. On the 14th, four U-boats patrolled "on line from 54 degrees 40 minutes North, 32 degrees West to 49 degrees North, 15 degrees West," but the following day they moved a bit to the north, to the area around 52-54N and 17-20W.³⁸⁹

The Admiralty arranged a course for HX.156 that would completely bypass all of these concentrations. The first leg of the track was a 1,900-mile passage from Halifax to 66N 22W, the approximate location of the MOMP. This meant that the convoy was to steam almost due east from Halifax, and then to turn northeast after passing St. Johns. Approximately 300 miles due east of Belle Isle, HX.156 was

to turn east once again until it reached 54N 34W; at that point it was to head to the northeast. This route placed HX.156 considerably south of the six U-boats now operating against SC.48, and passed it no closer than 100 miles of the lone U-boat at 51-30N 31W. The route also put the convoy west of the pack of four submarines then 260 miles off the coast of Ireland. Once on its northeasterly leg, the convoy was to steam for the MOMP, where it was to turn slightly southeastern and sail for the northern tip of Scotland. This last leg of the route kept HX.156 some 210 miles north of the four U-boats. After being escorted for the last 480 miles under British escort, the convoy was to scatter just northwest of the northern tip of the British Isles, each merchantman continuing on to her destination.³⁹⁰

OpNav approved this suggested route, and prepared to check it against the Admiralty's daily intelligence summaries to make sure it did not cross any known U-boat patrol lines. The ships began to load their cargo. NSC in Canada organized the convoy; and the merchantmen began to assemble at Halifax on the 20th.

Convoy HX.156, consisting of forty-four merchantmen formed into eight columns of five ships and one column of four ships, put out of Halifax on 23 October. Convoy speed was

about nine knots. From the beginning of the voyage, the ships maintained their assigned stations well. Station-keeping was made easier by the good weather which the convoy encountered throughout its passage to the MOMP. In fact, there were only two days of rough weather over the span of a week and a half, quite unusual considering the season.³⁹¹

The Support Force ocean-escort group rendezvoused with HX.156 about 0900Z on the 24th. The Canadian destroyer Annapolis had provided local escort from Halifax to the meeting point with the Americans, but Atlantic Fleet Task Unit 4.1.3 was designated to escort the convoy from Argentia to the MOMP south of Iceland. Commander Richard E. "Possum" Webb had five destroyers in his group: the modern destroyers Benson, Niblack, and Hilary P. Jones, and the old four-stackers Reuben James and Tarbell. All of these vessels were veterans of earlier escort-of-convoy operations.

The SOE arrayed his escorts mostly according to prevailing Atlantic Fleet doctrine. The Jones took station off the convoy's port bow, about 2,000 to 3,000 yards away from the nearest merchant ship. Webb positioned the Benson off the starboard bow in the same manner. The two older destroyers patrolled 2,000 to 3,000 yards off the rear of the convoy.

The Reuben James was stationed off the last ship in the leftmost column, while the Tarbell was off the starboard quarter. Webb and his destroyer skippers understood to patrol actively at their stations, so as to ward off shadowing submarines. Although the older escorts were limited in their patrolling owing to fuel constraints, the modern destroyers cruised at 12 to 15 knots on station. The result of the destroyer commanders' aggressive doctrine was that the escorts usually found themselves at least 3,000 yards from the convoy formation.³⁹² To cover the four corners of the convoy, Webb instructed his escorts to sweep 125 to 135 degree arcs with their sound gear.

The Niblack's mission was somewhat different. In mid-October, the Navy began to fit the Support Force destroyers with radar which the Royal Navy had found to be particularly effective against surfaced U-boat attacks. With Donitz's aces attacking on the surface and at night, radar offered the Allies "eyesight" at night they had not previously been afforded. Many of the more senior officers had trouble adjusting to tactics dictated by radar, and complained that the radar gear often malfunctioned. Indeed, early American radar systems were quite primitive as compared to those produced later in the war, but the systems installed in 1941 could locate a submarine on the surface at a range of 6,000

yards. Since the Niblack was one of the ships fitted with radar, Webb stationed her aft of the convoy, a decision criticized by some accounts which argued that most of the U-boat attacks at the time developed on the convoy's bow or its flanks. During 1940 and early 1941, the Germans favored attacking the van with the aim of infiltrating the columns and causing havoc inside the convoy formation. By September 1941, however, Donitz abandoned that tactic because the British now positioned a corvette directly aft of the convoy so as to attack any U-boats attempting to make a submerged escape after the action. The attacks on convoy SC.48 demonstrated that the Germans were no longer attempting head-on attacks. The torpedoes which sank the eight merchantmen and damaged the Kearny were all launched by submarines positioned 4,000 to 5,000 yards off the rear flanks of the convoy.

Lieutenant Commander Edward R. Durgin in the Niblack proposed that Webb station his ship about 4,000 yards to the rear, thus allowing Durgin to search a 130 degree arc with her sound gear, and to operate her radar continuously. The after-action report attested that the "Niblack patrolled at a relatively high speed across the stern and quarters of the convoy."³⁹³ Webb not only hoped that the Niblack would pick up any U-boats attempting to attack from the rear flanks,

but also intended her to be in position to locate shadowers during the daytime, so that he could detach an escort to disrupt the U-boats' activities to his rear.³⁹⁴ Though the positioning of Niblack was sound, the experience of HX.156 did not prove this to critics inasmuch as she gained no radar contacts during the whole escort operation. Her radar did not detect the only U-boat which attacked the convoy, although this was due to a malfunction of the set. But the U-boat had attacked from the rear port corner of the convoy, where a properly working radar would have detected the attacker easily.

Not only was HX.156 defended by a radar-equipped destroyer, like convoy HX.150, her escort group included a destroyer carrying a shipboard D/F set, the Tarbell. She maintained a continuous D/F watch, and on one occasion D/F bearings caused Webb prosecute at least one search for a U-boat believed to be trailing the convoy.³⁹⁵

Tactical doctrine for conducting counterattacks against U-boats differed little from that established in September and refined early in October. Upon sighting a surfaced submarine, the nearest escort and another ship assigned to assist her were to attempt to sink the enemy by ramming or gunfire. Should the opponent submerge, the escorts were to

attack her with depth charges. Should a U-boat be located by sonar, the nearest destroyer and an assist ship were first to prosecute an embarrassing attack, then a deliberate attack to destroy the submarine. As for depth charge patterns and settings, Webb announced that "the policy of this task unit is to fire patterns vertically as well as horizontally, various patterns being used to meet the conditions of each individual attack."³⁹⁶ In other words, the escorts were to follow one of the three standard depth charge patterns established by the time of the sailing of HX.156. All counterattacks were to be limited to approximately one hour inasmuch as the safety of the convoy was thought to be more important than the pursuit of an unconfirmed contact. Should the escort fail to positively identify the attacker within an hour, or to sink her, Webb wanted her to return to her station.

The attack on convoy SC.48 made the crews of Webb's task unit edgy and excited when the ships put to sea, but HX.156 proceeded northeast at 8.8 knots for almost a week without being attacked. In that time, the escorts attacked two targets which later proved to be nothing more than fish. At 1845 on 25 October, the Jones dropped a depth charge off the convoy's port side; the "chattering" and "whistling effect was noticeable" by the sound operators, and "all indications

confirmed possibility of a submarine." The Jones's attack, initiated without echo-range information, consisted of two depth charges, and after they were dropped, a school of porpoises passed near the ship.³⁹⁷ Four days later, the Jones conducted another embarrassing attack on a sonar contact 1,800 yards off the port bow of the convoy. The contact was lost and not regained, and the Jones regained her station twenty minutes later.³⁹⁸

The Admiralty's original route for HX.156 allowed the convoy to evade three U-boat concentrations, but Donitz repositioned his forces after the attack on SC.48 by shifting several submarines southward. "Hydra" decrypts revealed that on 24 October the six boats which had previously formed a line from Cape Farewell to the southeast had all steamed several hundred miles to the south. That same day, OIC found four U-boats in an area 120 to 250 miles east of Belle Isle, just northeast of Newfoundland. STR decided that this was too close to HX.156, especially because those U-boats appeared to be still moving further to the south, so the Admiralty recommended a course change to OpNav. OpNav quickly agreed and ordered Webb to change the convoy's course to head for point "F" at 49.45N 32W. As a result, instead of continuing on its northeasterly heading, HX.156 turned to starboard on a more easterly heading so as

to remain to the south of the new U-boat concentration. The correctness of this move was demonstrated on 26 October, when STR learned that Donitz had used those six U-boats to form a patrol line athwart HX.156's original course. The records do not make clear whether the Admiralty understood this to mean that the Germans were reading the Allied convoy code -- which they were. Had Special Intelligence not provided good information, those U-boats surely would have attacked HX.156 on the 26th.³⁹⁹

OpNav's new course instructed HX.156 to continue to the east until it arrived at point "F", and then to resume a more northeasterly course heading to point "G" at 59N 22W. On the 26th, however, Special Intelligence provided additional information that five U-boats were operating in an area athwart the amended route for HX.156. STR learned on the 27th that these submarines were steaming westward, heading directly towards the convoy which was then moving eastward. Reports on the 28th confirmed that HX.156 and the five U-boats were on a collision course. That day the Admiralty proposed another route amendment to OpNav: "Change route immediately to steer 150 degrees true to latitude 47 degrees 30 minutes North, then steer 090 degrees." OpNav concurred and issued an order soon after which diverted HX.156 to the south so as to avoid the U-boats moving west.

Within days, STR determined that these U-boats were pursuing convoy ON.28, but Ultra had prevented a chance encounter with HX.156.⁴⁰⁰

Convoy HX.156 reached a position near 30W latitude on the afternoon of the 28th, and here she again changed course. The same Special Intelligence summary which had warned the Admiralty and OpNav of the westward-moving group of five U-boats also pointed to three or four U-boats patrolling 300 miles northeast of the Azores. The Admiralty recommended to OpNav that HX.156 now turn northward and sail for 56N 23W, and that this be designated as the new MOMP. OpNav instructed Webb to turn the convoy north; in this way, HX.156 would keep clear of the U-boats off the Azores, and would pass to the rear of the pack now following ON.26.⁴⁰¹

The Admiralty and OpNav had succeeded in defending HX.156 with an evasive routing strategy, but Special Intelligence did not always identify the location of every U-boat in the North Atlantic and so provided no means to prevent a chance encounter. On 28 October, shore-based D/F sets picked up enemy transmissions in the vicinity of HX.156, and two days later, D/F sets detected more broadcasts. Winn and his team in STR concluded that, in all likelihood, HX.156 had been spotted, and the Admiralty conveyed this estimate to OpNav.

Commander Webb was apprised on the 30th.⁴⁰² The Support Force task unit was to be relieved when the convoy arrived at the MOMP on the morning of the 31st, but the Admiralty now asked that these escorts not detach until 1 November, and the CNO agreed. In short, the intelligence derived from the shore-based D/F bearings were the basis for the decision to strengthen the escort temporarily.⁴⁰³

Webb now expected to be attacked, and the Tarbell's D/F watch was put on alert. Lookouts on all the destroyers became nervous. At roughly 0500 on the 31st, the Tarbell's D/F operators picked up a transmission whose length and frequency were characteristic of a U-boat sighting report.⁴⁰⁴ The transmission came from 214.5 degrees true, and this placed the contact aft and off to port of the convoy. Inasmuch as the Tarbell was positioned off the starboard side of the convoy, Webb ordered the Reuben James to investigate the signal.

The Reuben James had kept station 3,000 yards off the last ship on the leftmost column all night, but did not actively patrol in order to conserve fuel. Upon receiving Webb's order, Lieutenant Commander Heywood L. "Tex" Edwards, ordered his crew to their action stations and brought the ship's speed up to about fifteen knots. Edwards was headed

for the rear of the convoy where Webb and Durgin thought that an attack would most likely develop.

At this moment, several thousand yards away, Kapitanleutnant Erich Topp in the U-552 was shadowing HX.156. The submarine's lookouts had spotted the convoy two hours earlier, and had broadcast two position reports since then. Topp's tactics were flawed, however, because he took too long in his approach to the convoy.⁴⁰⁵ He was probably awaiting the arrival of more U-boats so that the Germans could conduct a coordinated attack. Just after 0500, a lookout aboard the U-552 sighted the unmistakable four-stacks which characterized the U. S. Navy's World War I-era destroyers. Hitler had still ordered his U-boat skippers not to attack American warships, even if they were protecting convoys, but Topp had no way to tell if she was an American or British escort. It was an overcast night with little moonlight. Though the four-stackers were mostly American, Topp knew that the Royal Navy and Canadians operated several destroyers with four-stacks. Topp chose not to wait for identification on the grounds that he had sighted a convoy, and his own vessel was endangered. With the escort bearing down in his direction, Topp decided to attack and fired a spread of two torpedoes at a range of 1,000. The time was 0532.⁴⁰⁶

The U. S. Navy was about to lose the first ship sunk by enemy action in World War II. At 0540, at 51.59N 27.5W, one of Topp's torpedoes struck the Reuben James "approximately at number one stack on the port side." The ship immediately blew apart, the official report indicating that the torpedo may have exploded her magazine. Whatever the cause, the forward section of the ship all the way to number four stack fell off and sank almost immediately. Only one man survived from this section; the remainder were either trapped inside the sinking section or were killed or stunned outright by the initial explosion. The after section stayed afloat for five minutes before it, too, slipped beneath the waves. A handful of the crew of 120 escaped from the ship by diving into the icy, oil-covered water; they splashed about, fighting the elements, hoping to be rescued. Just after the stern went under, two previously set and armed depth charges exploded, and the resulting concussion killed several of the sailors in the water.⁴⁰⁷

The attack on and sinking of the Reuben James transpired so quickly that she did not have time to transmit before she went down. However, lookouts on board the Niblack heard the explosion and saw a brilliant flash of light from the position James was supposed to be patrolling. Webb was told, and he immediately detached two escorts to

investigate. The remaining two destroyers arranged themselves to fill the gaping holes in the escort screen as best they could. The Niblack and the Hilary P. Jones arrived on the scene to find oil covering the water, and dead bodies and a few survivors bobbing around. "Rescue operations were hampered by the large amount of oil on the water, presence of the submarine, darkness, and the hysterical and shocked condition of survivors," Webb reported. The Niblack found thirty-six men; the Jones, only ten. No officers were rescued, and only one petty officer, a chief machinist's mate who was on watch when the torpedo hit the ship.⁴⁰⁸

The Niblack and the Jones searched the area for the submarine, but Topp had steamed towards the convoy. Upon learning what had happened to the Reuben James, the crews of the Benson and the Tarbell became trigger happy. At approximately 0550, as the Benson was switching station from starboard bow to port flank, her sonarmen picked up a contact dead ahead of the convoy. She headed towards the contact at 25 knots, and conducted an embarrassing attack, firing three 600-pound depth charges from the Y-gun. The Benson regained the same contact at 0600, this time off the port beam of the convoy at a range of 460 yards. Again, she attacked by firing a pattern of three 600-pound charges.

She lost contact, circled, regained it, and fired another three-depth charge pattern. The Benson lost contact after this attack, but at 0630, the Tarbell reported a sound contact off the convoy's starboard bow, and made an embarrassing attack. The Benson and Tarbell returned to their stations on the flanks of the convoy, and no further sound contacts were recorded that morning.⁴⁰⁹ Hard upon the Tarbell's D/F report, Webb ordered the convoy to change course 20 degrees right in order to evade the U-boat.⁴¹⁰ This course change and the depth charge attacks probably combined to force Topp to withdraw and lose contact with the convoy.

The Niblack rejoined the convoy at 0900, but Webb ordered the "Hilary P. Jones to remain on the spot until 1200 trying to gain contact and at the same keeping the submarine down."⁴¹¹ She rejoined the convoy later that afternoon. There were now four escorts left, each positioned at one corner of a square surrounding the convoy. Later on the morning of the 31st, two British corvettes joined the American task unit and reported that they had just engaged two U-boats ten miles ahead of the convoy. The corvettes had encountered the submarines on the surface and fired their guns, but the enemy dove before they inflicted any damage. For reasons that are unclear, Webb did not order a

course change upon hearing this news and, instead, HX.156 continued steaming towards the MOMP. The convoy never came upon the two U-boats which had tangled with the two corvettes.⁴¹²

Shore-based D/F stations picked up transmissions from a U-boat in the vicinity of HX.156 on 31 October and again on 2 November. Either because the U-boat could not attain a good attack position or because the skipper was waiting for other submarines to arrive, the convoy was not attacked again before arriving at the MOMP. On the 1st, Webb turned the convoy of forty-two merchantmen over to the ten-unit British relief force at 57 degrees North, 24 degrees West. The ships headed eastward towards the British Isles, and all reached port safely.⁴¹³

Two merchantmen from HX.156 and the four American destroyers steamed north for Iceland. At dawn on 2 November, they encountered another U-boat. The Tarbell acquired a sound contact on the starboard quarter of the small convoy and attacked it with an embarrassing pattern of three depth charges. When the Tarbell lost contact, Webb ordered the Niblack astern to assist in the search and attack, but neither ship regained the contact. The Niblack and the Tarbell returned to their stations at 0710. As they

were doing so, however, the Niblack's sonar picked up propeller noises bearing astern of the convoy, and moments later a lookout reported seeing a torpedo wake pass near the Benson. The destroyers Niblack and Benson headed for the contact and swept the area for nearly two hours, but they found nothing. Either the alarm had been false or the submarine skipper had failed to press home his attack; whatever the case, nothing came of the incident. At 0915, the Benson and the Niblack resumed their stations, and again the convoy continued north. On 3 November, Task Unit 4.1.3 pulled into Reykjavik Harbor.⁴¹⁴

The political repercussions from the sinking of the Reuben James were perverse. Roosevelt again denounced Germany, insisted that the U. S. Navy would continue to escort convoys between Newfoundland and Iceland, but admitted that the United States was no nearer a declaration of war. The loss of the Reuben James in no way slackened the resistance on Capitol Hill to American intervention in the European war. Indeed, Hitler interpreted this to mean that he might allow the U-boats to operate as far east as Newfoundland with near-complete political immunity. If Congress refused to declare war over the Reuben James incident, Hitler thought, more aggressive U-boat operations entailed little risk.⁴¹⁵

The conduct of the defense of HX.156, however, carried great significance for American escort doctrine, however. Webb's defense of the convoy was very aggressive. In September, when the Support Force initiated escort operations, Atlantic Fleet doctrine emphasized the need to conserve depth charges. Yet against the U-boats which attacked HX.156 the task unit expended forty-one depth charges.⁴¹⁶ Moreover, he had limited the use of star shells, reasoning that the experience of convoy SC.48 proved that illumination worked to the advantage of the U-boats. The starshells silhouetted the escorts and the convoy against the light, but the low-profile U-boats were still very hard to see.

Webb was also impressed that the Tarbell's shipboard D/F gear had provided him with the first evidence that the U-552 was closing on the convoy. Although the Tarbell could not position the enemy with only one bearing, at least Webb was apprised of the U-boat's general location, and this enabled him to initiate the search. He had immediately put the convoy on an evasive course to shake the shadower, and dispatched the Reuben James to investigate. Unfortunately, the destroyer was sunk. The passage of SC.48 had served to emphasize the need for shipboard D/F sets so as to quicken the escort group's reaction time attack. The HX.156

operation confirmed the usefulness of such a system, and Webb urged Bristol "that this effort [to endow the escorts with more means] to locate the enemy must be continued."⁴¹⁷

Though radar did not locate U-552 on the night that the Reuben James went down, radar soon became part of the escorts' standard ASW gear. In his after-action report, Webb recommended that, when more radar equipped escorts were available, they be stationed on the flanks of the convoy so as to minimize submarine attacks from the weak spots.⁴¹⁸ The only radar-equipped destroyer defending in the task unit, the Niblack was correctly positioned to the aft of the convoy so as to prevent shadowing. Only faulty radar operation explained how Topp managed to close on the convoy.

Webb's most important contribution to Support Force tactical doctrine was to revise the configuration of the escort screen and show the importance of having an active escort in an area where a U-boat was known to be. The SC.48 operation revealed the dangers of keeping the escorts grouped tightly around the convoy, so in HX.156, Webb placed his units farther away -- at least 3,000 yards -- from the body of merchantmen. The U-552 could not attack the convoy because the escorts were alerted to her presence first by the Tarbell's D/F bearing, and second by the movement of the

Reuben James. Her quick and aggressive reaction forced Topp to defend his submarine and neglect his primary mission, which was to sink merchant shipping. As the convoy sped off toward the MOMP, the Jones kept the U-552 underwater. Inasmuch as Topp could not surface, he could not broadcast position reports to BdU and home other U-boats to HX.156.

The "Escort-of-Convoy Bulletins" first published in November 1941, embodied these lessons and many others, and provided a vehicle by which the Navy Department disseminated amendments to the Support Force's tactical doctrine based on the experience of the past two months. Admiral Bristol suggested that his escort group commanders position their escorts "in an area 2,500 to 5,000 yards from the convoy" on the basis that most U-boats fired "from an estimated range of 4,500 yards."⁴¹⁹ A December Bulletin emphasized the use of radar and D/F bearings to locate U-boats shadowing a convoy; once a contact was obtained, the escorts were to attack and hold the submarines "down as long as possible."⁴²⁰ While the counterattack was underway, the convoy was to make several evasive course changes to confuse the enemy. These new tactics were derived in large part from experience gained in the HX.156 operation. Nonetheless, Atlantic Fleet escort-of-convoy doctrine still needed improvements. Some of this would come with the

appearance of more escorts, better equipment, and new assets. Air support for the ocean escort groups was still non-existent, for example. Still, the November and December "Escort-of-Convoy Bulletins" contained flaws; at 2,500 yards, escorts were still too close to the convoy to obstruct U-boats firing from a range of 5,000 yards.

In spite of the loss of Reuben James, the passage of HX.156 represented a true victory in the struggle between Allied escort-of-convoy system and Donitz's U-boat arm. Evasive routing prevented Donitz from locating the convoy at a position where he could have massed U-boats against it. Aggressive escort tactics prevented the U-552 from successfully attacking the helpless merchantmen which made up the convoy. Many of the lessons learned from the SC.48 operation were put to good use by Commander Webb and his destroyer skippers.

CHAPTER 11: In A Declared War

The state of play in the North Atlantic intensified during the last five weeks of official American neutrality. Between mid-September and the end of October, Support Force task units escorted a total of fourteen convoys comprising 675 merchantmen. From 1 November to 7 December, the Support Force matched these numbers. Donitz and his U-boat commanders refined their tactics in an effort to reassert their advantage over Bristol and his Support Force escorts, but the approach of winter and other demands on the U-boat arm meant that the tempo of the campaign slackened in December. In November, Donitz abandoned the practice of placing a single patrol line in the western North Atlantic's main trade route in favor of instituting a number of shorter patrol lines each consisting of three to four submarines. Donitz thought that the convoys could not make it through several patrol lines without being sighted at least once. Inasmuch as these new lines were shorter, the U-boats were now closer together, not stretched over several hundred miles in one line, and this closer proximity meant that Donitz could form larger wolfpacks easily, and concentrate his packs more quickly.

In aid of this new strategy, more U-boats concentrated in the North Atlantic in October and November. Only ten to twelve submarines were in positions to intercept North Atlantic convoys in September, but by the end of October, when HX.156 crossed the Atlantic, the total had risen to over twenty. In early November, Donitz deployed about twenty U-boats athwart the trade lanes west of 26W, and several of these were positioned just slightly to the east of the coast of Newfoundland. Donitz' objective in doing this was to attack convoys soon after they put to sea. On the other side of the Atlantic, he stationed six U-boats west of Ireland, just the range of land-based aircraft.⁴²²

This strategy of positioning a concentration of U-boats off Newfoundland succeeded in so damaging one slow eastbound convoy that it had to turn back, the only Allied convoy in the entire war to do so. Convoy SC.52 departed Sydney on 1 November, but was quickly sighted by the U-374 just off Newfoundland. STR soon got wind of this from Ultra and told OpNav's Convoy and Routing to reroute SC.52 to the north. However, too many U-boats of "Group Raubitter" were near the scene.⁴²² SC.52 faced a 1,000-mile passage to the MOMP when the Admiralty directed that the convoy return to Sydney. U-boats sank four merchantmen before the convoy made it back, and two more ships ran aground. This was a telling blow to

the pride of the Royal Canadian Navy's Newfoundland Escort Force. The SC.52 debacle was an exception, however, for other convoys were safely steamed across the Atlantic in November 1941.

November also saw the United States take one more step away from practical neutrality when Congress passed and the President signed a revision of the 1934 Neutrality Act. The new law repealed the restriction that forbid American merchantmen from sailing into war zones and being armed while the United States was not a belligerent. This removed the last legal barrier to the establishment of a thorough transatlantic escort-of-convoy system under American control, something envisioned by the March 1941 ABC-1 Report.

November's convoy operations demonstrated that the tactics learned from the experiences of SC.48 and HX.156 were being integrated into standard Atlantic Fleet escort doctrine. When HX.157 put to sea at the beginning of the month, the SOE stationed his escorts 2,500 to 4,000 yards off the convoy. When visibility worsened owing to heavy fog, the escorts were drawn in closer to the convoy, but only because the SOE reasoned that the U-boat skippers could not see well enough at a range of 4,000 to 5,000 yards to attack the

convoy effectively.⁴²³ Furthermore, the old practice of conserving depth charges had been abandoned. Whenever an escort made a contact, she carried out an attack. The Navy realized that wasting depth charges on non-contacts was preferable to risking the loss of merchant ships. More shipboard D/F sets were available, and the ocean escort group defending HX.157 included two radar-equipped destroyers. Then, on 19 November, while escorting HX.160, the destroyer Leary made the first recorded radar contact of an enemy submarine by an American warship. Webb's assessment of the importance of radar, although it had not helped him defend HX.156, proved to be correct.

Admiral King had, since February, wanted to increase the size of the Atlantic Fleet's ocean escort groups, and in November he finally possessed enough ships to do this. On 1 October, Atlantic Fleet contained eighty-nine operational destroyers, almost half of which were assigned to the Support Force. They were organized into seven escort groups consisting of five destroyers and one group of six. More destroyers joined the Support Force in October and early November, and this allowed Bristol to reorganize his task units by increasing the number of escorts in most groups to six or seven, for one group, to eight.⁴²⁴ Bristol could afford to assign more escorts to each convoy, at least for

some of the convoys, and in early November, ON.28 sailed with an escort of eight Support Force destroyers, the first time more than five American escorts were attached to the same convoy from the beginning of passage to the MOMP.⁴²⁵

Some tactics and doctrine remained the same, however, and were being practiced so often that the attacks on U-boats increasingly became routine. The escorts still made "embarrassing" attacks of two deep-set depth charges to attempt to drive submarines to the surface. When a contact was definite, the destroyers employed deliberate attack tactics, dropping five to six depth charges which were intended to kill the U-boat. Depth charges were still being dropped in diamond-shaped patterns with depth settings ranging from 150 feet to 300 feet so as to cover a large horizontal and vertical area. Finally, the escorts always attacked in pairs, with one ship assisting another to ensure a kill.

By the end of November 1941, the U. S. Navy had established the escort-of-convoy doctrine it used against the U-boats without substantial revision for the rest of the war. When the Tactical Orders for 1942 and 1943 were published, not much was changed. The destroyers still attacked in pairs, and the depth settings and patterns for depth charges

remained the same. The escorts were still at the outer visibility limits of the convoys, now thought to be 4,000 to 5,000 yards. The escorts still made periodic sweeps astern and to the flanks to look for U-boats shadowing the convoy. The escorts used radar and shore-based and shipboard D/F bearings to assist them in finding enemy submarines.⁴²⁶

While the Support Force was busy with escort-of-convoy operations, other elements of the Atlantic Fleet were on the alert for Axis shipping throughout the vast Atlantic. Admiral LeBreton deployed his battleships on patrol in the Denmark Strait in early September, and on the 17th, the Admiralty proposed the U. S. Navy take over formal responsibility for guarding this chokepoint. The reason for this was that the situation in the Mediterranean was becoming critical for the British and they hoped to withdraw some of their battleships from the Home Fleet, hitherto responsible for the Denmark Patrol, and send them into the Mediterranean. Supply convoys to Malta and Alexandria needed battleship escorts, owing to the threat of the strong Italian fleet.

King had anticipated such a move. "In the same operation plan of 1 September that had established United States responsibility for transatlantic convoys between the

meridians of Newfoundland and Iceland, King had designated a task group of two battleships, two heavy cruisers, and supporting destroyers as a Denmark Strait Patrol," he wrote later.⁴²⁷ This group was commanded by Rear Admiral Robert C. Giffen and, based at Hvalfjordur, was to control the waters separating Iceland and Greenland. By 27 September, all units of Giffen's force had arrived at Iceland, the carrier Wasp soon joined the task group to increase its offensive punch.⁴²⁸ King and Stark feared a breakout by the Bismarck's sister ship, the Tirpitz, into the western Atlantic, so the force went down on patrol almost immediately, and these operations continued throughout the rest of 1941. In this sense, the Americans had accomplished another aspect of convoy protection called for by the ABC-1 agreement -- that a battleship or heavy unit would always be at sea, ready to intercept any heavy German surface combatants that might threaten the convoys.

In the South Atlantic, Admiral Ingram's cruisers and destroyers continued their sweeps, and that fall King attached four new destroyers to that squadron. This meant that Ingram could deploy four task groups, each consisting of a light cruiser and two destroyers.⁴²⁹ The four groups alternated making sweeps into the central South Atlantic; destroyers often made sound contacts, and pursued them

aggressively. However, the South Atlantic Force had no occasion to sight or sink a U-boat, and most of these sound contacts were clearly phantoms. As a result, its operations had little or no influence on the development of Atlantic Fleet escort-of-convoy doctrine.

One instance of note did occur in the South Atlantic in November, however. Before dawn on 6 November, the cruiser Omaha and her destroyer escorts happened upon an apparent merchantman travelling northward in a darkened ship status. The merchant identified herself as the S. S. Willmoto, a cargo ship from Philadelphia, but the Omaha's skipper was not convinced because her characteristics did not match that of the Willmoto described in Merchant Ships of the World, 1940. Captain Theodore A. Chandler sent a boarding party over to investigate, and when Lieutenant George Charmichael and his men neared the vessel, it was obvious that she was not what she claimed to be.⁴³⁰ The Willmoto was actually the German blockade runner Odenwald, then bound for Europe from the Orient carrying "a cargo of raw rubber, tires, oats peanuts, tannic acid, and oils and chemicals."⁴³¹ The Germans scurried topside, threw their classified material overboard, and prepared scuttling charges. As the Omaha's party approached, two explosions rumbled in the aft section of the ship. As the German crew of forty-five abandoned

ship, Charmichael and his men boarded. The Germans had prepared the charges too quickly and carelessly, however, with the result that the ship was not properly scuttled. Below the Americans found that the freighter was taking on water slowly, so they quickly closed the watertight doors and shifted the cargo weight around to prevent listing. Engineers came aboard, found the holes, and worked throughout the day to repair some minor damage to the hull and the engines. Late that afternoon, the repair party apprised Chandler that the Odenwald could make it to Trinidad, and at 1800, the Omaha, her destroyer escorts, and the Odenwald got underway, arriving on the 17th at San Juan.⁴³²

The Germans of course were outraged at such an overtly belligerent act by a supposedly "neutral" power. However, the Odenwald had posed as an American ship, and was flying an American flag when seized. Chandler had sent his boarding party over to determine if the ship was indeed an American vessel, something he had every right to do under international law.⁴³³ Roosevelt cited these circumstances to justify the controversial action. Regardless of its legality, the Odenwald incident provided the South Atlantic Force with its only exciting action of the short-of-war months.

Anglo-American collaboration improved in November on another front. Churchill had needed to ship a division of British troops to Egypt to mount offensive by the Eighth Army against General Erwin Rommel's Axis forces in Cyrenaica, but the British did not have the transports to carry them there. Churchill asked Roosevelt for help, the President agreed, and Stark prepared the operation.

On 15 September, Stark told King to expect sometime in November to escort U. S. Navy transports carrying British troops bound for the Middle East.⁴³⁴ The following day, the British Military Mission in Washington formally requested that the United States loan the British six transports for this purpose, and asked the Atlantic Fleet to provide the escort for the convoy to 22W, where British units would take over.⁴³⁵

The final preparations were ironed out on September 28. The convoy of empty transports, dubbed TC.15, was to leave Halifax on 14 October, defended to 22W by Atlantic Fleet escorts. The convoy was expected to arrive in Britain on 22 October. Renamed WS.12X, the transports, now embarking the 2nd British Division, put to sea on 5 December and sailed via the Azores for Suez. The convoy was to be escorted by British warships until it arrived at a meeting point at 40N,

when American cruisers and destroyers would relieve them. When the convoy reached 13N, a British escort force would relieve the Americans.⁴³⁶

Instead of sticking with this plan, the British and Americans changed their minds. The British decided it would be better to send the Second Division to Canada in nine liners, and then transfer them to the six American transports at Halifax. These transports would leave Halifax on 7 November under U. S. Navy escort. This new plan lessened the complications concerning escort arrangements because, the U. S. escorts were now to turn the convoy over to the Royal Navy at a point off Freetown, somewhere around 13N 22W. Only one change of escort was required by this new plan.⁴³⁷

On 10 November, WS.12X, consisting of six transports carrying 20,800 British troops put out of Halifax on a 3,000-mile voyage to Basra, Iraq. The convoy, proceeding at about 15 knots, was escorted by the carrier Ranger, and several cruisers and destroyers. They were to remain with the convoy until just off the African coast, at which point the British units would take charge. WS.12X stopped at several Caribbean and South American liberty ports on its voyage, and was still at sea when the Japanese attacked

Pearl Harbor.⁴³⁸

The Japanese attack caused WS.12X to change its destination. In order to support the British position at Singapore, the convoy and its troops were sent there to reinforce the garrison. With American escorts still providing cover, WS.12X sailed from Cape Town on 11 December, and two days later, the British cruiser Dorsetshire and several destroyers relieved the Americans of their escort chores. In January, the transports, filled with British troops, arrived at Singapore, only to be forced to surrender weeks later by the Japanese.⁴³⁹

Anglo-American naval cooperation improved on the other fronts. On 27 September, Ghormley requested that Pound transfer to the U. S. Navy some two dozen patrol aircraft and base them at Iceland to assist in convoy escort duty. The Admiralty approved the request, and on 10 October, twenty Hudson aircraft were turned over to the U. S. Navy. In return, the Americans provided the British with twelve Catalina patrol aircraft, to be used for convoy escort work and ASW off the British Isles.⁴⁴⁰ The technical exchanges dealing with anti-submarine warfare tactics and doctrine proceeded apace. In December, the British released the results of tests of the use of a shipboard a High Frequency-

Direction Finder set, a new type of D/F apparatus capable of detecting signals up to forty miles away and giving "bearings with an accuracy of 2 degrees to five degrees." These tests also revealed that, although many ships were already fitted with D/F, the poor results could be ascribed to the fact that D/F frameworks had been fitted in positions on the ships where other electrical equipment interfered with their operation. Moreover, the Admiralty concluded, the old sets were overly complicated, and too few skilled operators were trained to use them. The new HF/DF sets were more simple, and men could be easily trained to operate them effectively.⁴⁴¹ The production and use of shipboard HF/DF gear contributed greatly to the defeat of the U-boat offensive in the spring of 1943.

The final days of the short-of-war period saw a dramatic shift in German strategy occasioned by warnings that reached Berlin that the British were about to launch a major offensive from Egypt and might even land troops from Britain in Algeria. To be ready for such an invasion and to cut Britain's line of communications to Gibraltar, Hitler ordered Donitz to mass his U-boats off Gibraltar in late November. The effect on German Navy operations in the North Atlantic was soon evident.

When HX.160 sailed in early November, there were fifteen to twenty U-boats west of 30W and Donitz was about to institute his multi-patrol line strategy; by 30 November, however, only one U-boat was west of 30W.⁴⁴² On 5 December, ten U-boats were positioned just west of Gibraltar, and five were to the east. Donitz had ninety-one operational U-boats in mid-December. About one-third of these were in the repair yards, another one-third were training in the Baltic or refitting, and one-third were on patrol. Of those at sea, only four were in the North Atlantic, strung out from the Arctic Circle to Iceland to the North Cape off Norway. Twenty-three were in the eastern Mediterranean, and another four were in transit.⁴⁴³ The weather in the north in November and December made it difficult for the U-boats to operate anyway.

For the moment, the tempo of the Battle of the Atlantic had greatly subsided. When it resumed, off the East Coast in January 1942, the United States faced an entirely new set of strategic problems occasioned by the Japanese attack on Pearl Harbor, her invasion of the Philippines, and the declarations of war against Japan's Axis partners, Germany and Italy. Nonetheless, the U.S. Navy entered the belligerent years of World War II with a solid escort-of-convoy doctrine developed and proven in the short-of-war

period.

The U.S. Navy entered World War II on 5 September, when Stark ordered Neutrality Patrol operations to begin in the Caribbean and in waters 200 miles off the coasts of North and South America. The American patrol ships assisted the Royal Navy in tracking down and then capturing or destroying a large number of German merchantmen attempting to flee home after the commencement of hostilities. In 1940, the Navy organized battleship sweeps deep into the Atlantic to deter Axis surface raiders and U-boats from entering the Neutrality Zone. The Navy also took significant steps in developing the Anglo-American alliance. Ghormley's mission in August and the subsequent exchange of technical information and after-action reports, the Destroyer-Deal in September, and the Plan Dog Memorandum in November assured both the U.S. Navy and the Royal Navy of their common interests in the war.

The year 1941 opened with the confirmation of the Anglo-American alliance with the signing of the ABC-1 Agreement in March. Atlantic Fleet patrols became more aggressive that year as the Atlantic Fleet doubled in size and became much better trained under its new commander, Admiral Ernest King. In April the destroyer Niblack fired the first shots at a

suspected U-boat in the Neutrality Zone. In May, the U.S. Navy assisted the British Home Fleet in the hunt for the battleship Bismarck. Marines occupied Iceland in June, and the Navy established a base for escort ships there.

During the summer, the Atlantic Fleet prepared for its escort-of-convoy operations as outlined in the ABC-1 Agreement. The U.S. Navy had developed an effective escort-of-convoy doctrine in 1940 and 1941, using in part input from its own ASW experts, and also information on escort-of-convoy duties by British corvettes that was provided by the Admiralty in 1940. By September, Admiral Bristol's Support Force was trained and eager to commence operations. On 16 September, an American ocean escort group of five destroyers rendezvoused with convoy HX.150 off Newfoundland, and escorted the merchantmen to a point south of Iceland, where British force relieved the Support Force group. Although the United States was officially neutral, the Support Force continued to escort convoys from September to December. Most of the convoys made it through unscathed, a tribute to Special Intelligence, which provided the Admiralty with the information needed to mount a successful evasive routing strategy. Some convoys, like SC.48 and HX.156, both in October, were attacked by U-boats. Despite damage to one Support Force destroyer and the loss of the Reuben James,

the Atlantic Fleet used the experiences of these convoys to improve upon its escort-of-convoy doctrine.

Thus, between 16 September and 7 December, the Atlantic Fleet destroyermen carried the war to the enemy. They fought and some died before a single sailor was killed at Pearl Harbor. Their sacrifice was heroic and competent at a time when many Americans, despite pro-British sentiment, thought the United States should remain uninvolved with world affairs. It was King and Bristol, the Atlantic Fleet and Support Force, that led the way in America's fight against fascism in World War II.

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