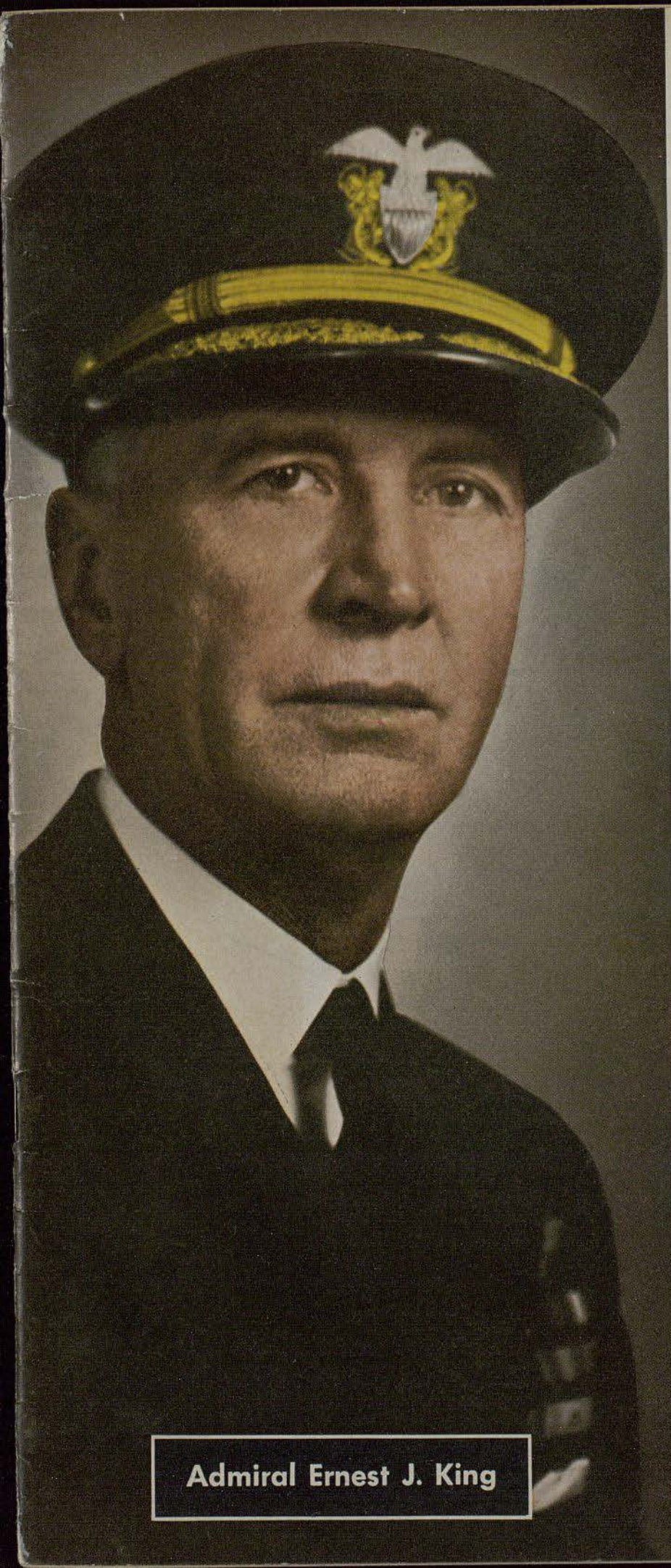

Admiral Ernest J. King

OUR NAVY AT WAR

★ ★

Official Report

by

Admiral Ernest J. King

Commander in Chief,
United States Fleet,
and Chief of Naval Operations

★ ★

Report Covering Combat Operations
Up To March 1, 1944

Compliments of

THE United States NEWS

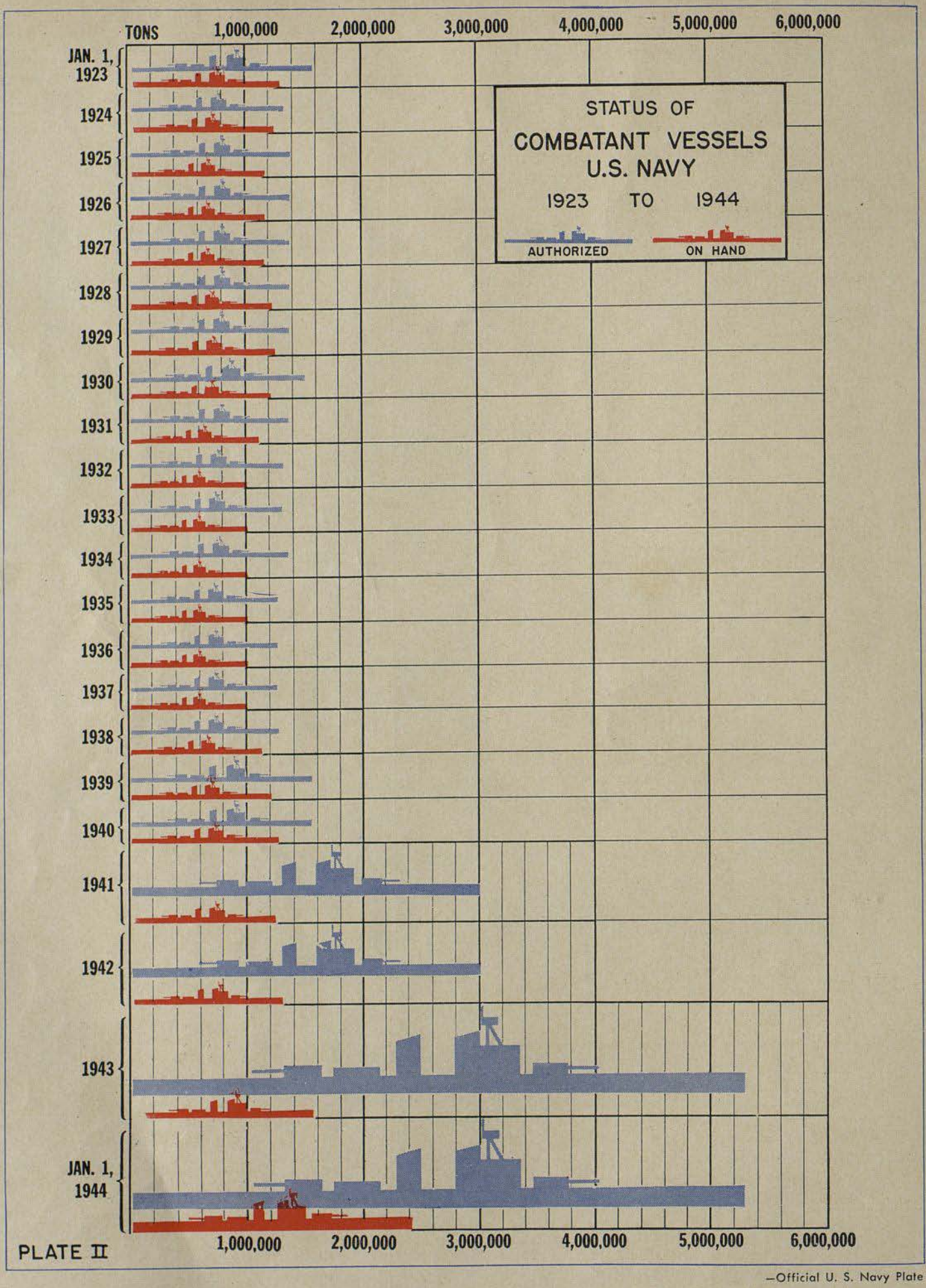

PLATE II

—Official U. S. Navy Plate

OUR NAVY AT WAR

A Report to the Secretary of the Navy

Covering our Peacetime Navy and our Wartime Navy
and including combat operations up to March 1, 1944

By ADMIRAL ERNEST J. KING, U.S.N.

Commander in Chief, U. S. Fleet,
and Chief of Naval Operations

27 March 1944

Dear Mr. Secretary,

In view of the importance and complexity of our naval operations and the tremendous expansion of our naval establishment since we entered the war, I present to you at this time a report of progress.

It is of interest to note that the date of this report happens to be on the 150th anniversary of the passage by Congress of a bill providing for the first major ships of the United States Navy--the 44-gun frigates *Constitution, United States, President* and *Chesapeake,* and the 36-gun frigates *Constellation* and *Congress.*

This report includes combat operations up to March 1, 1944. I know of no reason why it should not be made public.

ERNEST J. KING

Admiral, U. S. Navy,
Commander in Chief, United States Fleet
and Chief of Naval Operations

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Introduction

For more than two years, the United States has been engaged in world-wide war. Our geographical position, our wealth, resources and industrial development, combined with an unfaltering will to victory have established and enhanced our position as one of the dominant powers among the United Nations. As such we have been closely and deeply involved with our Allies in all the political, economic and military problems and undertakings which constitute modern war. Historically, the conduct of war by allies has rarely been effective or harmonious. The record of the United Nations in this regard, during the past two years, has been unprecedented, not only in the extent of its success but in the smooth working and effective cooperation by which it has been accomplished. As one of the United Nations, the United States has reason to be proud of the inter-Allied aspects of its conduct of the war, during the past two years.

As a national effort, the war has shown the complete dependence of all military undertakings on the full support of the nation in the fields of organization, production, finance, and morale. Our military services have had that support in a full degree.

The Navy has also had full support from the nation with respect to manpower. Personnel of our regular Navy, who, in time of peace, serve as a nucleus for expansion in time of war, now represent a small portion of the total number of officers and men. About ninety per cent of our commissioned personnel and about eighty per cent of our enlisted personnel are Naval Reserves, who have successfully adapted themselves to active service in a comparatively short time. Thanks to their hard work, their training, and their will to become assets their performance of duty has been uniformly as excellent as it has been indispensable to our success.

As to the purely military side of the war, there is one lesson which stands out above all others. This is that modern warfare can be effectively conducted only by the close and effective integration of the three military arms, which make their primary contribution to the military power of the Nation on the ground, at sea, and from the air. This report deals primarily with the Navy's part in the war, but it would be an unwarranted, though an unintended, distortion of perspective, did not the Navy record here its full appreciation of the efficient, whole-hearted and gallant support of the Navy's efforts by the ground, air and service forces of the Army, without which much of this story of the Navy's accomplishments would never have been written.

During the period of this report, the Navy, like the full military power of the Nation, has been a team of mutually supporting elements. The Fleet, the shore establishment, the Marine Corps, the Coast Guard, the Waves, the Seabees, have all nobly done their parts. Each has earned an individual "well done"—but hereafter are all included in the term, "The Navy."

I—Peacetime Navy

PRIOR TO THE WAR IN EUROPE

The fundamental United States naval policy is "To maintain the Navy in strength and readiness to uphold national policies and interests, and to guard the United States and its continental and overseas possessions."

In time of peace, when the threats to our national security change with the strength and attitude of other nations in the world who have a motive for making war upon us and who are—or think they are—strong enough to do so, it is frequently difficult to evaluate those threats and translate our requirements into terms of ships and planes and trained men. It is one thing to say that we must have and maintain a Navy adequate to uphold national policies and interests and to protect us against potential enemies, but it is another thing to decide what is and what is not the naval strength adequate for that purpose.

In the years following World War I, our course was clear enough—to make every reasonable effort to preserve world peace by eliminating the causes of war and failing in that effort, to do our best to stay clear of war, while recognizing that we might fail in doing so. For a number of years, the likelihood of our becoming involved in a war in the foreseeable future appeared remote, and our fortunate geographical position gave us an added sense of security. Under those circumstances, and in the interest of national economy, public opinion favored the belief that we could get along with a comparatively small Navy. Stated in terms of personnel this meant an average of about 7,900 commissioned officers, all of whom had chosen the Navy as a career, and 100,000 enlisted men more or less.

This modest concept of an adequate Navy carried with it an increased responsibility on the part of the Navy to

maintain itself at the peak of operational and material efficiency, with a nucleus of highly trained personnel as a basis for war time expansion.

For twenty years in its program of readiness, our Navy has worked under schedules of operation, competitive training and inspection, unparalleled in any other Navy of the world. Fleet problems, tactical exercises, amphibious operations with the Marines and Army, aviation gunnery, engineering, communications were all integrated in a closely packed annual operation schedule. This in turn was supplemented by special activities ashore and afloat calculated to train individuals in the fundamentals of their duties and at the same time give them the background of experience so necessary for sound advances in the various techniques of naval warfare. Ship competitions established for the purpose of stimulating and maintaining interest were climaxed by realistic fleet maneuvers held once a year, with the object of giving officers in the higher commands experience and training in strategy and tactics approximating these responsibilities in time of war.

Our peacetime training operations, which involved hard work and many long hours of constructive thinking, were later to pay us dividends. For example, it would be an understatement to say merely that the Navy recognized the growing importance of air power. By one development after another, not only in the field of design and equipment, but also in carrier and other operational techniques—such as dive bombing—and in strategic and tactical employment, the United States Navy has made its aviation the standard by which all other naval aviation is judged and has contributed its full share to the advances which were to make aviation the *sine qua non* of modern warfare. It may be stated here, with particular reference to naval aviation, that the uniform success which has characterized our naval air operations is unmistakably the result of an organization which was based on the conviction that air operations should be planned, directed and executed by naval officers who are naval aviators, and that in mixed forces naval aviation should be adequately represented in the command and staff organization.

Size and Composition

The effects of treaty limitations on our Navy are too well known to require more than a brief review. In 1922, under the terms of the Washington Arms Conference, limitations upon capital ships and aircraft carriers were agreed upon, the ratio established being five for the United States, five for Great Britain, and three for Japan. Pursuant to that treaty, the United States scrapped a number of battleships, but was permitted to convert the *Lexington* and *Saratoga,* then under construction as battle cruisers, to aircraft carriers. Whatever the other effects of the treaty, that particular provision has worked to our advantage because those two ships, as battle cruisers, would now be obsolescent, and as aircraft carriers they were—and the *Saratoga* still is—effective units of our fleet.

In 1930, at London, the parties to the 1922 treaty agreed upon further limitations, this time with respect to cruisers, destroyers and submarines. As a result of these two treaties, which reflected world conditions at the time, and also because of our decision to maintain our Navy at considerably less strength than that allowed by the treaties, we experienced a partial building holiday that threw our small construction program out of balance. Except for cruisers, hardly any combatant ships (no battleships or destroyers) were added to our fleet during that period, and few were under construction. In size, therefore, our Navy remained static, with certain types approaching obsolescence. Moreover, advances in the science of naval construction were hampered by the lack of opportunity to prove new designs. As the chart (front inside cover, Plate 2) indicates, our naval strength was at low ebb during the year 1927.

Our failure to build progressively was a mistake which it is to be hoped will never be repeated. When a total building holiday in any type of ship is prolonged, and there is no opportunity to proceed on a trial and error basis, our designers are placed under handicaps taking years to overcome.

In 1924, and again in 1929, in response to representations to the effect that we were dangerously deficient in cruisers even in a world at peace, the Congress authorized the construction of a number of cruisers. These were appropriated for from time to time, as were ships of certain other types (except battleships), usually one or two at a time.

In 1933, our building program was stepped up materially by the authorization for the construction of two new aircraft carriers, four more cruisers, 20 destroyers and four submarines. The two carriers were considerably different in design from those previously built. The other types were more evolutionary as to new features, with the possible exception of the *Brooklyn* class of cruisers, which were to a degree a departure from former light cruisers, both as to ship design and armament. These cruisers were notable for their six-inch guns which combined light but strong construction with rapid loading, giving them a volume of fire far greater than any other light cruisers then—or now—in existence.

In the previous year, eight destroyers of the *Farragut* class had been laid down. These were the first of a long series of new designs which had been improved in each succeeding class up to the latest type laid down in 1943. The 1933 program, which was considered large at the time, used the *Farragut* type of armament, not only for destroyers but for the broadside batteries of the larger ships, because of the five-inch 38 caliber dual purpose gun which, because of its power, reliability and extremely rapid loading proved to be the best naval anti-aircraft gun of comparable caliber.

In March, 1934, the Congress authorized but did not appropriate for a Navy of treaty strength.

In 1935, in anticipation of making replacements under the terms of the treaties, work was begun on the design of battleships of the *North Carolina* class. Original designs (completed in 1937) included many features which have proved to be of great importance in the war; namely, increased armor protection against bombs and gunfire, heavy fragment protection around important control stations, modern five-inch anti-aircraft weapons, good torpedo protection, and excellent speed and steering qualities for rapid maneuvering. Contract designs for the *South Dakota* and *Iowa* classes were completed in 1938 and 1939, respectively. Most of these ships did not come into service until after the war had been declared.

The 6,000-ton *Atlanta* class cruisers, featuring powerful antiaircraft batteries, were designed in 1937.

In 1938, foreseeing the submarine menace, an experi-

mental program for patrol vessels was started. At the same time the motor torpedo boat was started through a series of developmental stages.

In 1938, it had become apparent that in spite of all efforts on the part of the United States to reach an agreement covering limitation of armaments, and thus to establish at least the probability of world peace, other nations were increasing their navies at an accelerating rate. At that time, in spite of the fact that there was a general desire on the part of most people everywhere in all countries of the world to remain at peace, about one fourth of the world's population was engaged in war, and civilians were being driven from their homes and subjected to bombing attacks. In view of the situation, the President, in his message to the Congress, recommended an increase of 20 per cent in our naval strength, exclusive of replacements permitted under the Vinson-Trammel Act of 1934. In May 1938, the Congress authorized the recommended program, giving us, on paper, what appeared to be reasonably adequate naval strength.

The so-called agreement at Munich was such as to require an upward revision of the defense requirements of this country. Subsequent events in 1939 resulting in the outbreak of the war in Europe not only confirmed those estimates, but made our building up to them a matter of urgency. A great increase in design activity, in preparation for later building programs, began at this time. War had become a distinct possibility.

As Affected by the War in Europe

As a result of Germany's policy of expansion by political, economic and military aggression, culminating in the invasion of Poland, the European war began on the 3rd of September, 1939. While our position was for the time being not clearly established, it was nevertheless apparent that this war would affect the United States in a degree which might extend to our becoming involved in a war for our national existence.

The Limited Emergency

The first step taken by the United States was the declaration of the limited emergency by the President on September 8, 1939. The immediate effect of this, so far as the Navy was concerned, was to fix the authorized enlisted personnel strength of the Navy at 191,000 instead of 131,485, and to authorize the recall to active duty of officers and men and nurses on the retired and reserve lists of the Navy and Marine Corps. Other direct effects were that the procurement of materials and equipment, and the taking over of land needed for military purposes, could be accomplished more readily. Also, the Coast Guard could be made a part of the Navy if it appeared desirable, by presidential order. Indirectly, the limited emergency was responsible for changes in contracting authority which eliminated competitive bidding, and for the suspension of certain labor provisions relating to hours of work on government contracts.

Neutrality

On October 2, 1939, the Congress of American Republics assembled at Panama agreed upon a resolution which established a neutral zone surrounding the Americas, with the exception of Canada, at an average distance of 300 miles. By the terms of the resolution belligerent raiders and submarines were to be prevented from operating close to the Western Hemisphere, as they had done in the World War, the thought responsible for the resolution being that if belligerent operations took place in that area, the United States and her Latin-American neighbors might well become involved in the war. The United States Navy being the only armed force equal to the task of maintaining patrol in this extensive area, the primary responsibility for the implementation of the proclamation was obvious. The patrol was in fact taken by the United States Navy, and at that time a portion of the 111 decommissioned destroyers were recommissioned for the purpose of making it effective.

Preceded by heated debates, during which it was argued that for insufficent reason, we would be abandoning our traditional policy of freedom of the seas, the Neutrality Act of 1939 became law on November 4, 1939, and American vessels and citizens were thereby prohibited from entering combat zones. The Act also established a so-called cash and carry policy, under which all belligerents were required to do their own transporting of goods purchased in the United States, and pay for them before being granted clearance. In addition, it authorized the President to place restrictions on the use of ports and territorial waters of the United States by submarines or merchant vessels of foreign states (pursuant to which he prohibited their use by foreign submarines of belligerent states, except when there by force majeure) and prohibited the use of United States ports as bases for furnishing men and supplies to ships of belligerent states lying off these ports. Other consequences of the Neutrality Act were to make effective certain laws previously enacted, having for their purpose the maintenance of neutrality. These included prohibitions against sending our armed vessels for delivery to belligerents, and contained provisions for detaining armed vessels or vessels manifestly built for warlike purposes or conversion thereto. Included, also, insofar as detention and permissible length of stay were concerned, were laws covering the use of our ports by foreign vessels.

Naval Expansion

In view of the situation, our requirements as to naval strength were again presented to the Congress, in January, 1940. At that time, the part the United States was to play in the war was still not clear, but with due regard for our national safety and with aggressor nations disregarding treaties and pacts without hesitation—the immediate result being rapid changes in the international situation—Congress recognized that our security would be measured by our ability to defend ourselves. Coupled with this uncertainty was the knowledge that the international situation had been very difficult to predict. Many keen observers were certain that no European war would break out in 1939, and there were others who felt that we would be able to stay out of the war.

Pursuant to the recommendation of the Navy Department, and following a careful examination of world conditions, the Congress authorized an expansion of 11 per cent in our combatant ships, and the President signed the bill on June 14, 1940.

Meanwhile, the aggressor nations had succeeded in imposing their will upon numerous European countries. Germany had disposed of France and had overrun the Netherlands, Belgium, Norway, Denmark and Poland, and stood on the Channel coast, poised for an all out at-

tack on Britain. In view of that alarming situation, the Congress passed the so-called Two-Ocean Navy Bill, which was signed by the President on July 19, 1940. The increase in our naval strength authorized by this Act was 1,325,000 tons of combatant ships—by far the largest naval expansion ever authorized. This authorization was followed by the necessary appropriations in due course, and in the making, we had a Navy commensurate with our needs.

The Destroyer—Naval Base Exchange

During the summer of 1940, the Battle of Britain was in its initial stages and the German submarine campaign had been prosecuted with telling effect. At the beginning of the war Great Britain had suffered severely from the general attrition of operations at sea, particularly in destroyers in the Norwegian campaign and during the retreat from Dunkirk. Faced with this situation, Great Britain entered into an agreement with the United States, under the terms of which 50 of our older destroyers no longer suited for the type of fleet service for which they had been designed, but still adequately suited for anti-submarine duty, were exchanged for certain rights in various localities suitable for the establishment of Naval bases in the Atlantic area, and essential to the national defense. In addition to the bases acquired in return for the 50 destroyers, we were granted, "freely and without consideration," similar rights with respect to the leasing of bases in Newfoundland and Bermuda.

This acquisition of bases operated to advance our sea frontier several hundred miles in the direction of our potential enemies in the Atlantic, and as the bases were leased for a term of 99 years, we could profit by their strategic importance to the United States not only immediately, but long after the crisis responsible for the exchange.

The bases thus obtained by the United States were briefly as follows:

BRITISH BASES ACQUIRED

Location	*Facility Established*
Antigua, B. W. I.	Naval Air Station (Sea Plane Base)
British Guiana, S. A.	Naval Air Station (Sea Plane Base)
Jamaica, B. W. I.	Naval Air Station (Sea Plane Base)
St. Lucia, B. W. I.	Naval Air Station (Sea Plane Base)
Bermuda, B. W. I.	Naval Air Station (Sea Plane Base)
Great Exuma, Bahamas	Naval Air Station (Sea Plane Base)
Newfoundland	Naval Operating Base Naval Air Station (Sea Plane Base, Air Field)
Trinidad	Naval Operating Base Naval Air Station (Sea Plane Base) Lighter-than-Air Base Radio Station

Lend-Lease and its Implementation

On March 11, 1941, the so-called "Lend-Lease" Act was signed by the President. The provisions and effects of that Act are too well known to require comment in this report. Naturally, we were unwilling to see a large part of the material built with our labor and money lost in transit, and our only recourse was to give the British assistance in escorting the convoys carrying that material within North American waters.

Incident to our decision, the United States entered into an agreement with Denmark on April 9, 1941, relative to the defense of Greenland, and on that day our Marines were landed there to prevent its being used by Axis raiders. The Coast Guard cutter *Cayuga* had already landed a party there to conduct a survey with respect to airfields, seaplane bases, radio stations, meteorological stations and additions to navigation, and on the 1st of June, the first of the Greenland patrols was organized consisting chiefly of Coast Guard vessels and personnel.

On May 27, 1941, an unlimited national emergency was proclaimed by the President.

On July 7, 1941, the United States Marines were landed in Iceland and relieved some of the British forces stationed there.

On August 11, 1941, on board the *USS Augusta,* the President and Prime Minister of Great Britain agreed upon a joint declaration covering the principles of mutual interest to the two countries.

For some months, for the purpose of ensuring safe passage of goods shipped under the provisions of the Lend-Lease Act, our naval forces had been patrolling waters in the vicinity of the convoy routes, and had been broadcasting information relative to the presence of raiders. On September 4, 1941, the *USS Greer,* a four-stack destroyer was enroute to Iceland, with mail, passengers and freight. When about 175 miles south of Iceland, she detected a submarine ahead. The submarine fired a torpedo at her and missed, whereupon the *Greer* counterattacked with depth charges. Another torpedo was fired at the *Greer* but it also missed, and the *Greer* continued to Iceland. As a result of this incident, our Naval forces were ordered by the President to shoot on sight any vessel attempting to interfere with American shipping, or with any shipping under American escort.

On October 15, the *USS Kearny,* a new destroyer, one of a number of vessels escorting a convoy from Iceland to North America, was torpedoed amidships. Eleven of her crew were killed and seven were wounded, and the ship was badly damaged but able to make port.

On October 30, the *USS Salinas,* a tanker, was hit by two torpedoes about 700 miles east of Newfoundland. There were no casualties to personnel, and the *Salinas* reached port safely.

On October 31, in the same vicinity the *USS Reuben James,* another old destroyer, was struck amidships by a torpedo. The ship was broken in two; the forward part sank at once, but the after part stayed afloat long enough to enable 45 men to reach the deck and launch life rafts from which they were rescued. About 100 men were lost in this sinking.

Whatever the situation technically, the Navy in the Atlantic was taking a realistic viewpoint of the situation. During the month of November, further steps were taken to enable our naval forces to meet the steadily growing emergency. On November 1, the Coast Guard was made a part of the Navy, and at about the same time nine Coast Guard cutters were transferred to the British. On November 17, sections 2, 3 and 6 of the Neutrality Act of

1939, were repealed by an act of Congress, thereby permitting the arming of United States merchant vessels and their passage to belligerent ports anywhere.

Another effect of the European war, of major importance to the United States, was the alliance by which on Sept. 27, 1940, Japan became one of the Axis powers.

For many years it had been predicted and expected that eventually Japan's policy of expansion would conflict with our interests in the Pacific. Recognition of that possibility, plus Japan's growing naval strength, were indicated by her being a party to the 1922 treaty on limitation of armaments, and to subsequent treaties dealing with that subject.

At the time of the 1922 treaty Pearl Harbor and Manila were fortified bases, and Guam was being fortified. None of our other Pacific territories and possessions was fortified. When, therefore, the parties to that treaty agreed to maintain the fortification of certain Pacific islands in *status quo*, the fortification of Guam was halted. Subsequently conforming to the treaty provisions, we maintained the *status quo* at Guam and Corregidor, and confined our precautionary measures in the Pacific to the strengthening of Pearl Harbor and our West Coast bases. After we were no longer bound by the treaty, the proposal was made to proceed with the fortification of Guam, but after considerable debate in Congress, it was rejected.

Our foresight in developing Pearl Harbor and our West Coast bases has increased, immeasurably, our ability to carry on the war in the Pacific. Whether or not Guam could have been made sufficiently strong to withstand the full force of enemy attack is of course problematical, but we appear to have had an object lesson to the effect that if we are to have outlying possessions we must be prepared to defend them.

When, in the winter of 1935-1936, the Japanese declared themselves no longer willing to abide by existing treaty provisions or be a party to further negotiations, it gave rise to a feeling of uneasiness concerning the trend of Japanese policy and activities. Unfortunately, the full import of that move did not become apparent until later.

In 1931, Japan had embarked on a policy of aggression by the seizure of Manchuria. This was followed by other conquests in China, and as we have since learned, was accompanied by the fortifying of certain islands mandated to Japan by the League of Nations, in direct violation of the treaty provisions. A complete history of our relations with Japan during the period 1931-1941 was issued by the State Department in the so-called "White Paper" dated January 2, 1943.

Continuing her aggression, Japan moved into French-Indo China in 1940. In 1941, the United States was engaged in protesting these and other moves, and while conversations with the Japanese were being held, the German offensive in Russia was being successfully pressed. It seems likely that this influenced the Japanese decision to attack Pearl Harbor.

Whatever the reasons, Japan, while her representatives in Washington were still engaged in discussions, presumably with a view to finding a means of preventing war, on the morning of December 7, 1941, attacked our ships at Pearl Harbor. The attack was essentially an air raid, although there were some 45-ton submarines which participated. The primary objectives of the Japanese were clearly the heavy ships in the harbor and our grounded Army and Navy planes were destroyed in order to prevent them from impeding the attack. Damage done to the light surface forces and the industrial plant was incidental. Of the eight battleships in the harbor, the *Arizona* was wrecked, the *Oklahoma* capsized and three other battleships were so badly damaged that they were resting on bottom. The damages to the other three were comparatively minor in character. A total of 19 ships was hit, including three light cruisers which were not seriously damaged. Three destroyers were hit and badly damaged. (All three were later restored to service.) Of the 202 Navy planes ready for use on that morning only 52 were able to take the air after the raid.

Personnel casualties were in proportion to the material damage. The Navy and Marine Corps suffered a loss of 2,117 officers and men killed and 960 missing.

The Japanese losses were about 60 planes, attributable mainly to anti-aircraft fire, and it is probable that others were unable, on account of lack of fuel, to return to the carriers which composed the striking force.

A few hours later a similar but less damaging attack was made on the Philippines. (The situation in the Far East is described elsewhere in this report.)

On the following day we declared ". . . that a state of war which has thus been thrust upon the United States by the Imperial Government of Japan is hereby formally declared." On December 11, a similar declaration was made concerning Germany and Italy.

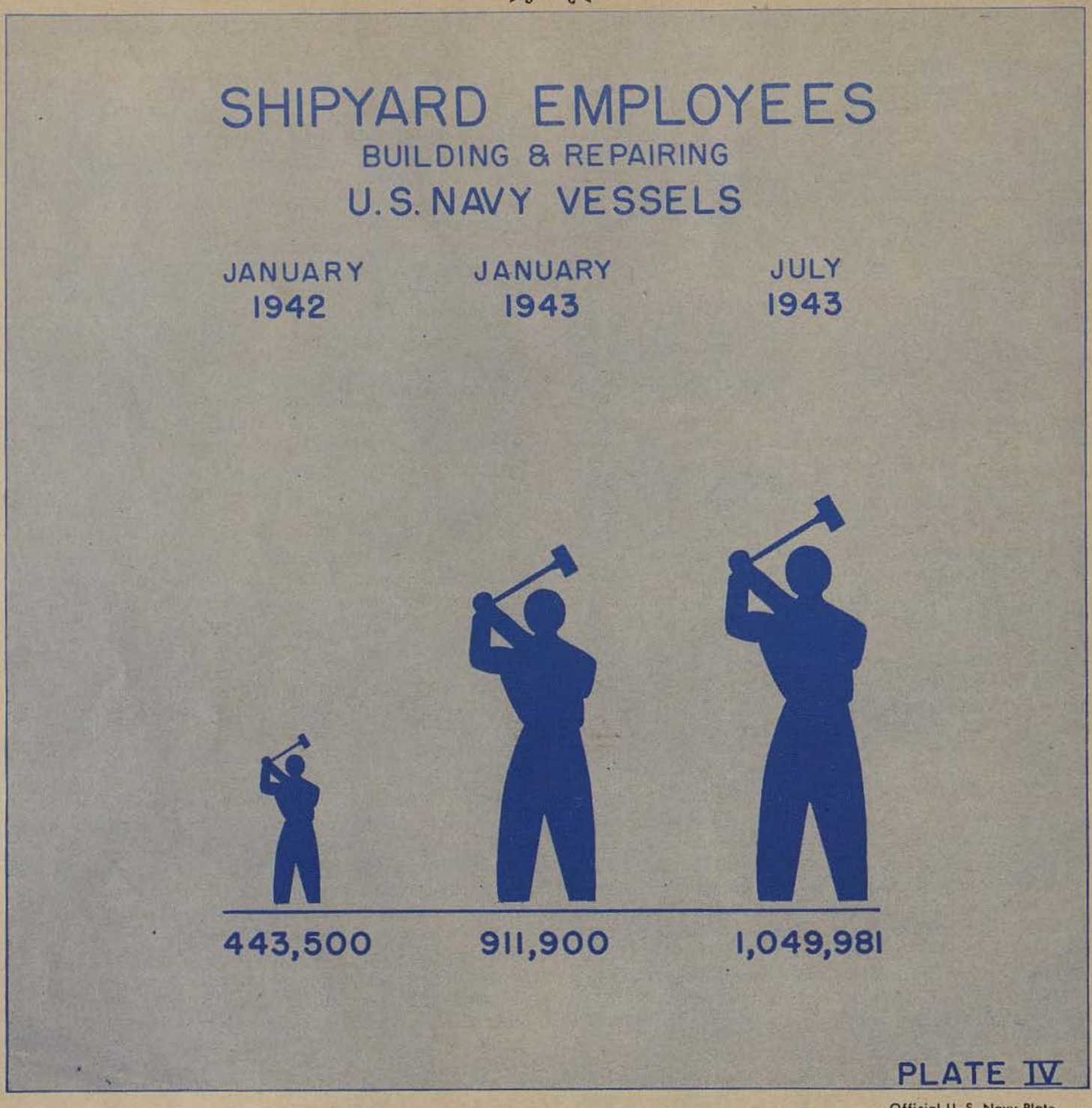
II — *The Wartime Navy*

FIGHTING STRENGTH

Armaments

The world diplomatic situation had been deteriorating for some years, and Europe had been at war since September 1939. For those reasons, we had been adding to our fleet from time to time, beginning in 1933, but our decision to prepare ourselves fully for the inevitable conflict may be considered to have been made when the so-called Two-Ocean Navy Bill became law on July 19, 1940. At that time, we had to consider the possible disappearance of British sea power. England itself was threatened and its capture by the Germans would have meant the loss of the Royal Navy's home bases and the industrial establishments. These, we could readily see, would become very tangible assets indeed, in the event that we were drawn into the war.

In round numbers, provision for a "two-ocean Navy" meant an expansion of about 70 per cent in our combat tonnage—the largest single building program ever undertaken by the United States or any other country.



—Official U. S. Navy Plate

Upon the outbreak of war in Europe in September 1939, the Navy Department initiated expansion of naval shipbuilding facilities in private yards and in Navy yards. In many instances, particularly in Navy yards, the expansion provided facilities which were to be available for repairs as well as new construction.

By July 19, 1940, when the two-ocean Navy was authorized, the program for expanding facilities was well started, and it continued thereafter at an accelerating rate until the early part of 1943. Early in the period of the shipyard expansion, it was apparent that as the new programs for cargo ships, tanks, planes, and Army and Navy equipment of all kinds started to pyramid, the country's latent manufacturing capacity would soon be overloaded. Thus the problem became not merely one of expanding shipyards, but of expanding the manufacturing capacity of industry as a whole to meet the needs of the Navy shipbuilding program. (See Plate 4.)

Expansion of general industry to meet the requirements of this shipbuilding program began with plants producing basic raw materials. Next to be enlarged were plants capable of manufacturing the component parts of a modern man-of-war ranging all the way from jewel bearings to huge turbines. So comprehensive was the building program that nearly every branch of American industry was affected either directly or indirectly. Manufacturers were encouraged to let out their work to subcontractors, particularly to plants which had been producing non-essential materials. An automobile manufacturer, for example, was given the job of producing

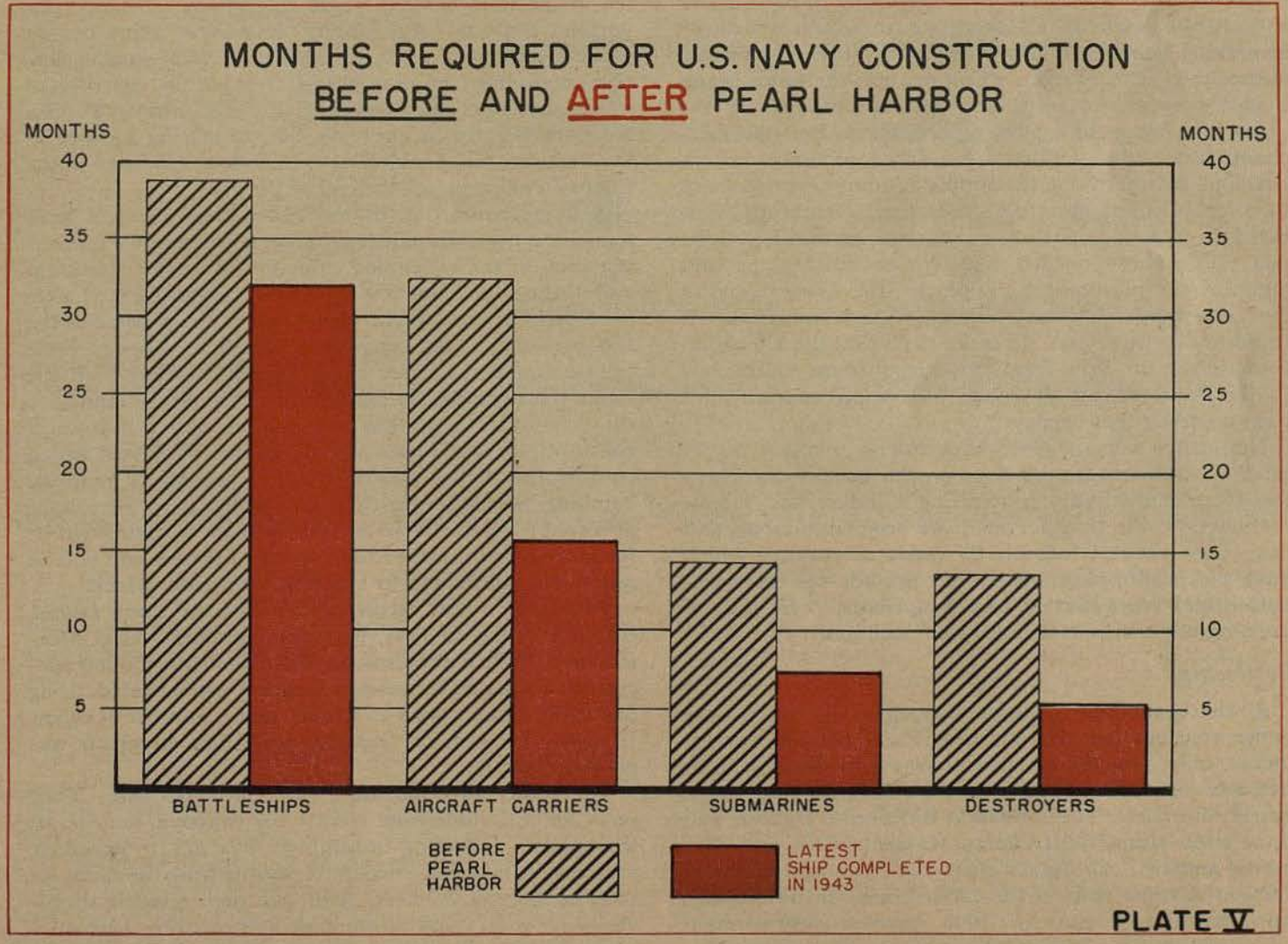
extremely intricate gyroscopic compasses, and a stone finishing concern undertook the manufacture of towing machines and deck winches. Early in the building program an acute situation in the construction of turbo-electric propulsion machinery was solved by the construction of an enormous new plant in a 50-acre corn field. As an illustration of the speed with which the whole program was undertaken, the construction of that particular plant was not begun until May 1942, and by the end of the year the first unit had been produced, completed and shipped.

The rapidity of this naval expansion has had a profound effect upon our military strategy. As a result of it, we were enabled to seize and hold the initiative sooner than we had originally anticipated, and to deal successfully with the submarine situation in the Atlantic. The former has, of course, meant a vast improvement in our military situation everywhere, and the latter was of great benefit to the shipping situation, which was very serious in the early months of the war and threatened to become more so with the prospective increases in overseas troop movements and their support. (See Plate 5.)

Immediately after the passage of the Two-Ocean Navy Bill, corresponding contracts for new construction were let and there were soon more warships and auxiliaries on the ways than had ever been under construction anywhere in the world at any one time. Simultaneously with this new construction, the conversion of merchant ships was being accomplished, one of the most important of these being the escort carriers which later proved so effective in combatting the German submarine campaign in the Atlantic. It is interesting to note that the conversion of these ships was superimposed upon the shipbuilding effort following enactment of the Two-Ocean Navy Bill, it having been long appreciated that sea-borne aircraft would play a dominant role in overseas campaigns if and when war came.

With a construction program well under way, it was most important to keep alterations in design at a minimum in order to avoid delays. Nevertheless, changes which would increase military effectiveness or give greater protection to crews were not sacrificed for the sake of speeding up construction. Another consideration which industry had to take in its stride was the evolution of strategic plans and changes in the type of operations which made it necessary, from time to time, to shift the emphasis in construction from one type of ship to another. For example, when the war began our carrier strength was such that we could not stand much attrition. When, therefore, we suffered the loss of four of our largest aircraft carriers in the Coral Sea engagement, at Midway, and in the South Pacific, it was imperative that the construction of vessels of this category be pushed ahead at all possible speed. Shortly after we suffered the heavy loss in battleship strength at Pearl Harbor our battleships under construction at the time were given top

—Official U. S. Navy Plate



priority. At another stage of the war, when the submarine situation in the Atlantic was a matter of great concern, emphasis was placed upon escort carriers and destroyer escort vessels. At the moment, major emphasis rests with the construction of landing craft, because we intend to use them in large numbers in future operations.

The production of aircraft quite naturally assumed proportions commensurate with the building program. Thanks to the research and experimentation that had been done in improving and perfecting the various types of airplanes, and thanks also to the genius of United States industry in the field of mass production, our air power increased with almost incredible rapidity as soon as our airplane factories were expanded and retooled for the various models of planes we needed. In view of the delays to be expected from changes in design when on a mass production basis, it was apparent that a nice timing in changes of design would be necessary, so that the performance of our aircraft would always be more than a match for anything produced by the enemy. A notable example is the change-over from the Grumman *Wildcat* to the Grumman *Hellcat*.

In order to obtain a properly balanced navy the construction of combatant ships was supplemented by building patrol vessels, mine craft, landing craft and auxiliary vessels of all types. Some 55 building yards, and yacht basins, located in practically all areas of the United States served by navigable waters have participated in the patrol craft construction program.

No maritime nation has ever been able to fight a war successfully without an adequate merchant marine—something we did not have when the two-ocean Navy was authorized. The Maritime Commission therefore began a vast program of merchant ship construction at the same time we were expanding the Navy, and the merchant shipbuilding industry, too, faced an enormous expansion. Furthermore, the supply of materials necessary to complete the huge program had to be carefully allocated, in view of the country's other needs that had to be met. The Navy needed material to build ships and manufacture planes and equipment, the Army required the material for military purposes, and civilian needs could not be neglected. In order to control the allocation of material, the War Production Board was established by the President and decisions as to priorities have since been made by that agency.

Naturally, such a great undertaking involved thousands of business transactions on the part of the Navy Department, with the contracting builders and manufacturers. These transactions have been continuous, and have been entered into on the basis of statutes which limit the profits permissible, and provide for the negotiation and renegotiation of all contracts. This part of the program has, in itself, been a colossal job.

Battleships

At the beginning of the program ten battleships were under construction. By the time Pearl Harbor was attacked only two, the *North Carolina* and the *Washington,* were in service, but since that time, six more have joined the fleet. These include the *South Dakota* and three sister ships, the *Indiana, Massachusetts,* and *Alabama,* and two of a larger class, the *Iowa* and the *New Jersey*. A third ship in the latter class, the *Wisconsin,* was launched December 7, 1943, appropriately enough, two years to the day after Pearl Harbor was attacked. In speed, in fire power, particularly antiaircraft fire, in maneuverability, and in protection, these ships represent a great advance over previous designs.

Aircraft Carriers

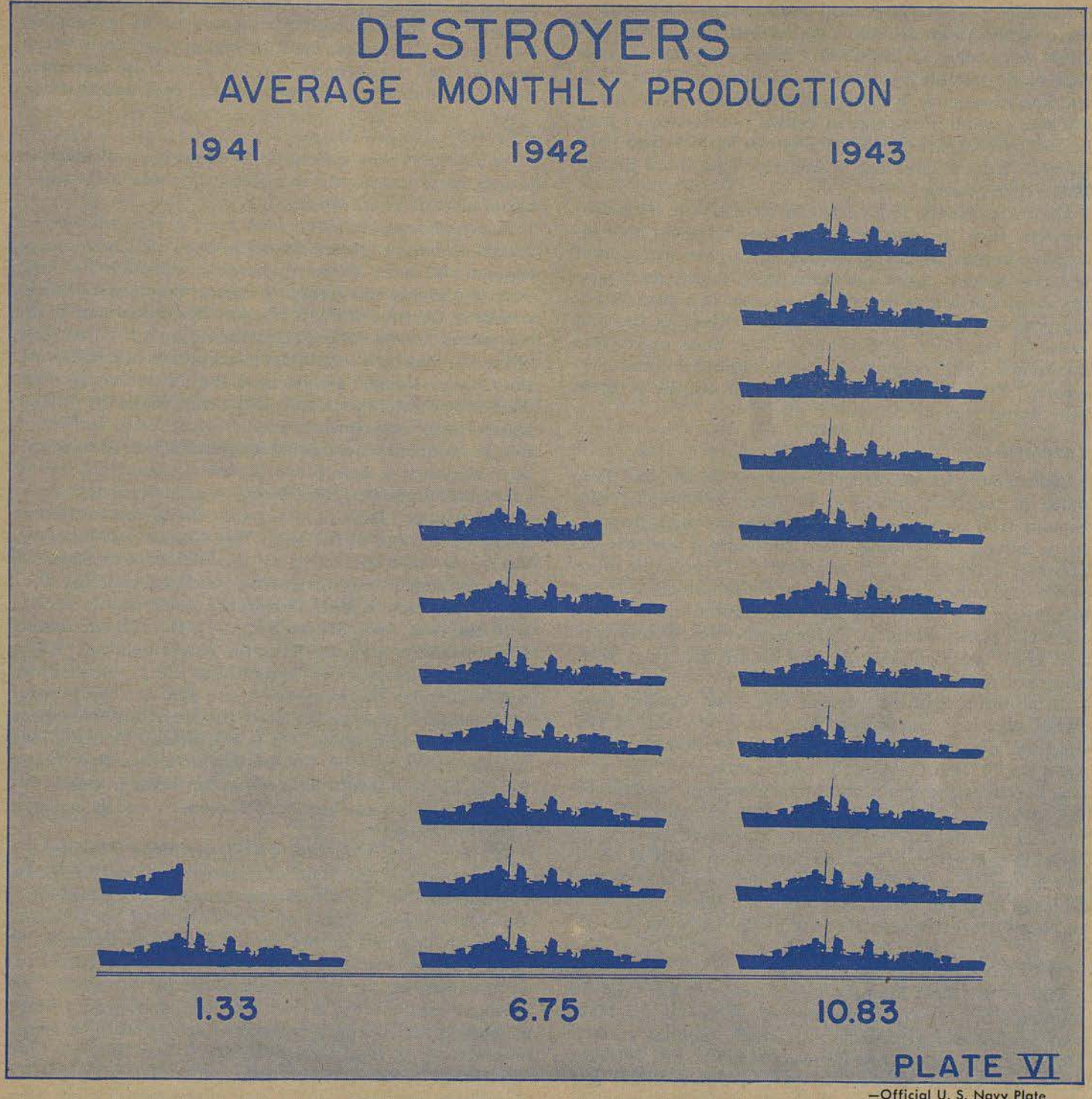
Construction of aircraft carriers represents one of the most spectacular phases of the naval shipbuilding program. The carrier strength of the Navy on December 7, 1941, was seven first-line vessels and one escort carrier, a converted merchant ship. Contracts had been placed for several large carriers of the new *Essex* class, and some of these had been laid down. Conversion of a number of merchant vessels was under way. The pressing need to add to our striking power in the air and to replace losses suffered in the Pacific during 1942, led to a great expansion of the construction program for first-line carriers. Concurrently, an even larger expansion of the escort carrier program was undertaken. By the end of 1943, more than 50 carriers of all types had been put into service in our Navy, and in addition a large number of escort carriers had been transferred to Great Britain.

This remarkable record in construction enabled us in a single year to build up our carrier strength from the low point reached in the autumn of 1942, when the *Saratoga,* the *Enterprise,* and the *Ranger* were the only ships of our fleet carrier forces remaining afloat, to a position of clear superiority in this category. The rapidity with which new carriers of various types were put into service in 1943, influenced naval operations in many important respects. Availability of several ships of the *Essex* class and of a considerable number of smaller carriers, completed months ahead of schedule, contributed to the success of our operations in the Southwest Pacific, aided materially in checking the submarine menace in the Atlantic, and enabled us to launch an offensive in the Central Pacific before the end of the year.

A large proportion of the *Essex* class carriers have joined the fleet. Excellent progress is being made on construction of the remaining ships in the original program and of the additional vessels in this class authorized after the Pearl Harbor attack. Nearly all of the carriers of the *Independence* class, converted from light cruisers, have been completed. These ships, though smaller than the *Essex* class vessels, are first-line carriers. It is planned to supplement these two basic types of carriers with a third, substantially larger than any of our present classes, which will displace 45,000 tons, and will be capable of handling bombing planes larger than any which heretofore have operated from the decks of aircraft carriers. They will be far more heavily armed than smaller carriers and will be much less vulnerable to bomb and torpedo attack.

The Navy's first escort carrier was the *Long Island,* converted early in 1941, from the merchant vessel *Mormacmail.* When experiments with this ship proved successful, a sizeable conversion program was initiated, using Maritime Commission C-3 hulls, and a number of oilers. In 1942, because of pressing need, this program was greatly expanded.

The "baby flat-tops" have three principal uses. They serve as anti-submarine escorts for convoys; as aircraft transports, delivering assembled aircraft to strategic areas; as combatant carriers to supplement the main air striking force of the fleet. Although their cruising speeds are lower than those of our first-line carriers, these aux-



—Official U. S. Navy Plate

iliary carriers can be turned out more rapidly and at a fraction of the cost of conventional carriers. These ships have proved invaluable in performing convoy escort and other duties for which larger and faster carriers are not needed.

Cruisers

The *Baltimore* class heavy cruisers, a number of which are now in service, were designed during the period from July 19, 1940 to December 7, 1941. These cruisers are considered as powerful as any heavy cruisers afloat, particularly as recent technical developments have made it possible to improve their fighting characteristics. The *Cleveland* type of light cruiser (a development of the *Brooklyn* class) was approved for a large part of the cruiser program, its design having been completed just before the expansion was authorized. The design of the large *Alaska* class was the result of a series of studies commenced when treaty limitations went by the board and we were no longer bound by any limitations on the size of ships.

Destroyers and Destroyer Escorts

The *Fletcher* class of destroyers designed just after the outbreak of the war in Europe, formed a large part of the new destroyer building program. As compared with earlier destroyers, they are larger and have greatly increased fighting power, made possible by the same technical developments that permitted similar improvements in our cruisers.

Destroyer production has been highly satisfactory, and

it has been possible to expand and accelerate this part of the program in an orderly manner. Although some new yards were engaged in building destroyers the increases were made possible by expanding facilities in yards which had had experience in destroyer construction. An idea of the acceleration in the rate of delivery of destroyers may be had by comparison with the figures for 1941 and 1943. In 1943, the rate was approximately eight times that of 1941. (See Plate 6.)

Contracts for the first destroyer escorts were let in November, 1941. In January, 1942, the program was increased, and as Germany stepped up the construction of U-boats several more increases were found necessary. Because of priorities the commencement of a large building program was delayed, but after delivery of the first vessel of the class, in February, 1943, mass production methods became effective in the 17 building yards concerned. The result was a phenomenal output of those very useful vessels.

Submarines

As a result of the orderly progress which had been made in the construction of submarines involving continuous trial under service conditions, the main problem to be solved in building more submarines was the expansion of facilities. For a period of 15 years or more, there were only three yards in the United States with the equipment and the know-how to build submarines. These were the Navy yards at Portsmouth, New Hampshire, and Mare Island, California, and the Electric Boat Company at Groton, Connecticut.

In addition to the expansion that took place at these yards, two other yards went into the production of submarines. One of these was the Cramp Shipbuilding Corporation of Philadelphia, Pennsylvania, and the other was the Manitowoc Shipbuilding Company at Manitowoc, Wisconsin. The building at the latter yard is a further testimonial to the ingenuity displayed throughout the entire program, in that submarines are built at Manitowoc, tested in the Great Lakes, then taken through the Chicago drainage canal, and down the Mississippi River to New Orleans, where they are made ready for sea.

Landing Craft

One of the most important achievements has been the landing craft construction program. Although the Navy had begun to experiment with small landing craft in 1936, we had only a few thousand tons in this catagory when we entered the war. In 1942, a billion dollar program for the construction of landing craft was superimposed on the already heavy building schedule, and the work was given top priority until the desired quota was filled. The facilities of existing public and private shipyards were given part of the burden. New yards were constructed, many of them in the Mississippi Valley, where bridge-building and steel-working companies which had had no previous experience in shipbuilding put up new plants and swung into production. In the second half of 1942, almost a quarter of a million tons of landing craft were produced, and the figure increased to well over a third of a million tons for the first half of 1943.

This production included a tremendous variety of vessels from small rubber boats to tank landing ships more than 300 feet in length. Within this range are small craft designed to carry only a few men, and ships with a capacity of 200, tracked craft capable of crawling over coral reefs or up beaches, craft for landing tanks or vehicles, craft for landing guns, craft for giving close fire support —in fact, all types necessary for success in that most difficult of military operations, landing on a hostile shore.

Airplanes

As a natural consequence of the importance of aviation in war, there has been a tremendous growth in the number of aircraft in the Navy.

Lessons learned in battle have been incorporated in the design of combat planes. New naval aircraft have larger engines and more power, increased protection for both crew and plane, and greater firepower than the models in service at the time of Pearl Harbor. The Grumman *Wildcat,* which served with distinction through the first year of the war, has been largely replaced by two new fighters—the Chance-Vought *Corsair* and the Grumman *Hellcat.* These two fighters were born of the war. While the *Corsair* existed as an experimental model before Pearl Harbor, it was so modified before going into production as to represent virtually a new plane. Offering greatly increased speed and firepower, the *Corsair* went into production in June, 1942, and large numbers were being sent to the war fronts by the end of the year. The *Corsair* was followed, but in no sense succeeded by the *Hellcat,* which carries more armament and has greatly increased climbing ability. In production since November, 1942, and in service with the fleet since September, 1943, the *Hellcat* rounds out a powerful striking force for Naval aviation. These two planes are superior to anything the Japanese have.

The Douglas *Dauntless* scout and dive bomber, in service when this country entered the war, has undergone successive modifications but is still in use. A new plane in this category—the Curtiss *Helldiver*—is now ready for the fighting front. This plane can carry a greatly increased bomb load, has more firepower, and is speedier than the *Dauntless.*

Twelve days after the attack on Pearl Harbor the Navy approved the final experimental model of a new torpedo bomber, the Grumman *Avenger.* Six weeks later, this plane began coming off the production line. Undergoing its baptism of fire at the Battle of Midway, it gradually replaced the Douglas *Devastator* and has now become almost an all-purpose plane for the fleet. The *Avenger* is a speedy, strongly protected, rugged aircraft capable of delivering a torpedo attack at sea or a heavy bomb load on land targets. Since it was first put into service, its defensive armament and auxiliary equipment have been improved, and a new model introducing other improvements is almost ready for volume production.

No field of aviation has been more important to the Navy than that of long range reconnaissance and patrol. After two years of war, the Consolidated *Catalina* flying boat remains in active service, having proved its usefulness in performing such varied tasks as night bombing patrol, rescues, anti-submarine warfare, and even dive bombing. Since Pearl Harbor, the *Catalina* has been supplemented by the Martin *Mariner,* a larger plane, which has likewise proved to be versatile in this field.

The Navy has made increasing use of land-based patrol airplanes because of the greater speed and range of newly developed models of this type and their greater defensive ability as compared with seaplanes. With more land bases becoming available, it has been possible to

utilize them effectively for long over-water operations. Their superior offensive and defensive power makes them more valuable in anti-submarine warfare and for combat reconnaissance photography and patrol.

Two principal types of land-based patrol planes are now in service with the Navy—the four-engine Consolidated *Liberator* and the two-engine Vega *Ventura*. The Navy's version of the *Liberator* is an extremely useful plane for fast, long range reconnaissance, search and tracking. A new version, with more powerful defensive armament and greater offensive strength, soon will be available. The *Ventura* is a strongly armed aircraft which carries a heavy bomb load. It has proved a powerful weapon, particularly in the war against the submarine. Two other land-based bombers—the Lockheed *Hudson* and the Douglas *Havoc*—have seen limited service with the Navy, and a third—the North American *Mitchell*—is in use by Marine air squadrons.

The principal plane used by the Navy for scout observation work during the war, has been the Vought-Sikorsky *Kingfisher*. A newer plane in this field, now in service, is the Curtiss *Seagull*.

The field of air transport has been enormously expanded since the beginning of the war. The Naval Air Transport Service now operates, either directly or through contract with private airlines, more than 70,000 miles of scheduled flights to all parts of the globe, helping to maintain the Navy's long supply lines. Thus far, standard type transport planes have been used. In December 1943, however, the Martin *Mars*, world's largest flying boat, was accepted by the Navy after exhaustive tests which proved its ability to carry heavy loads at long range. Manufacture of the *Mars*, under a prime contract with the Navy, is now under way, and the first production plane of this type recently entered actual service as cargo carriers.

Auxiliaries

The tremendous increase in the number of fighting ships and the global nature of the war required the acquisition of a commensurately large fleet of auxiliaries. These ships were obtained by construction, by conversion of standard Maritime Commission commercial hulls and by acquisition and conversion of commercial vessels. A considerable number of conversions of standard Maritime Commission types have been accomplished under the supervision of the Maritime Commission. Probably the most important vessels produced under the auxiliary program during 1943 were those which take part in actual landing operations, consisting of attack transports, attack cargo vessels and general headquarters ships. The demand for repair ships of standard and special types, which increased many-fold during 1943, was met by new construction and conversion.

Patrol Craft

As previously stated, patrol vessels were necessary to a properly balanced Navy. The first group of patrol craft whose design was developed before the war, was completed in the spring of 1942, and more than 600 vessels of this type were completed in 1943. Motor torpedo boats (which have been employed to good advantage in several different theaters) were produced at intervals in accordance with military requirements. The classification "Patrol Craft" includes the 110-foot sub-chaser and the 136-, 173- and 184-foot steel vessels. The greatest emphasis on this type of ship prevailed prior to and during the German submarine offensive off our Atlantic Coast and in the Caribbean.

PERSONNEL

The expansion program and the additional requirements following the outbreak of war resulted in increases in personnel as follows. The figures given include officers and men and the Women's Reserve, but not officer candidates or nurses:

	Sept. 8, 1939	*Dec. 7, 1941*	*Dec. 31, 1943*
Navy	126,418	325,095	2,252,606
Marine Corps	19,701	70,425	391,620
Coast Guard	10,079	25,002	171,518

The increases in enlisted naval personnel are shown graphically on the accompanying chart. (See Plate I.)

Taking the number of men indicated into an organization was in itself an enormous undertaking. Training them was an even greater undertaking, in spite of their high intelligence and the other characteristics which make the American fighting man the equal of any in the world.

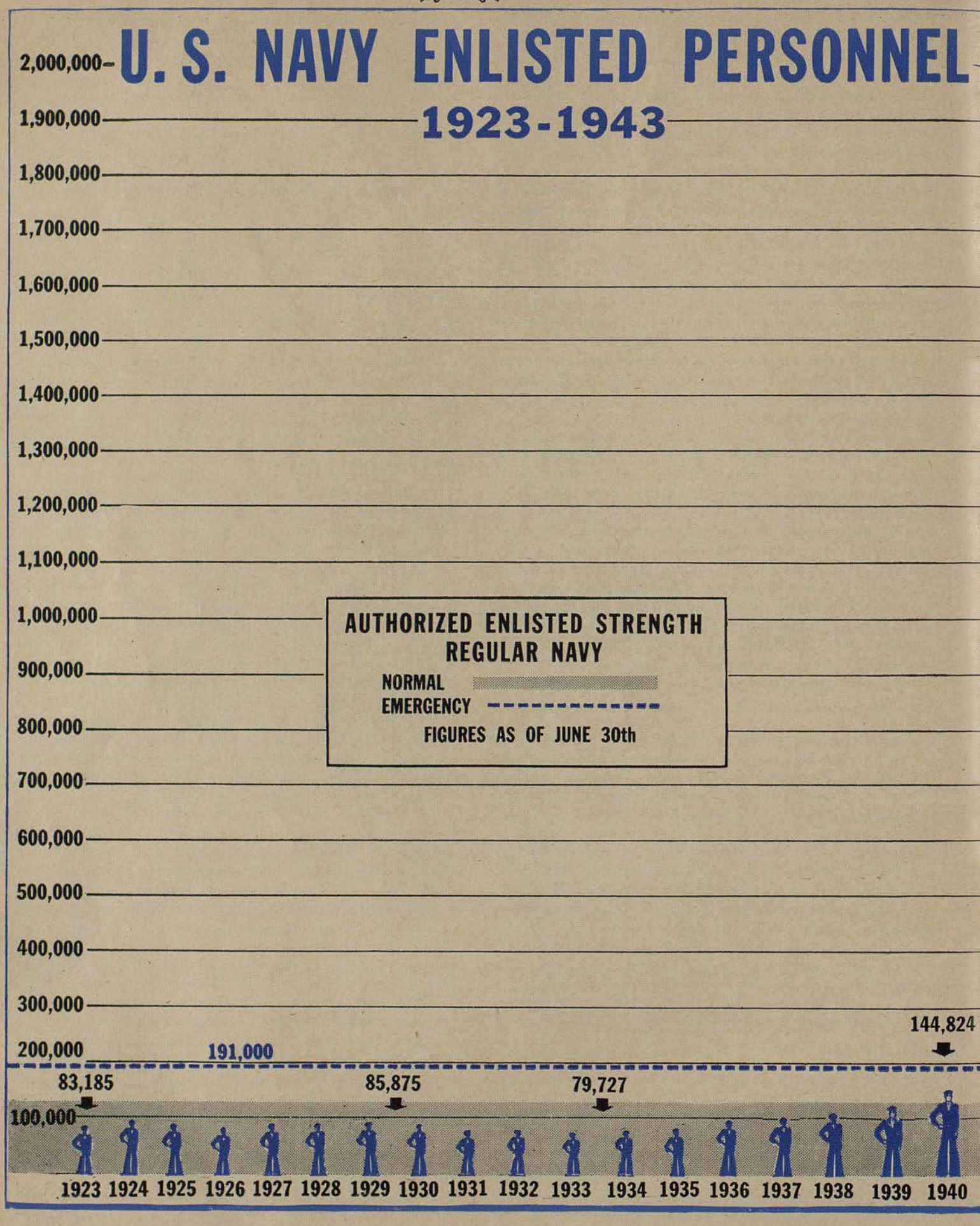
Procurement of Officers

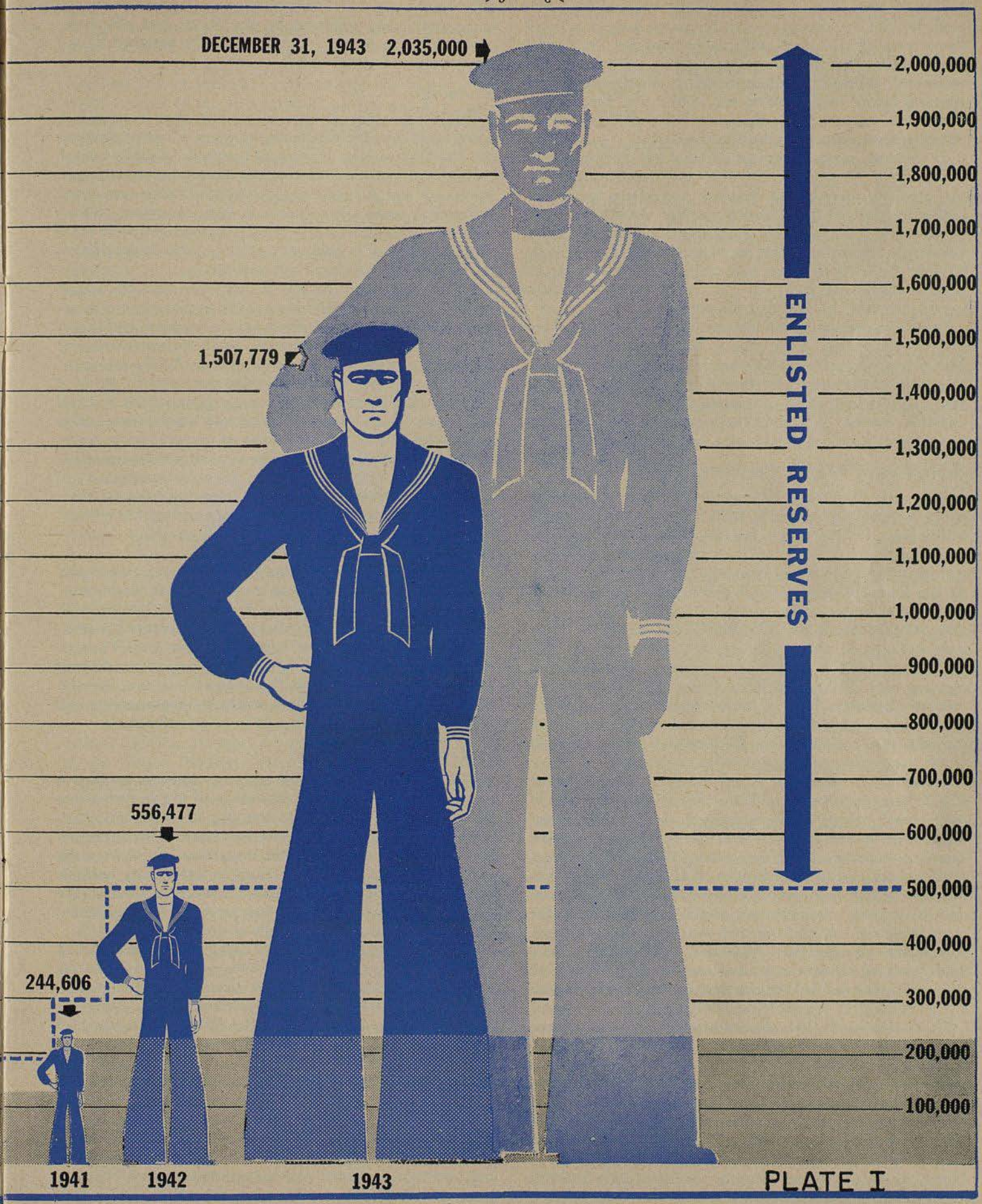
In time of peace the Navy is manned almost entirely by officers of the regular Navy, most of whom are graduates of the Naval Academy. Several years before the war, knowing that the Naval Academy would not be able to supply officers in sufficient quantities for wartime needs, the Navy established Naval Reserve Officer Training Corps units at various colleges throughout the country. Under the system set up, students were given the opportunity to take courses in naval science (which included training at sea during the summer months) and upon successfully completing them, were commissioned in the Naval reserve. When the limited emergency was declared, these officers were ordered to active duty, but when the war broke out it became apparent that the combined supply of commissioned officers from the Naval Academy and from ROTC units would not be sufficient to meet our needs for the rapidly expanding Navy.

In February, 1942, therefore, offices of naval officer procurement were established in key cities throughout the country. Hundreds of thousands of officer candidates went to these offices and there presented their qualifications. With the requirements of health, character, personality and education duly considered, the applications of those who appeared qualified were forwarded to the Navy Department for final consideration. Under this procedure some 72,000 officers were commissioned in the Navy directly from civil life, to meet immediate needs.

Meanwhile, educational programs designed to produce commissioned officers had been established in numerous colleges throughout the country. Included were the aviation cadet program (V-5) principally for physically qualified high school graduates and college students, and later the Navy college program (V-12) which absorbed under-graduate students of the accredited college program (V-1), and of the reserve midshipman program (V-7). At the present time there are 66,815 members of the V-12 program in some 241 different colleges.

From the foregoing, it will be seen that high school graduates are now the Navy's principal source of young officers. Their training is described elsewhere in this re-


U. S. NAVY ENLISTED PERSONNEL
1923-1943
2,000,000
1,900,000
1,800,000
1,700,000
1,600,000
1,500,000
1,400,000
1,300,000
1,200,000
1,100,000
1,000,000
900,000
800,000
700,000
600,000
500,000
400,000
300,000
200,000
100,000
AUTHORIZED ENLISTED STRENGTH
REGULAR NAVY
NORMAL
EMERGENCY
FIGURES AS OF JUNE 30th
83,185
191,000
85,875
79,727
144,824
1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940



—Official U. S. Navy Plate

port, but the various programs for naval reserve officers have supplied the fleet with large numbers, many of whom have already demonstrated their ability and the wisdom of the policy calling for their indoctrination and training before being sent to sea. Officers of the regular Navy are universally enthusiastic over the caliber of young reserve officers on duty in the fleet.

In general, procurement of officers has kept up with the needs of the service, with the exception of officers in the medical, dental, and chaplain corps and in certain highly specialized fields of engineering. As graduates of professional schools are the chief source of commissioned officers in the various staff corps and as there must be a balance between military and civilian needs, we are at present somewhat short of our commissioned requirements in certain branches of the service.

By comparison with the increase in size of the naval reserve, the increases in the regular Navy have been small. The output of the Naval Academy is at its peak, however, having been stepped up by shortening the course to three years and by increasing the number of appointments. In addition, during 1943, 20,652 officers have been made by the advancement of outstanding enlisted personnel.

Recruiting of Enlisted Personnel

When the President declared the existence of a limited emergency on September 8, 1939, the personnel strength of the Navy had been increased by calling retired officers and men to active duty and by giving active duty status to members of the naval reserve who volunteered for it. At the time the large naval expansion was authorized in July 1940, however, there were still only slightly more than 160,000 men in the Navy and by the end of that year only 215,000. As late as June, 1941, the total was still well below 300,000, and it was apparent that a radical increase over and above the existing figure was an immediate necessity. Various measures were therefore taken to stimulate recruiting, by virtue of which the Navy strength stood at 290,000 on December 7, 1941. In other words, we doubled our personnel in two years.

Immediately after the attack on Pearl Harbor there was a large increase in enlistments, and by the end of that month some 40,000 additional men had been accepted for naval service. This heavy enlistment rate, however, experienced in December, 1941, and January, 1942, subsequently fell off at a time when the requirements were still mounting. In order to meet the situation and to provide an adequate method of recruiting the large numbers of men needed, our recruiting system, which had already been expanded, was fortified by a field force of officers commissioned directly from civil life, and by the fall of 1942, we were accepting each month a total equivalent to peacetime Navy strength.

On December 5, 1942, the voluntary enlistment of men between the ages of 18 and 37, inclusive, was ordered terminated as of February 1, 1943, on which latter date the manpower requirements of the Navy were supplied by operation of the machinery of the Selective Service system. During the period of active recruiting about 900,000 volunteers were accepted. Since February 1, 1943, 779,713 men have entered the Navy through Selective Service. During the same period voluntary enlistments within the age limits prescribed totalled 205,669.

On June 1, 1943, the Army and Navy agreed on joint physical standards which were somewhat lower than those previously followed by the Navy, but still sufficiently rigid to permit all inductees to be assigned to any type of duty afloat or ashore.

Training

Strictly speaking, it is probably true that training is a continuous process, which begins when an individual enters the Navy and ends when he leaves it. In time of peace the number of trained men in the Navy is relatively high. In time of war, however, particularly when we experience a personal expansion such as has been described, trained men are at a premium. It is not an exaggeration to state that our success in this war will be in direct proportion to the state of training of our own forces.

When we entered the war we experienced a dilution in trained men in new ships because of the urgency of keeping trained men where fighting was in progress, and initial delays in getting underway with the huge expansion and training program had to be accepted. As the war progressed, and as the enemy offensive was checked, we were able to assign larger numbers of our trained men to train other men. Our ability to expand and train during active operations reflects the soundness of our peacetime training and organization. With that as a foundation on which to build, and with the tempo of all training stepped up, adequate facilities, standardized curricula, proper channeling of aptitude, full use of previous related knowledge, lucid instructions, and top physical condition became the criteria for wartime training.

Generally speaking, the first stage in the training of any new member of the Navy is to teach him what every member of the Navy must know, such as his relationship with others, the wearing of the uniform, the customs of the service, and how to take care of himself on board ship. The second stage involves his being taught a specialty and being thoroughly grounded in the fundamentals of that specialty. The third stage is to fit him into the organization and teach him to use his ability to the best advantage.

Commissioned Personnel

The over-all problem of training officers involves a great deal more than the education of the individual in the ways of the Navy. The first step is classification according to ability, which must be followed by appropriate assignment to duty. This is particularly true in the case of reserve officers, who must be essentially specialists, because there is insufficient time to devote to the necessary education and training to make them qualified for detail to more than one type of duty.

As previously stated, ROTC units, which were part of the V-1 training program, had been established in various colleges, and courses in naval science, which included drills and summer cruises, were worked into the academic careers of the individuals enrolled. With the approach of war, the training of these students was shortened in most colleges to two and one-half years, and eventually they became part of the Navy college training program (V-12).

In 1935, the Congress authorized the training of Naval aviation cadets, and that statutory authority was implemented by a program for their training, known as the V-5 program, which was open to physically qualified high school graduates and college students. Under the methods adopted, a decision as to whether or not a candidate would be accepted for the V-5 program was made by Naval Aviation Cadet Selection Boards, who were

guided by high standards covering the educational, moral, physical and psychological qualifications of each individual. The period of training normally requires from 12 to 15 months, exclusive of additional college training required for 17-year-old students. Of this time, six to eight months are spent in preliminary training in physical education and ground school subjects at pre-flight schools. The remainder of the training consists of primary, intermediate and advanced flight training. Upon successful completion of the full flight training course, an aviation cadet is commissioned ensign in the Naval Reserve or second lieutenant in the Marine Corps Reserve and is then ordered to active duty as a pilot.

The V-12 (Navy college training) program was established on July 1, 1943. It consisted initially of students who were on inactive duty in the Naval Reserve, new students from civilian life, and young enlisted men especially selected. The new students from civilian life consist of selected high school graduates or others with satisfactory educational qualifications who can establish by appropriate examination their mental, physical and potential officer qualifications. These students are then inducted into the Navy as apprentice seamen or as privates, United States Marine Corps, placed on active duty, and assigned to designated colleges and universities to follow courses of study specified by the Navy Department.

V-12 training embodies most of the features of preceding Naval Reserve programs. Depending on training requirements, and with the exception of medical and dental officers, engineering specialists, and chaplains, length of courses vary from two to six semesters. The courses of study include fundamental college work in mathematics, science, English, history, naval organization and general naval indoctrination for the first two terms for all students. This is followed by specialized training in a particular field, assignment of a student to special training being based upon his choice and upon his demonstrated competence in the field chosen, subject to available quotas. Upon satisfactory completion of college training, students are assigned to further training in the Navy, Marine Corps or Coast Guard, and if found qualified after completion of that training they are commissioned in the appropriate reserve.

So far, the V-12 program has worked well. It permits the selection of the country's best qualified young men on a broad democratic basis without regard for financial resources, and the induction and training of those young men who show the greatest promise of having superior ability and the other qualities likely to make a good officer.

The link between the College Training Program and the fleets is the Naval Reserve Midshipman Program. The Navy college graduates who are going to deck and engineering duties with the forces afloat are sent to one of the six reserve midshipman schools for a four months' course. Upon the successful completion of the first month's study, they are appointed reserve midshipmen, and after the remaining three months' intensive training, they are appointed ensigns in the Naval Reserve.

Originally four reserve midshipman schools were established, located at Columbia University, Northwestern University, Notre Dame, and the Naval Academy. The program has been such an outstanding success, and the demand for its graduates has so increased, that two additional schools recently have been put into commission, at Cornell and at Plattsburg, New York, with the result that there are nearly 9,000 men in this training program at any one time. The combined result of the College Training Program and the Reserve Midshipman Program is to meet the need of the fleets for thoroughly trained young deck and engineering officers.

Enlisted Personnel

Recruit training, in addition to the instruction given the individual in the ways of the Navy, consists of his being fully informed of the training opportunities open to him. This is followed by a series of tests designed to determine the ability of each recruit. These tests are based on the type of duty to be performed in the Navy, and in addition to such tests as the general classification test, consists of a systematic determination of aptitudes in reading and mechanical ability and any knowledge of specific work. Through a system of personal interviews these tests are supplemented by considering the background and experience of the individual, so that the special qualifications of each recruit may be evaluated. This information is then indexed and recorded and used in establishing quotas for the detail of men to special service schools or to any other duty for which they seem best qualified.

While the recruit is learning about the Navy, therefore, the Navy is learning about him. A practical application of this system was the assembly of the crew for the USS *New Jersey,* a new battleship. While the ship was fitting out, a series of tests and a thorough study of the requirements of each job on board were conducted. For example, special tests determined those best fitted to be telephone talkers or night lookouts or gun captains, and as a result, when the crew went aboard each man was assigned to a billet in keeping with his aptitude for it.

As permanent establishments, we had four training stations—Newport, Rhode Island; Norfolk, Virginia; Great Lakes, Illinois, and San Diego, California. As soon as we entered the war it became apparent that it would be necessary to expand these four stations radically and to establish others. By November 1942, we had expanded the four permanent training stations and established new ones at Bainbridge, Maryland; Sampson, New York, and Farragut, Idaho.

The training in the fundamentals of the specialty to be followed by a newcomer to the Navy is carried on ashore and afloat. Recruits showing the most aptitude for a particular duty are sent to special service schools designed to give the individual a thorough grounding in his specialty before assuming duties on board ship. If he hopes to become an electrician's mate he may be assigned to the electrical school, if a machinist's mate, to the machinist's mate school, if a commissary steward, to the cook's and baker's school, and so forth. Approximately 32 per cent of those who receive recruit training are assigned to special service schools.

An advanced type of training is given men who are already skilled in a specialty by assembling them and training them to work as a unit. This is known as operational training, and in addition to the special meaning of the term as applied to aviation training, it encompasses such special activities as bomb disposal units as well as the training of ship's crews before the ship is commissioned.

When the individual goes on board ship, he discovers that his training has only begun, because he must learn how to apply the knowledge he has already gained and

how his performance of duty fits into the organization of the ship. This is another form of operational training—conducted, of course, by the forces afloat—which is a preliminary to the assignment of that ship as a unit of the fleet. This does not mean that the ship is fully trained, but it means that the training is sufficiently advanced to fit the crew for the additional training and seasoning that comes only with wartime operations at sea. With the proper background of training, the most efficient ship is very likely to be the one which has been in action. In other words, actual combat is probably the best training of all, provided the ship is ready for it.

HEALTH

The health of the personnel in our naval forces has been uniformly excellent. In addition, the treatment and prevention of battle casualties has become progressively better.

The Medical Corps of the Navy has not only kept up with scientific developments everywhere, but it has taken the lead in many fields. The use of sulfa drugs, blood plasma and penicillin, plus the treatment of war neuroses probably represent the outstanding medical accomplishments of the war, but all activities requiring medical attention have been under continuous study.

For example, the conditions under which submarines must operate have been found to require special diet, air conditioning, sun lamps, special attention to heat fatigue, and careful selection of personnel. Similarly, in the field of aviation medicine, such matters as supply of oxygen, decompression treatment, acceleration stresses, air sickness, and fatigue require the closest attention. In the case of aviation medicine, flight surgeons, who are themselves qualified naval aviators and therefore familiar with all aviation problems, have been instrumental in keeping our aviation personnel at the peak of their efficiency.

Naval mobile hospitals were developed shortly before the war. These are complete units, capable of handling any situation requiring medical attention. Each unit contains officers of the Medical Corps, the Dental Corps, the Hospital Corps, the Nurse Corps, the Supply Corps, the Civil Engineer Corps and the Chaplain Corps, and in addition, enlisted personnel of a wide variety of non-medical ratings such as electricians, cooks, and bakers. Mobile hospitals are organized and commissioned, and being mobile as the name implies, are placed under the orders of the Commander in Chief, United States Fleet, for such duty as may be deemed desirable, the same as a ship. These mobile hospitals have proved invaluable in all theaters.

While it is hardly possible to single out any one activity as outstanding, the practice of evacuating sick and wounded personnel from forward areas by plane to be treated elsewhere, has been estimated to have increased the efficiency of treatment by about one-third. The beneficial effects of this practice on our ability to carry on a prolonged campaign, such as in the Solomon Islands, are obvious.

There have been many more contributions to our military efficiency having to do with not only medicine, but health in general. The question of malaria control in the Solomon Islands, protective clothing, the survival of personnel in lifeboats, the purification of drinking water, the treatment of flash burns, the recording by tag of first aid treatment received in the field, and periodic thorough physical examinations are a few of the progressive measures which, collectively, have been responsible for marked increases in our military efficiency.

The Marine Corps

Statistics previously given indicate the personnel expansion of the Marine Corps. In terms of combat units those figures represent a ground combat strength of two half-strength divisions and seven defense battalions expanded to five divisions, 19 defense battalions and numerous force and Corps troop organizations and service units; 12 aviation squadrons expanded to 85; and increases in ships' detachments to keep pace with the ship construction program. Under the leadership of Lieutenant General T. H. Holcomb, U.S.M.C., the Marine Corps successfully met the greatest test in its history by forging a huge mass of untrained officers and men into efficient tactical units especially organized, equipped, and trained for the complicated amphibious operations which have characterized the war in the Pacific.

Training of the expanding Marine Corps personnel had to be conducted by stages because existing bases were inadequate in housing, space, and facilities. Basic training for all Marines was continued at the established recruit depots at Parris Island, South Carolina, and San Diego, California. Specialized advanced training for ground and aviation personnel before being assigned to combat units was conducted chiefly at Camp Lejeune, New River, North Carolina; at Camp Elliott, near San Diego, California; and at Camp Pendleton, Oceanside, California. Improvised facilities were used at those three bases until they had been developed into centers capable of affording training in all the basic and special techniques required in amphibious warfare. The final stage of training began with assignment of personnel to combat units and ended with the movement of those units to combat areas. (The effectiveness of individual and unit training of the Marine Corps was first demonstrated at Guadalcanal and Tulagi, eight months after the beginning of the war. That first test showed Marine Corps training methods to be sound and capable of producing combat units in a minimum of time.)

The commissioned personnel of the expanding Marine Corps were initially obtained from reservists and graduates of the Marine Corps Schools at Quantico. Later, commissioned personnel were obtained by including the Marine Corps in the Navy V-12 program, by selecting candidates from graduates of designated colleges and universities, and by increasing the number of enlisted men promoted to commissioned rank.

Marine Corps aviation, while expanding to a greater degree than the Corps as a whole, has continued to specialize in the providing of air support to troops in landing or subsequent ground operations. Training and organization in the United States and excellent equipment have made it possible to operate planes from hastily constructed airfields with limited facilities. The generally excellent performance of Marine aviation squadrons operating from forward bases in the Central and South Pacific areas in successful attacks against enemy aircraft, men-of-war, and shipping, attests the soundness of the organization.

In November 1942, the Marine Corps Women's Reserve was established, the authorized strength being 1,000 commissioned and 18,000 enlisted women, to be reached by June 30, 1944. By December 31, 1943, there

were 609 officers and 12,592 enlisted women in the organization, all of whom have released male Marines for service in combat areas. The remarks relating to the performance of duty of the Waves, contained in that part of this report covering their organization and training, are equally applicable to women in the Marine Corps.

Participation of Marines in combat is covered in Part III of this report.

The Coast Guard

The duties of the Coast Guard under Naval administration consist of the civil functions normally performed by the Coast Guard in time of peace which become military functions in time of war, and the performance of Naval duties for which the personnel of the Coast Guard are particularly fitted by reason of their peacetime employment. The organization operates separately with respect to appropriations, required for Coast Guard vessels, shore stations, and personnel.

The increase in the size of the Coast Guard was necessitated chiefly by additional duties in connection with captain-of-the-port activities in the regulation of merchant shipping, the supervision of the loading of explosives, and the protection of shipping, harbors, and water front facilities. In addition, the complements of Coast Guard vessels and shore establishments were brought up to wartime strength, certain transports and other naval craft, including landing barges, were manned by Coast Guard personnel, and a beach patrol (both mounted and afoot) and coastal lookout stations were established. The Coast Guard also undertook the manning and operating of Navy section bases and certain inshore patrol activities formerly manned by naval personnel, and furnished sentries and sentry dogs for guard duty at various naval shore establishments.

Coast Guard aviation, which is about three times its previous size, has been under the operational control of Sea Frontier Commanders, for convoy coverage, and for anti-submarine patrol and rescue duties. Other squadrons outside of the United States are employed in ice observation and air-sea rescue duty. Miscellaneous duties assigned to Coast Guard aviation include aerial mapping and checking for the Coast and Geodetic Survey and ice observation assistance on the Great Lakes.

The assignment of certain Coast Guard personnel to duties radically different from those they normally perform required numerous changes in ratings. This resulted in extensive classification and retraining programs designed to prepare men for their new duties. The replacement of men on shore jobs by Spars, both officer and enlisted, has been undertaken as a part of this retraining program. Approximately 10,000 Spars—whose performance of duty and value to the service is on a par with that of the Waves and the women of the Marine Corps—will be commissioned and enlisted when the contemplated strength of that organization is reached.

The present strength of the Coast Guard was attained by the establishment of the Coast Guard Reserve and by commissioning warrant officers and enlisted men for temporary service. Other increases in the commissioned personnel of the Coast Guard have been accomplished by appointments made direct from civil life in the case of individuals with particular qualifications, such as special knowledge in the prevention and control of fires, police protection and merchant marine inspection.

A feature peculiar to the Coast Guard is the Temporary Reserve, which consists of officers and enlisted men enrolled to serve without pay. Members of the Temporary Reserve have full military status while engaged in the performance of such duties as pilotage, port security, the guarding of industrial plants, either on a full or part-time basis. At the present time there are about 70,000 members of the Temporary Reserve, but it is anticipated that it will eventually be reduced to about 50,000. The Coast Guard Auxiliary, which is a civilian organization, has contributed much of its manpower to the Temporary Reserve, the result being a substantial saving in manpower to the military services.

Under the general direction of Vice Admiral R. R. Waesche, U.S.C.G., Commandant, the Coast Guard has done an excellent job in all respects, and as a component part of the Navy in time of war, has demonstrated an efficiency and flexibility which has been invaluable in the solution of the multiplicity of problems assigned. The organization and handling of local defense in the early days of the war were particularly noteworthy.

The Seabees

For some months before the Japanese attacked Pearl Harbor we had been strengthening our insular outposts in the Pacific by construction of various fortifications. When these islands were attacked by the Japanese, the construction was only partially completed, and the civilians who were employed there by various construction companies were subjected to attack, along with our garrisons of Marines.

In that situation, the civilians were powerless to aid the military forces present because they lacked the weapons and the knowledge of how to use them. Furthermore, they lacked what little protection a military uniform might have given them. As a consequence, the Navy Department decided to establish and organize Naval construction battalions whose members would be not only skilled construction workers but trained fighters as well.

On December 28, 1941, authorization was obtained for the first contingent of "Seabees" (the name taken from the words "Construction Battalions") and a recruiting campaign was begun. The response was immediate, and experienced men representing about 60 different trades were enlisted in the Navy and given ratings appropriate to the degree and type of their civilian training.

After being enlisted these men were sent to training centers where they were given an intensive course in military training, toughened physically, and in general educated in the ways of the service. Particular attention was paid to their possible employment in amphibious operations. Following their initial training, the Seabees were formed into battalions, so organized that each could operate as a self-sustained unit and undertake any kind of base building assignment. They were sent to advance base depots for outfitting and for additional training before being sent overseas.

The accomplishments of the Seabees have been one of the outstanding features of the war. In the Pacific, where the distances are great and the expeditious construction of bases is frequently of vital importance, the construction accomplished by the Seabees has been of invaluable assistance. Furthermore, the Seabees have participated in practically every amphibious operation undertaken thus far, landing with the first waves of assault troops

to bring equipment ashore and set up temporary bases of operation.

In the Solomon Islands campaign, the Seabees demonstrated their ability to outbuild the Japs and to repair airfields and build new bases, regardless of conditions of weather. Other specialized services performed by the Seabees include the handling of pontoon gear, the repair of motor vehicles, loading and unloading of cargo vessels, and in fact every kind of construction job that has to be done.

At present the Seabees number slightly more than 240,000, nearly half of whom are serving overseas at various outposts. Fleet commanders have been and are generous in their praise and appreciation of the work done by construction battalions everywhere. There can be no doubt that the Seabees constitute an invaluable component of our Navy.

The Waves

Early in 1942, when the need for expansion of naval personnel became acute, the Navy Department proposed to the Congress that there be established, as an integral part of the Navy, a Women's Reserve. The stated purpose of the proposal was to employ women in shore billets, so that men could be released for sea duty. Acting on that recommendation, the Women's Reserve was established on July 30, 1942, and the organization became known as the Waves, the name being derived from the expression "Women Accepted for Volunteer Emergency Service." In November, 1943, certain statutory changes were made which provided for women becoming eligible for all allowances or benefits to which men are entitled, and made certain alterations in the composition of the organization, chiefly with respect to promotions.

Initial plans called for 1,000 officers and 10,000 enlisted women, and immediately upon obtaining the necessary statutory authority for the organization of an officer training school were established at Northampton, Massachusetts, utilizing the facilities of Smith and Mount Holyoke Colleges. At the same time, a training school for yeomen was established at Stillwater, Oklahoma, one for radio personnel at Madison, Wisconsin, and one for storekeepers at Bloomington, Indiana. Under the procedure followed at that time all Waves went to one of these schools immediately after joining the Navy, and upon the successful completion of their training, to duty somewhere in the continental United States where they could take the place of men.

All officer candidates now go to Northampton for their indoctrinational training and may then receive further training elsewhere—there are 16 schools for special training—in communications, supply, aerological engineering, Japanese language, radio and electronics, chemical warfare, general ordnance and photographic interpretation, and many others, including air navigation, air gunnery, and ship and aircraft recognition.

All enlisted Waves now go to a general indoctrination school at Hunter College in New York City, and there receive their basic training. Further training at some other school—there are now 19 of them—designed to train them in their chosen specialty, is now standard practice. Enlisted personnel are trained as radio operators, yeomen, storekeepers, for various aviation ratings, and for many others, including pharmacist's mate. Approximately one-fourth of all enlisted women are now on duty with Naval aviation activities.

On December 31, 1943, there were 6,459 commissioned Waves and 40,391 enlisted Waves serving in various capacities. Present plans call for nearly 100,000 Waves by the end of 1944.

The organization has been a success from the beginning, partly because of the high standards Waves had to meet to be accepted, partly because no effort has been spared to see that they are properly looked out for, and partly because of their overpowering desire to make good. As a result of their competence, their hard work, and their enthusiasm the release of men for sea duty has been accompanied in many cases, particularly in offices, by increases in efficiency. The natural consequence is an *esprit de corps* which embraces their value to the Navy, and it is a pleasure to report that in addition to their having earned an excellent reputation as a part of the Navy, they have become an inspiration to all hands in naval uniform.

III—*Combat Operations*

GENERAL

Organization of the United States Fleet

On February 1, 1941, command afloat in the high echelons was vested in three Commanders in Chief, one of whom commanded the Asiatic Fleet, one the Pacific Fleet, and one the Atlantic Fleet, provision being made whereby one of these three, depending on the circumstances, would act as Commander in Chief, United States Fleet, chiefly for purposes of standardization. In case two or more fleets operated together, he would coordinate their operations. At the time Pearl Harbor was attacked, the Commander in Chief of the Pacific Fleet was also Commander in Chief of the United States Fleet.

Almost immediately after our entry in the war it became apparent that for the purpose of exercising command all oceans must be regarded as one area, to the end that effective coordinated control and the proper distribution of our naval power might be realized. On December 20, 1941, therefore, the President changed this organization by making the Commander in Chief, United States Fleet, separate and distinct and in addition to the other three Commanders in Chief, and ordered the Headquarters of the Commander in Chief, United States Fleet, established in the Navy Department in Washington.

As of January 1, 1942, Admiral H. R. Stark was Chief of Naval Operations, Admiral E. J. King was Commander in Chief of the United States Fleet, Admiral T. C. Hart was Commander in Chief of the Asiatic Fleet,

Admiral C. W. Nimitz, who relieved Admiral H. E. Kimmel late in December, was Commander in Chief of the Pacific Fleet, and Vice Admiral (now Admiral) R. E. Ingersoll was Commander in Chief of the Atlantic Fleet.

In March, 1942, (coincident with my appointment as such) the duties of the Chief of Naval Operations were combined with the duties of the Commander in Chief, United States Fleet. Admiral Stark, who had so ably performed the duties of Chief of Naval Operations during the vital period preceding the war, became commander of United States Naval Forces in Europe. This move was accompanied by a number of adjustments in the Navy Department organization, calculated, among other things, to facilitate the logistic support of the forces afloat by providing for its coordination. Except for the fact that the Asiatic Fleet ceased to exist as such in June, 1942, that basic organization of the United States Fleet and supporting activities is still in effect. In the spring of 1942, however, and from time to time thereafter, independent commands were established directly under the Commander in Chief, United States Fleet.

Organization Within Each Fleet

In time of peace, for purposes of standardization, and to facilitate training and administration, our forces afloat operate under what is known as a type organization. Each fleet is subdivided according to types of ships in that fleet, (this includes shore-based naval aircraft), and in general, the officers assigned to command each subdivision are the next echelon below the Commander in Chief of a fleet. The "type commands" are primarily for administrative purposes. For operations, vessels and aircraft of appropriate types are formed into operating commands known as "task forces."

Sea Frontiers

As of February 1, 1941, Naval Coastal Frontiers consisted of one or more Naval Districts, depending on their geographical location, and Naval Coastal Frontier forces were administrative and task organizations. Commanders of those forces were responsible to the Navy Department for administrative purposes and to the Chief of Naval Operations for task purposes.

On December 20, 1941, the operating forces of Naval Coastal Frontiers were placed under the command of the Commander in Chief, United States Fleet.

On February 6, 1942, Naval Coastal Frontiers became Sea Frontiers, and Commanders of Sea Frontiers were made responsible to the Commander in Chief, United States Fleet, for that portion of their commands comprising ships and aircraft duly allocated as Sea Frontier forces. For the portion comprising ships and aircraft allocated by the Chief of Naval Operations as local defense forces, they were made responsible to the Chief of Naval Operations.

The foregoing change in designation of Naval Coastal Frontiers is not to be confused with the designation "Coastal Frontier." The latter, of which Sea Frontiers form a part, are coastal divisions with geographically coterminous boundaries within which an Army officer and a naval officer exercise command over their respective forces and activities.

In continental United States there are four Sea Frontiers: the Eastern, covering the Atlantic seaboard; the Gulf, covering the Gulf of Mexico; the Western, which takes in the southern part of the Pacific Coast; and the North West, which covers the northern part of the Pacific Coast.

Advance Base Units

Early in the war the Navy undertook a large expansion of its system of advance bases, many of which represented the consolidation of gains made by combat units. Depending on the circumstances, that is to say, whether they were gained as a result of a raid or as a result of an advance, the permanency of their construction was varied to meet the situation. In the South and Central Pacific, the entire campaign thus far has been a battle for advance bases where we can establish supply ports, ship repair facilities and landing fields, to act as a backstop for a continuing offensive.

Advance bases range in size from small units for the maintenance and repair of PT boats, manned by a handful of officers and men, to major bases comprising floating drydocks, pattern ships, foundries, fully equipped machine shops, and electrical shops, staffed by thousands of specialists. Some of these bases are general purpose bases; others are established for a special purpose. Convoy escort bases, located at terminals of the convoy routes, provide fuel, stores, ammunition, and repair facilities for merchant ships and their escort vessels. Rest and recuperation centers afford naval personnel facilities for relaxation and recreation after they return from combat zones. Air stations provide the facilities of an aircraft carrier on an expanded scale.

Once bases are built, they must be maintained. The problem of supplying the Navy's worldwide system of advance bases is one of great complexity, requiring a high degree of administrative coordination and attention to the most minute detail. Food, clothing, fuel, ammunition, spare parts, tools, and many types of special equipment must be made available in sufficient quantities and at the proper times to maintain the fighting efficiency of the Fleet.

In view of the difficulties involved, the arrangements made for the procurement and distribution of supplies to advance bases have been extremely effective. New methods have been improvised and shortcuts devised to simplify procedures and expedite deliveries. Among other devices adopted is the mail order catalogue system. Through use of the Navy's "functional component catalogue," it is possible to order all the parts and equipment needed to set up any type of base, from a small weather observation post to a fully equipped airfield or Navy yard.

As our forces advance, new bases must be established and economy of personnel and material demands that this be accomplished largely by stripping the old bases that have been left behind as the front is extended. This process is known as "rolling up the back areas."

Fighting Efficiency

When Pearl Harbor was attacked, the forces comprising the Atlantic Fleet had been engaged with Axis submarines, but the forces comprising the Asiatic and Pacific Fleets had not been previously engaged in combat. In the case of all ships everywhere, the transition from a state of peace to a state of war involved a great number of immediate changes, some of which could not possibly be made until our ships had been

in action. For example, we profited from experiences gained after the war started with respect to the use of certain of our weapons in actual combat. Such things as depth charges and explosive charges in torpedoes and shells were put to the real test by our forces, and all personnel have become accordingly familiar with their handling and use. We also learned from our experience the best practice in such matters as the painting and preservation of the interior of ships, camouflage, deficiencies and improvement of equipment, and from time to time what new contributions were of value. The most valuable of all experience has been that gained with respect to the operational technique in such fields as air combat, amphibious operations, and escort of convoys.

Another consideration was the correct use of the initiative by officers and men, especially the former. We had spent years training officers to think, judge, decide and act for themselves—a policy that paid dividends when the war began.

The war was also the real test of the training methods we had followed in time of peace, particularly the exercise of initiative by officers. As used in connection with the exercise of command, initiative means freedom to act, but it does not mean freedom to act in an offhand or casual manner. It does not mean freedom to disregard or depart unnecessarily from standard procedures or practices or instructions. There is no degree of being "independent" of the other component parts of the whole—the fleet. It means freedom to act only after all of one's resources in education, training, experience, skill and understanding have been brought to bear on the work in hand. This requires intense application in order that what is to be done shall be done as a correlated part of a connected whole—much as a link of a chain or the gear within a machine.

In other words, our officers had been indoctrinated and were now in larger measure on their own. Most of those officers understood perfectly the transition that becomes automatic when we passed from the peacetime to the wartime status, but it was thought desirable to define and emphasize the standards expected in time of war, not only to confirm their understanding, but for the benefit of newcomers. Without correct exercise of the principle calling for initiative on the part of the subordinate, decentralization, which is so essential, and which is premised on division of labor, will not work.

Calculated Risk

The ability of a naval commander to make consistently sound military decisions is the result of a combination of attributes. The natural talent of the individual, his temperament, his reactions in emergencies, his courage, and his professional knowledge all contribute to his proficiency and to the accuracy of his judgment. We have spent years training our officers to think clearly and for themselves, to the end that when entrusted with the responsibility of making decisions in time of war they would be fully qualified.

One of the mental processes that has become almost a daily responsibility for all those in command is that of calculating the risks involved in a given course of action. That may mean the risks attendant upon disposition of forces, such as had to be taken before the Battle of Midway, when an erroneous evaluation might have left us in a most unfavorable strategic position; the risks of losses in contemplated engagement, such as the Battle of Guadalcanal on November 13-14-15, 1942; the risks of success or failure dependent upon correct evaluation of political conditions, of which the North African landings are an example, and a host of others.

Calculating risks does not mean taking a gamble. It is more than figuring the odds. It is not reducible to a formula. It is the analysis of all factors which collectively indicate whether or not the consequences to ourselves will be more than compensated for by the damage to the enemy or interference with his plans. Correct calculation of risks, by orderly reasoning, is the responsibility of every naval officer who participates in combat, and many who do not. It is a pleasure to report that almost universally that responsibility is not only accepted, but sought, and that there have been few cases where it has not been properly discharged.

Logistics

The war has been variously termed a war of production and a war of machines. Whatever else it is, so far as the United States is concerned, it is a war of logistics. The ways and means to supply and support our forces in all parts of the world—including the Army—of course—have presented problems nothing short of colossal, and have required the most careful and intricate planning. The profound effect of logistic problems on our strategic decisions is described elsewhere in this report, but to all who do not have to traverse them, the tremendous distances, particularly those in the Pacific, are not likely to have full significance. It is no easy matter in a global war to have the right materials in the right places at the right times in the right quantities.

Superimposed on the shipping requirements for the overhead of logistic needs has been the transportation of Army troops and the demands of Lend-Lease. The combination of circumstances has made shipping a question of primary importance which has been reflected in the shipbuilding industry and the merchant marine.

When war was declared, an immediate estimate of the situation with respect to material was made, as a result of which we could see that no matter how much material was produced within the next year, it would not be enough. Therefore, with the idea of doing the first thing first, every effort was made to produce as much material as possible of all kinds, with the idea that as the war progressed our estimates could be revised to fit our needs. Stock piles of spare parts and materials needed for routine maintenance and repair of ships and aircraft were therefore established at advance bases, additional supplies being delivered under regular schedule.

Plate III is an over-generalization of the situation which existed in April 1942, with respect to the relationships involving munitions, manpower, and the eight fronts. From an examination of the diagram it will be seen that in order to keep our operating forces balanced in such a way as to conform to our planned operations, we had to maintain a continuous flow of munitions and manpower from sources of supply. The quantities involved, of course, had to be varied in accordance with the importance of any particular front, that is to say, the urgency of a particular campaign or operation. It is interesting to note that the United States was, and is, the only nation represented as having a full supply of both munitions and manpower.

MUNITIONS vs. MANPOWER
VERSUS
THE EIGHT FRONTS

AS OF APRIL, 1942

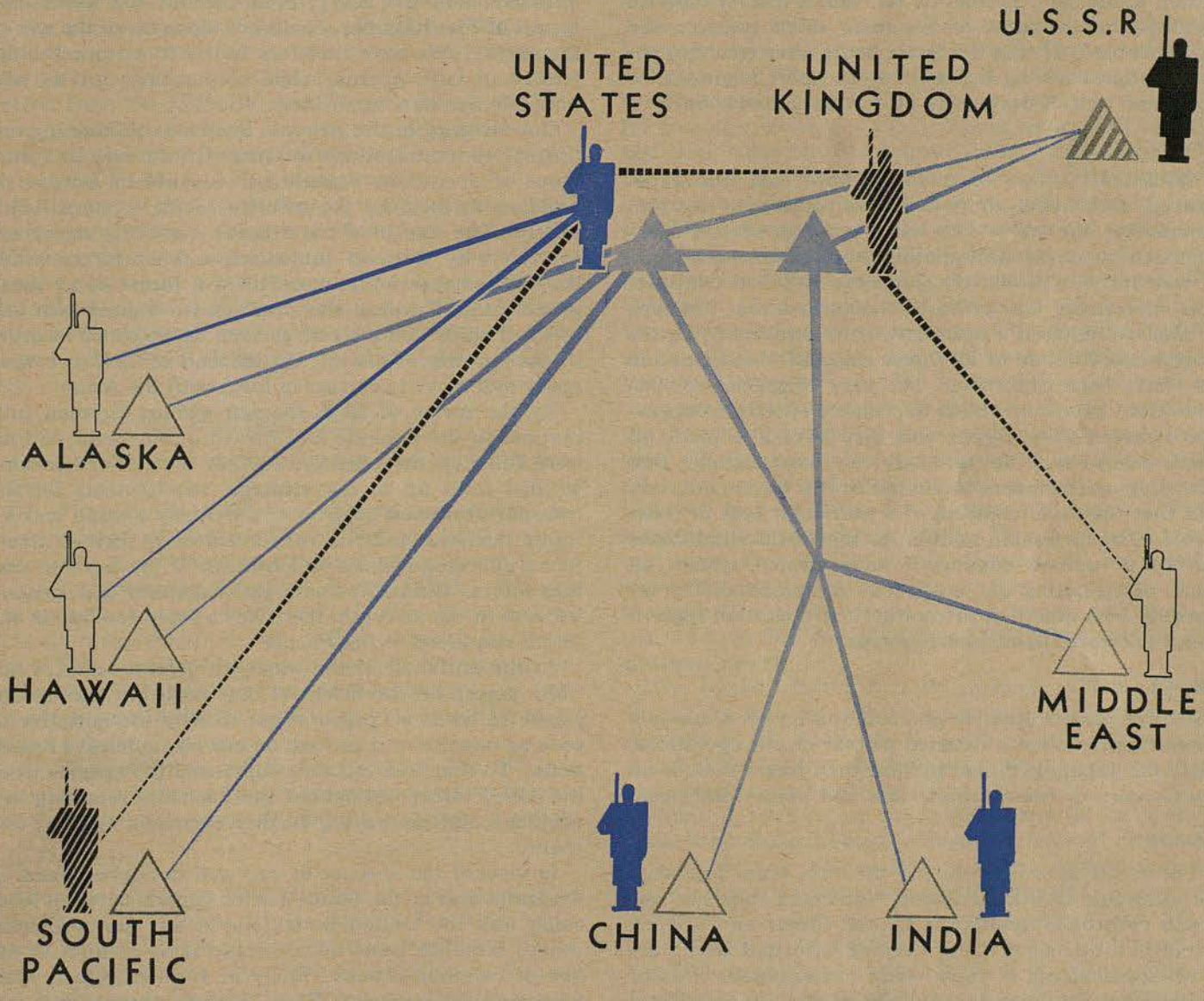


PLATE III

—Official U. S. Navy Plate

It became possible to anticipate the needs for material much more accurately after we had been in the war a little over a year, and numerous changes were made in the methods of controlling the flow to the operating forces.

In supplying the forces afloat with the material they need, different methods are required. For example, spare parts and materials can be put on a regular schedule, but in distributing battle damage spares, which consist of complete units of pumps, turbines, boilers, turbo generators, steering gear and other assemblies, it has been found advantageous to keep them in stock at depots in the United States, and to effect immediate delivery to points where they are needed. For example, on one occasion a damaged submarine put into a distant base for extensive replacement of her main drive controls and power cables. Within thirty-six hours after receiving the information covering her needs a transport plane loaded with nine tons of parts took off for the advance base.

Character

While every kind of naval warfare has been experienced, with naval air power more often than not predominating, the war to date has to a degree become characterized by numerous amphibious operations—a method of warfare with which the Japanese had had considerable experience. Our previous conclusions that this type of warfare required a technique of its own involving the closest coordination of all forces engaged—land, sea and air—have been confirmed. The very exigencies of such operations have done much to promote effective cooperation between those forces, and they have also made all hands realize that the uniform they wear signifies first that they are members of United States forces, and second that they are members of a particular unit of those forces. The inevitable solution to successful amphibious warfare is unified command, under which system all those participating are under the command of the individual best qualified to conduct the operation regardless of his status in our armed forces.

Enemy Losses

As previously stated, the object of this report is to give a general, rather than a detailed picture of our operations. Since the Japanese do not publish their losses there is no exact record of enemy ships sunk and planes destroyed.

Strategy

The trend of events during the two years following the outbreak of war in Europe indicated that the war would eventually engulf the United States and become global in all its aspects. In keeping with that trend, the growing truculence of Japan and the continuous clash of Japan's policies with the policies of the United States made it likely that that country would enter the war at the most propitious moment. Because of that attitude, we were forced to retain the major part of our naval strength in the Pacific, in spite of the unfavorable situation in Europe reflecting the possibility of the need of our naval strength in the Atlantic. We were therefore placed in an unfavorable strategic position, in that our naval forces at that time were not adequate to meet the demands in both oceans should we be forced into the war.

The sudden treacherous attack by Japan which resulted in heavy losses to us made our unfavorable strategic position at the outbreak of war even worse than we had anticipated. Had we not suffered those losses, however, our fleet could not have proceeded to Manila as many people supposed and there relieved our hard pressed forces. Such an undertaking at that time, with the means at hand to carry it out and support it, would have been disastrous.

Although we had made some progress, and had for some months been increasing our defenses in the Western Hemisphere our armed forces and our production were not adequately expanded and developed to permit our taking the overall offensive in any theater. The Army ground and air forces and our shipping were not yet prepared to move overseas in sufficient strength for an offensive, and the Navy, even without the losses sustained at Pearl Harbor, could not alone carry the war to the enemy. We were therefore forced to assume the defensive in both oceans, while preparations for an amphibious war were intensified.

Our strategy in the Atlantic involved maintaining our lines of communications to Great Britain and to future bases of operations against our enemies in Europe, in addition to insuring the security of the western hemisphere. The control of the Atlantic was being vigorously contested by German submarine and air forces, while the Axis surface forces constituted a threat of no mean proportions. To meet the situation we trained men and manned ships and aircraft as soon as we could in order to assume the offensive. By the end of 1942, we were ready and moved overseas in force with the Army.

By the spring of 1943, the war against German submarines in the Atlantic had turned in our favor and we were fully on the offensive in that area. Furthermore, we had built up to our strategic requirements for the transportation and support of our Army ground and air forces overseas and the reinforcement of British naval forces guarding against the outbreak of the German surface forces. Coincident with this expansion and general increase in our strength, there was a rapid buildup in the forces employed in the Pacific.

At the outbreak of the war with Japan, we were initially placed on the defensive, but while we were so engaged we made all preparations to seize the initiative as soon as possible and embark on our own offensive operations. To that end, our fleet supported the operations of the Allied forces throughout the Pacific in retaining key positions and preventing further encroachments by the enemy.

In view of the absence of any well developed bases in Australia and in the South Pacific islands between Australia and the United States one of our first problems was to establish bases which would serve as links in the line of communications. Early in 1942, therefore, after surveying the situation, Efate, Espiritu Santo, and certain islands in the Fijis and New Caledonia were selected for advance bases, and developed in varying degree to suit our purposes. The establishment of those bases, which have been in constant use as fuel and troop staging stations, and as distribution points for material and supplies, was in large measure responsible for our ability to stand off the Japanese in their advance toward Australia and New Zealand. Without them we should have been at such a disadvantage that it is doubtful if the enemy could have been checked.

While essential sea and air communications to Alaska, Hawaii, New Zealand, Australia, and other intermediate

positions were being established and protected, our submarines immediately took the offensive in enemy waters. Also during this period, our naval air task forces were instrumental in attacking enemy positions and in turning back enemy sea-borne forces, particularly in the Coral Sea and off Midway. The enemy succeeded in making an incursion into the Western Aleutians.

The actions in the Coral Sea and at Midway did much to wrest the initiative from the enemy and slow down further advance. Our first really offensive operation was the seizure of Guadalcanal in August 1942. This campaign was followed by a general offensive made possible by increases in our amphibious forces and in our Naval forces in general, which has continued to gain momentum on the entire Pacific Front. At the end of February 1944, the enemy had been cleared from the Aleutians, had been pushed well out of the Solomons, had been ejected from the Gilberts, and Western Marshalls, was being attacked elsewhere, and was forced to adopt a defensive delaying strategy. Meanwhile, our own positions in the Pacific had been strengthened.

At the end of February, therefore, we were in a position to support our submarines which had been on the offensive from the beginning of the war, with strong Naval forces, some of which were ground and air forces not needed on the European front. A similar situation exists in the Atlantic, in that the sea lanes are under our control and we are definitely on the offensive in that area.

THE PACIFIC THEATER

The war in the Pacific may be regarded as having four stages:

(a) The defensive, when we were engaged almost exclusively in protecting our shores and our lines of communication from the encroachments of the enemy.

(b) The defensive-offensive, during which, although our operations were chiefly defensive in character, we were able nevertheless to take certain offensive measures.

(c) The offensive-defensive, covering the period immediately following our seizure of the initiative, but during which we still had to use a large part of our forces to defend our recent gains.

(d) The offensive, which began when our advance bases were no longer seriously threatened and we became able to attack the enemy at places of our own choosing.

The Defensive

After the attack on Pearl Harbor, the Japanese withdrew from the Central Pacific and for the time being, except for the capture of the islands of Guam and Wake, confined their major attacks to the Philippine Islands and Netherlands East Indies. Our own operations were of necessity limited to that line of enemy advance. Guam was easily taken. Our forces on Wake, after gallant resistance which took a large toll of enemy attacking forces, far superior in strength, were overcome at the end of December.

Except for the forces in the Philippine Islands under General MacArthur, our strength in the Western Pacific area consisted chiefly of the Asiatic Fleet, a few aviation units, and the garrisons of marines at Guam and Wake already referred to. The small Asiatic Fleet commanded by Admiral Thomas C. Hart, U.S. Navy, included the heavy cruiser *Houston,* the light cruiser *Marblehead,* 13 overage destroyers, some 29 submarines, two squadrons of Catalinas comprising Patrol Wing Ten, and a few gunboats and auxiliaries which could not be counted on for combat. With this force (plus the light cruiser *Boise,* which happened to be in Asiatic waters when the war warning was received) we undertook to delay the enemy's advance until such time as we could muster sufficient strength to put up any real resistance. In so far as completely stopping the advance was concerned, the campaign was foredoomed, but it nevertheless contributed materially to the ultimate check of the Japanese advance, and the energy and gallantry of the officers and men participating constitute a remarkable chapter in the history of naval warfare.

During the latter part of November, when the Japanese advances along the coast of Indo-China indicated the approach of a crisis, Admiral Hart had sent the *Marblehead* and eight destroyers to Borneo. Likewise, the *Houston, Boise,* and the destroyer tender *Black Hawk* had been dispatched to operate in southern waters. On the evening of December 8, therefore, after the Japanese had bombed our airfields and destroyed many of General MacArthur's planes, our submarines and motor torpedo boats, which were still in Philippine waters, were left with the task of impeding the enemy's advance. On December 10, the navy yard at Cavite, which had long been recognized as insecure, was practically wiped out by an air attack which also damaged the submarine *Sealion* and the destroyer *Peary,* the *Sealion* being destroyed by our own forces to prevent its capture. On the same day the Japanese effected landings on the islands, and thereafter all attempts to bring in effective quantities of supplies by sea proved unsuccessful. It should be noted, however, that on December 10, there were some 200,000 tons of Allied shipping in Manila Bay, most of it good, and some of it with valuable cargoes. All but one of these ships got clear, to the southward, under what amounted to cover by our surface forces, and escaped via the Sulu Sea and Makassar Strait. This was an important "save."

The holding of the Army's positions on Bataan and Corregidor became only a question of time, and Rear Admiral F. W. Rockwell, U. S. Navy, who was in command of the local naval defense forces, moved with them to Corregidor on December 26.

Admiral Hart set up his headquarters in the Netherlands East Indies. Shortly thereafter General Sir Archibald P. Wavell, of the British Army, arrived and assumed supreme command in that theater, whereupon Admiral Hart became the Commander of the Allied naval forces. Until Admiral Hart's arrival in Java, Rear Admiral (now Vice Admiral) William A. Glassford commanded the surface ships in southern waters, assisted by Rear Admiral William R. Purnell and other members of the Fleet Staff. Up to this point, (in so far as the Asiatic Fleet was concerned) the campaign was conducted in accordance with plans worked out in the Navy Department prior to the outbreak of hostilities.

The method adopted by the Japanese in making their advances through the Philippine Islands and the Netherlands East Indies was built around their air power. After building up their strength at a given base they would overcome the consistently inferior Allied air opposition at the next point of attack and then send along heavily screened amphibious forces to make landings. As a rule,

CHART I

THE DEFENSIVE PHASE in the PACIFIC

1 **BATTLE OF MAKASSAR STRAIT, January 24, 1942:** Japanese forces moving southward are attacked by U. S. destroyers.

2 **RAID ON THE MARSHALLS AND GILBERTS, February 1, 1942:** U. S. carriers and cruisers attack enemy bases.

3 **BANDOENG STRAIT, February 19-20, 1942:** Combined forces under Rear Admiral Doorman, R. N. N., engage Japanese force moving on Bali.

4 **ACTION OFF RABAUL, February 20, 1942:** Aerial engagement near the enemy's major base in New Britain.

5 **RAID ON WAKE ISLAND, February 24, 1942:** A U. S. Task Force bombards a former American outpost.

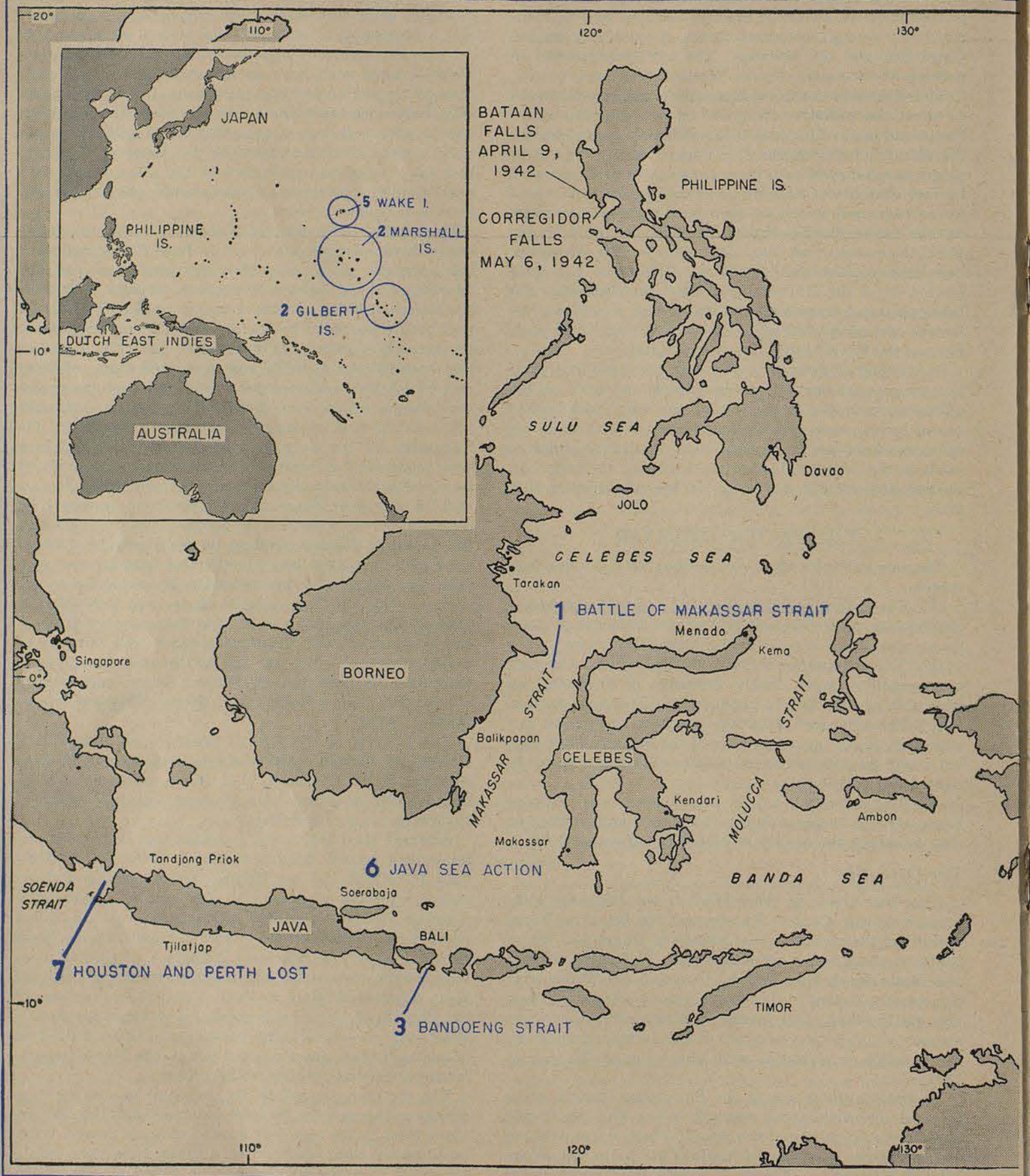
6 **JAVA SEA ACTION, February 27, 1942:** Combined forces attempt to intercept Japanese convoys. The end of organized Allied naval resistance in this phase of the war.

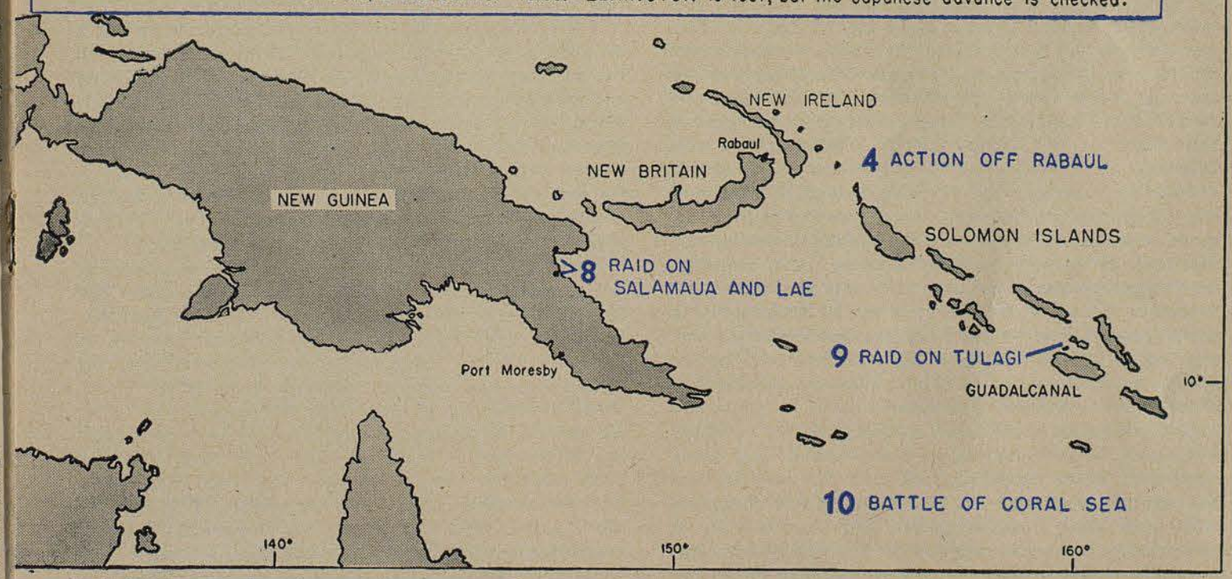
7 **HOUSTON AND PERTH LOST, March 1, 1942:** The surviving cruisers of the combined force are lost in an action near Soenda Strait.

8 **RAID ON SALAMAUA AND LAE, March 10, 1942:** Carriers attack enemy ships in recently occupied New Guinea bases.

9 **RAID ON TULAGI, May 4, 1942:** The opening blow of the Coral Sea actions. U. S. carrier-based aircraft attack Japanese ships in the newly occupied Solomons.

10 **BATTLE OF THE CORAL SEA, May 7-8, 1942:** Carriers exchange blows. Severe damage inflicted on the Japanese carrier force. LEXINGTON is lost, but the Japanese advance is checked.





—Official U. S. Navy Chart

the distances were too short to permit attack by our naval forces while the enemy was enroute. As soon as the enemy were in control of a new area they would repair the airfields and gather forces for the next attack. These tactics were well adapted to the geography of the Philippine Islands and the Netherlands East Indies, particularly as there was almost a total absence of interior communications in the islands occupied.

In January 1942, therefore, the Japanese had overrun the Philippine Islands, and the greatest part of our strength was in the Netherlands East Indies, for which the Japanese were obviously headed. Our submarines and motor torpedo boats were engaged in slowing down the enemy advance to give us as much time as possible to get organized for the surface actions that were in prospect in the Java Sea.

The Java Sea Campaign

In that situation, Admiral Hart had to plan all our operations without air support except for a few Army bombers and a few fighters based on Java. Our PBY4's of Patrol Wing Ten were not suited for the type of operations in prospect, and as a matter of fact it was only the superb work of their pilots in the face of enemy fighters coupled with the mobility of our tenders that made their use possible.

By the end of December, the Japanese were preparing bases at Davao, on Mindanao, and at Jolo in the Sulu Archipelago. From these points they moved south to attack Menado, on the northern tip of Celebes, Tarakan, in northeastern Borneo, and shortly afterward Kema, with the obvious intention of moving down Molucca Strait toward Ambon, Kendari, and Makassar Strait. By January 20, they appeared to be ready to move against Balikpapan, on the east coast of Borneo.

Collecting the few ships at his disposal, (until early February all British and Netherlands surface ships had to be used to escort troop convoys into Malaya) Admiral Hart decided upon a night torpedo attack. This was delivered off Balikpapan (the action became known officially as the Battle of Makassar Strait) early in the morning of January 24, by the destroyers *John D. Ford, Parrot, Paul Jones* and *Pope,* under the command of Commander (now Captain) P. H. Talbot, U.S. Navy. Whatever the losses sustained by the enemy, the attack, (one of four attempts by our cruisers and destroyers to come to grips with the enemy at sea) was brilliantly executed, and was responsible for the stalling of that particular force for some time at Balikpapan. Other amphibious forces, however, continued to advance eastward, and landed at Rabaul in New Britain and at Bougainville in the Solomons. New positions on the coast of Borneo were also seized by the enemy, and in the first few days of February they captured Ambon and began bombing Soerabaja and several other Javanese points.

In furtherance of the effort to delay the enemy drive, a striking force consisting of four cruisers and seven destroyers, about half of which were Netherlands and the other half American, was formed under the command of Rear Admiral Doorman of the Netherlands Navy. A large enemy convoy having gathered at Balikpapan, Admiral Doorman undertook to run up Madoera Strait into the Java Sea and deliver an attack, but our forces were discovered by Japanese planes and subjected to a prolonged bombing attack which prevented the carrying out of the plan. During this attack the *Houston* suffered one direct hit which destroyed her number three turret and the *Marblehead* was forced to retire to the south coast of Java to effect temporary repairs.

Continuing their advance, the Japanese attacked Palembang in southeast Sumatra and entered Banka Strait. Admiral Doorman's force, in a second effort to interfere with the enemy operation was again forced to withdraw by enemy planes. By February 14, the Japanese in Borneo and Celebes were in a position to advance on Bali and Eastern Java, and Japanese forces in Sumatra were also threatening Java.

At this point in the campaign, in accordance with previous agreements providing that it would be conducted by the Netherlands, Admiral Hart relinquished operational command of Allied naval forces to Vice Admiral Helfrich of the Netherlands Navy, and a few days later General Wavell turned over his command and left the area.

Having been subjected to daily bombing at Soerabaja, our headquarters were transferred from Soerabaja to Tjilatjap on the south coast of Java. On February 19, Darwin, (most of our forces basing there had been transferred to Tjilatjap because Darwin, not entirely suitable from the beginning, was becoming untenable) on the north coast of Australia, was subjected to a heavy air raid which destroyed the airport, warehouse, docks, and virtually every ship in the harbor, including our destroyer *Peary.*

Enemy forces having landed on the southeast coast of Bali, and seized the airfield there, Admiral Doorman, with his composite force, attacked enemy vessels in Bandoeng Strait on the night of February 19-20. This action resulted in the sinking of the Netherlands destroyer *Piet Hein* and damage to the Netherlands cruisers *Java* and *Tromp* and to our destroyer *Stewart.* Damage to the enemy in this action was impossible to assess but was believed to be considerable.

The action in Bandoeng Strait was encouraging but it did little to impede the Japanese, who now controlled all the northern approaches to the Netherlands East Indies, and seemed about to move on Java. In an effort to bolster up our strength with fighter planes, the *Langley,* with planes and crew on board, and the *Seawitch,* with more planes, were diverted to Java. On February 26, the *Langley* was sunk by enemy bombers. The *Pecos,* a tanker, was sunk about the same time in the same area. The *Seawitch* arrived safely at Tjilatjap but was too late.

On February 27, Admiral Doorman's composite force, consisting of two heavy cruisers, three light cruisers and nine destroyers, attacked an enemy force in the Java Sea, not far from Soerabaja. After maneuvering for position, and after having joined action, the composite force, for one reason and another, suffered a series of losses. These included the sinking of the British destroyer *Electra* and the Netherlands destroyer *Kortenaer,* and damage to the British cruiser *Exeter.* Later that night the Netherlands cruisers *DeRuyter* and *Java* were sunk by a combination of torpedoes and gunfire. This left only the *Houston* and the *Perth,* the American destroyers having expended their torpedoes and retired to port to refuel. Accordingly, the *Houston* and *Perth* retired to Tandjong Prock. Although the Japanese suffered some damage, they were successful in preventing the striking force from reaching their convoys. The im-

mediate problem was now to rescue our remaining vessels from the Java Sea, the exits to which were held by the enemy.

On February 28, the *Exeter, Pope,* and *Encounter* headed for Soenda Strait and were never heard from again. On March 1, the *Houston* and *Perth,* accompanied by the Netherlands destroyer *Eversten* headed in the same direction, and except for very meager reports of an engagement in Soenda Strait, they have not been heard from since. Of the entire Allied force, only the four American destroyers managed to make their way to Australia after a skirmish with Japanese destroyers patrolling Bali Strait.

On February 28, the Japanese landed on the north coast of Java. As no port on the island of Java was tenable as a base for our surface forces, the Allied Naval Command was dissolved and the American ships remaining at Tjilatjap were ordered to proceed to Australia. Of the four destroyers so ordered, the *Edsall* and the *Pillsbury* were lost en route. All other craft escaped, with the exception of the gunboat *Asheville.* Thus ended the gallant campaign of the Java Sea, conducted against overwhelming odds by officers and men who did the best they could with what they had.

Raids on Japanese Positions

While the situation in the Far East was growing steadily worse, and the Japanese were having things their own way there and elsewhere, our Pacific Fleet, now commanded by Admiral Nimitz, carried out its first offensive operation of the war. The targets selected were the Marshall and Gilbert Islands.

To carry out raids on these islands, there was placed under the command of Vice Admiral (now Admiral) William F. Halsey, Jr., U. S. Navy, a force consisting of the carriers *Enterprise* and *Yorktown,* the heavy cruisers *Chester, Louisville, Northampton,* and *Salt Lake City,* the light cruiser *St. Louis,* and ten destroyers. Beginning January 31, 1942, bomb and bombardment damage—very severe in some instances—was inflicted by that force upon the islands of Wotje, Maleolap, Kwajelein, Roe, Jaluit, Makin, Taroa, Loe and Gugegwe. It is quite possible that because of the success at Pearl Harbor, much of the enemy's air strength originally disposed in the Marshall Islands was withdrawn before these attacks were delivered. Except for the *Chester,* which suffered one bomb hit, and the *Enterprise,* which was slightly damaged by shell fragments, none of our vessels was damaged during the entire operation, and our personnel losses were slight.

The raid on the Marshall and Gilbert Islands was so successful that several other operations following the same pattern were conducted during the following weeks. On February 20, a task force built around the carrier *Lexington,* and commanded by Vice Admiral Wilson Brown, U. S. Navy, attempted a combination air and surface attack on Rabaul, New Britain. During the approach, the *Lexington* was discovered by enemy twin-engined bombers 16 of which were destroyed by our fighter planes and anti-aircraft, five of them by a single pilot. The element of surprise having been lost and fuel having been reduced by high-speed maneuvering, the attack on Rabaul was not pressed home.

On February 24, Admiral Halsey took the *Enterprise,* two cruisers, and seven destroyers and shelled and bombed Wake Island which had been in enemy hands since December 22. Considerable damage was inflicted. We lost only one aircraft during that operation. Eight days later planes from the *Enterprise* bombed Marcus Island with reasonably satisfactory results. Again, we lost only one plane.

On March 10, Vice Admiral Brown, with the carriers *Lexington* and *Yorktown* and supporting ships, raided the New Guinea ports of Salamaua and Lae where enemy troops had landed three days earlier. A number of enemy war vessels and transport vessels were sunk or damaged, and the attack was fully successful, even though it did not appear to delay, appreciably, the enemy's advance toward Australia. Our losses were light.

On April 18, Tokio was bombed by Army planes which took off from the carrier *Hornet,* the planes from the *Enterprise* providing search and fighter planes for the operation. As a carrier operation, this raid was unique in naval history in that for the first time medium land bombers were transported across an ocean and launched off enemy shores. Whatever the damage inflicted by these bombers, the attack was stimulating to the morale, which at that time, considering the surrender of Bataan, and the situation in general in the Far East, was at low ebb.

The Coral Sea

By the middle of April, the Japanese had established bases in the New Guinea-New Britain-Solomon Islands area, which put them in a position to threaten all Melanesia and Australia itself, and they were moving their forces through the mandates in preparation for an extension of their offensive to the southeast. Our available forces at that time were eager and ready for battle, but they were not any too strong for effective defense against major enemy concentrations, much less adequate to carry out a large-scale offensive operation.

It should be noted at this point that during the first five months of the war, nearly every engagement with the enemy had demonstrated the importance of air power in modern naval warfare. Our initial losses at Pearl Harbor and in the Philippines were the result of attack by aircraft, and the enemy's superiority in the air had been one of the controlling factors in our reverses in the Far East. Similarly, our successful though inconclusive raids on the Japanese-held islands in the Pacific had been conducted chiefly by carrier-based aircraft. The results had been excellent and the costs low. As yet, however, there had been no engagement between enemy carrier forces and our own, and although we had reason to believe that most of our naval aircraft was of good design and performance, we had no basis for comparison.

When the Japanese, on May 3, began to occupy Florida Island in the Solomons, Rear Admiral (now Vice Admiral) Frank J. Fletcher, U. S. Navy, who was cruising in the Coral Sea with a force composed of the carrier *Yorktown,* the three cruisers *Astoria, Chester,* and *Portland,* and six destroyers, proceeded north to interrupt the activity. On the morning of May 4, about 100 miles southwest of Guadalcanal, planes launched by the *Yorktown* sank and damaged a number of enemy vessels at Tulagi with loss of only one aircraft, and in the afternoon, another attack group scored additional hits, with the loss of two fighters.

On May 5, Rear Admiral Fletcher's force had joined other Allied units, one of which was a task group including the heavy cruisers *Minneapolis, New Orleans, Astoria, Chester* and *Portland,* and five destroyers. There were two flag officers in the tank group, Rear Admiral (now Vice Admiral) Thomas C. Kinkaid and Rear Admiral William W. Smith. The other unit, consisting of the Australian heavy cruiser *Australia,* and the light cruiser *Hobart,* plus the American heavy cruiser *Chicago* and two destroyers, was under the command of Rear Admiral J. G. Grace, Royal Navy, and was operated in conjunction with the carriers *Lexington* and *Yorktown* and four destroyers, which were under the command of Rear Admiral (now Vice Admiral) Aubrey W. Fitch, U. S. Navy.

On the afternoon of the 6th, enemy forces had become sufficiently consolidated in the Bismarck Archipelago—New Guinea area to indicate an amphibious operation to the southward, perhaps against Port Moresby, on the southeastern coast of New Guinea. As enemy forces would have to round the southeastern end of New Guinea, Rear Admiral Fletcher stationed an attack group within striking distance of the probable track of the enemy fleet, and the remainder of his force moved northward in an attempt to locate enemy covering forces.

On the morning of the 7th, contact was made with the Japanese carrier *Shoho,* which was promptly attacked and sunk by aircraft from the *Lexington* and *Yorktown.* We lost only one dive bomber in the attack, but the same morning Japanese carrier planes sank our tanker *Neosho* and the destroyer *Sims.*

The next morning, contact was made with two enemy carriers, four heavy cruisers, and several destroyers. One of the carriers was attacked and severely damaged by our carrier aircraft, and as was anticipated, enemy aircraft counterattacked about an hour later. During the counterattack, both the *Yorktown* and the *Lexington* were damaged, the latter rather severely. Both carriers and their planes shot down a considerable number of enemy planes during the engagement, and our aircraft losses were small by comparison, but early in the afternoon an explosion on board the *Lexington* made her impossible to control. She was therefore abandoned, and ordered sunk by one of our own destroyers. Nearly all of her personnel were saved.

Thus ended the first major engagement in naval history in which surface ships did not exchange a single shot. Although the loss of the *Lexington* was keenly felt, the engagement in the Coral Sea effectively checked the Japanese in their advance to the southward. Our losses of one carrier, one tanker, one destroyer, and a total of 66 planes were considerably less than estimated Japanese losses. Our personnel casualties totalled 543.

Defensive-Offensive

Midway

The engagement in the Coral Sea marked the end of the period during which we were totally on the defensive. There followed a lull during which both sides were preparing for further operations. Our immediate problem was to anticipate as nearly as we could what the next move of the enemy would be, as we had lost touch with the heavy Japanese forces which had participated in the Coral Sea action.

It was clear that the Japanese would not long remain inactive. Naturally enough, our various important outposts would be good targets, with Dutch Harbor and Midway offering them the best chance of success, either in the nature of a raid or of an invasion. Furthermore, an operation directed against these points would permit the enemy to retire without too great loss or complete annihilation in case their plans did not work out. At the same time, we had to consider the possibility that they might renew actions in the Coral Sea. It was a plain case of calculating the risk involved in stationing our forces. A mistake at that point would have proved costly.

Considering the chance that the enemy knew little concerning the location of those of our ships which had not participated in the Coral Sea engagement, but certainly was aware that most of our available carrier and cruiser strength was then in southern waters, it seemed reasonable to expect that the Japanese would make the most of the opportunity to strike us in the Central and/or Northern Pacific. Such an attack was likely because of the prospect of success in the immediate operation, and because if successful, the advance to Australia and the islands in the South Pacific could be accomplished in due course with comparative ease, once the enemy had cut our lines of communications.

Acting on our best estimate of the situation, our carriers and supporting vessels were recalled from the South Pacific. The *Yorktown* was patched up temporarily, and scouting and patrol lines were established well to the westward of Midway Island. Our total forces available in the Central Pacific consisted of the carriers *Enterprise, Hornet,* and *Yorktown,* seven heavy cruisers, one light cruiser, 14 destroyers, and about 20 submarines. These were divided into two task forces, one under the command of Rear Admiral (now Admiral) Raymond A. Spruance, [cruisers of this task force were commanded by Rear Admiral (now Vice Admiral) Kinkaid] and the other under the command of Rear Admiral (now Vice Admiral) Fletcher. Another flag officer, Rear Admiral W. W. Smith, was attached to the second task force. In addition, there was a Marine Corps air group based on Midway, augmented by Army bombers from Hawaii.

On the morning of June 3, enemy forces were sighted several hundred miles southwest of Midway, on an easterly course. The composition of the force sighted was not determined at that time, but it was clearly a large attack force with supporting vessels. Late in the afternoon this force was bombed by a squadron of B-17's under the command of Lt. Col. Walter C. Sweeney, Army Air Corps. While result of the attack were not definitely determined, hits on several ships were reported. On the morning of June 4, contact was made with enemy aircraft headed toward the island of Midway from the northwest, and immediately thereafter, two carriers and the enemy main body were picked up in the same vicinity. Although the enemy aircraft were not prevented from dropping their bombs on Midway, the Japanese air attack force was nevertheless subjected to heavy fire and the enemy plane losses were large. Meanwhile, Army, Navy, and Marine Corps planes from Midway attacked carriers, battleships, and other vessels, inflicting serious damage on one enemy carrier.

At this point, our own carriers took a hand in the engagement. Having been launched from a position north of Midway, a torpedo squadron from the *Hornet* (the now famous Torpedo Eight) without the protection of

fighters, and without accompanying dive bombers, attacked a force of four enemy carriers. All planes in the squadron were shot down and only one pilot survived, but the squadron made several hits on the enemy carriers. About an hour later, torpedo squadrons from the *Enterprise* and *Yorktown* attacked the same carriers, and also suffered heavy losses, but registered hits on two carriers. These attacks were followed by dive bombers from the *Enterprise* which smothered two carriers, and by more bombers from the *Yorktown* which hit a third carrier, a cruiser, and a battleship. Two carriers had been set on fire and put completely out of action. A third was damaged and was sunk later by the submarine *Nautilus.*

Planes from the only Japanese carrier remaining undamaged attacked the *Yorktown,* and although this attack force was annihilated, it succeeded in making three bomb hits. Shortly afterward, enemy torpedo planes scored two hits on the *Yorktown,* and orders were given to abandon ship. About two hours later, planes from the *Enterprise* attacked the undamaged Japanese carrier and left her a mass of flames and immediately thereafter, when a squadron from the *Hornet* arrived, the carrier was blazing so furiously that it was possible to concentrate on a nearby battleship and a cruiser, both of which were hit.

At this stage of the engagement, it was apparent that we had won control of the air and it remained for the aircraft from Midway to put on the finishing touches. Army Flying Fortresses attacked an enemy heavy cruiser and left it smoking heavily. Other planes scored hits on a battleship, a damaged carrier, and a destroyer. By the end of the day the Japanese were in full retirement.

On the morning of the 5th, aircraft from the *Enterprise* and the *Hornet* made an ineffective attack on an enemy light cruiser, but planes from Midway discovered two enemy cruisers, one of which they crippled, and scored a number of hits on them. Poor visibility on the 5th prevented further operations.

On June 6, *Hornet* planes located an enemy force consisting of two heavy cruisers and three destroyers and made hits on the two cruisers. Planes from the *Enterprise* also scored hits on those two cruisers and later in the day *Hornet* planes successfully attacked two more cruisers and a destroyer. On the same day, in an effort to save the *Yorktown,* which had been taken in tow, the destroyer *Hammann* went alongside to put on board a salvage party. While she was alongside, the *Yorktown* was struck by two torpedoes from an enemy submarine, and the *Hamman* by one. The *Hammann* sank within a few minutes and the next morning, the *Yorktown* also sank.

The Battle of Midway was the first decisive defeat suffered by the Japanese Navy in 350 years.* Furthermore, it put an end to the long period of Japanese offensive action, and restored the balance of naval power in the Pacific. The threat to Hawaii and the West Coast was automatically removed, and except for operations in the Aleutians area, where the Japanese had landed on the islands of Kiska and Attu, enemy operations were confined to the South Pacific. It was to this latter area, therefore, that we gave our greatest attention.

*The Korean Admiral Yi-sun administered a resounding defeat to the Japanese Admiral Hideyoshi (so called father of Japanese Navy) in 1592 off the Korean Coast.

Offensive-Defensive

Campaigns in the South Pacific

The Landings in the Solomons

From the outset of the war, it had been evident that the protection of our lines of communications to Australia and New Zealand represented a "must." With the advance of the Japanese in that direction, it was therefore necessary to plan and execute operations which would stop them.

Early in April, the Japanese had overrun the island of Tulagi, where (on May 4, 1942) they were attacked by our carrier-based bombers just before the Battle of the Coral Sea. In July, the enemy landed troops and laborers on Guadalcanal Island and began the construction of an airfield. As the operation of land-based planes from that point would immediately imperil our control of the New Hebrides and New Caledonia areas, the necessity of our ejecting them from those positions became increasingly apparent. Developments in New Guinea, where the enemy had begun a movement in the latter part of July, paralleling his Solomons penetrations, increased the necessity for prompt action on our part.

The counter operation—our first real offensive move in force—was planned under the direction of Vice Admiral R. L. Ghormley, who, in April, had assumed command of the South Pacific Force with headquarters at Auckland, New Zealand. Forces participating were the First Marine Division, reinforced by the Second Marine Regiment, the First Raider Battalion, and the Third Defense Battalion, supported by naval forces consisting of three major units, two of which were under the command of Vice Admiral Frank J. Fletcher, U.S.N. These were an air support force under Rear Admiral Leigh Noyes, U.S.N., consisting of three carriers, one new battleship, five heavy cruisers, one anti-aircraft light cruiser and a number of destroyers; and an amphibious force under Rear Admiral (now Vice Admiral) R. K. Turner, U.S.N., composed of six heavy cruisers (two of them Australian), one light cruiser (Australian), destroyers, and 23 transports. The third task force, under Rear Admiral (now Vice Admiral) John S. McCain, U.S.N., was composed of land-based planes of various types based in New Caledonia, the Fijis, and Samoa. Under the plan, they were to cooperate closely with the planes under the command of General MacArthur in New Guinea and Australia. Marine units were formed up in New Zealand during June and July, under the command of Major General (now Lieutenant General) A. A. Vandegrift, U.S.M.C.

After leaving New Zealand, and after effecting rendezvous with combat units, the entire invasion force conducted a realistic rehearsal en route to their objective. On the morning of August 7, the landing force, which took the enemy by surprise, made landings on Guadalcanal and Tulagi. There was little opposition initially on Guadalcanal, but on Tulagi the Japanese had constructed dugouts, and when they began heavy fire, progress was slow and costly. The enemy delivered an air counterattack in the afternoon, but it was ineffective.

By the next afternoon, our Marines were in complete control of Tulagi Island and were making satisfactory progress on Guadalcanal, where they had taken possession of the airfield. The immediate objectives of the operation had therefore been obtained, at the cost of one transport sunk, one destroyer damaged and subsequently

CHART II

THE OFFENSIVE-DEFENSIVE PHASE in the PACIFIC

1 U.S. LANDING, August 7, 1942 U. S. Marines establish foothold on Guadalcanal and Tulagi in the first major Allied offensive of the Pacific War.

2 BATTLE OF SAVO ISLAND, August 9, 1942 Japanese night attack on naval forces protecting landing. One Australian and three U. S. heavy cruisers lost, other units damaged

3 BATTLE OF THE EASTERN SOLOMONS, August 23-25, 1942 Powerful Japanese naval force is intercepted by U. S. carrier-borne aircraft Enemy breaks off action after loss of carrier support.

4 BATTLE OF CAPE ESPERANCE, October 11-12, 1942: U. S. cruisers and destroyers in a surprise night attack engage a sizeable enemy force near Guadalcanal.

5 BATTLE OF SANTA CRUZ ISLANDS, October 26, 1942. Blows are exchanged by U. S carriers and Japanese carriers operating with a powerful enemy force moving to support land operations at Guadalcanal. Two enemy carriers put out of action and four enemy air groups decimated.

6 BATTLE OF GUADALCANAL, November 13-14-15, 1942 Enemy concentrates invasion force at Rabaul U. S. naval forces covering reinforcements for troops on Guadalcanal meet and decisively defeat this force in a series of violent engagements in which heavy losses are sustained by both sides

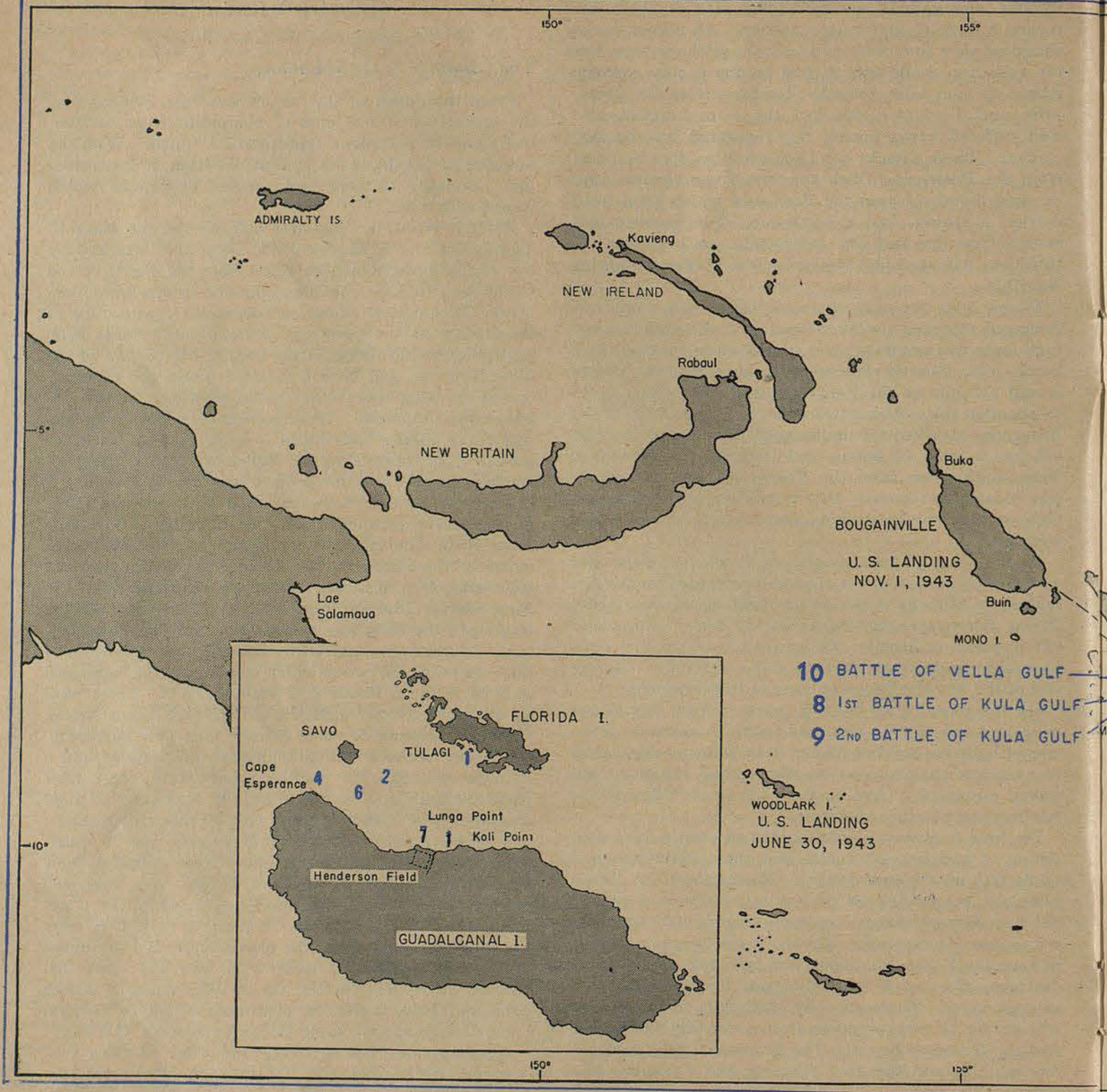
7 BATTLE OF TASSAFARONGA, November 30, 1942 A Japanese attempt to reinforce is defeated at heavy cost. NORTHAMPTON lost, three U. S. heavy cruisers severely damaged.

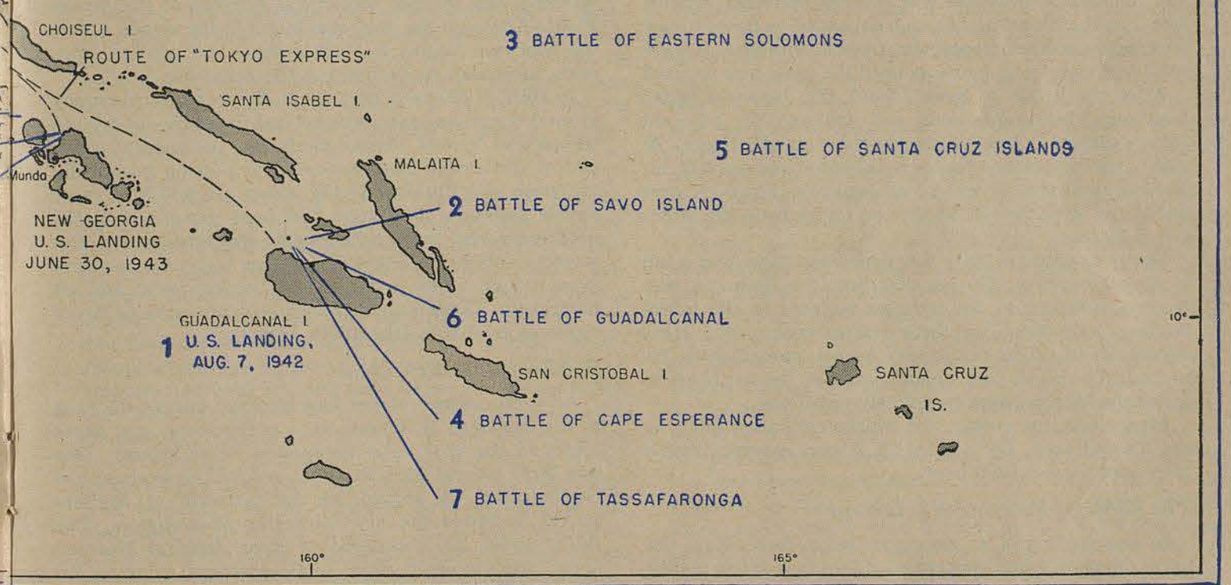
Japanese complete withdrawal, February 7-8, 1943.

8 FIRST BATTLE OF KULA GULF, July 6, 1943: U. S. cruisers and destroyers intercept the "Tokyo Express" HELENA lost

9 SECOND BATTLE OF KULA GULF, July 13, 1943 The circumstances of the engagement of July 6th are repeated. Three Allied cruisers severely damaged by torpedoes.

10 BATTLE OF VELLA GULF, August 6, 1943: Japanese destroyers escorting reinforcements are intercepted by our forces. Several enemy destroyers sunk





—Official U. S. Navy Chart

sunk, and one destroyer damaged. Plane losses amounted to 21 fighters.

Battle of Savo Island

We had repulsed air raids on the 7th and 8th with only moderate losses, but those attacks had considerably delayed the unloading of our transports and cargo vessels. Moreover, in spite of heavy plane losses inflicted on the enemy, further attacks on our vessels were a surety, perhaps by surface craft and perhaps by enemy planes based on Santa Isabel Island. At this critical time it became necessary for our carriers to withdraw from their covering position because of lack of fuel, and also because the Japanese had shown considerable air strength and were suspected of having submarines available, to which we did not care to expose our carriers.

In that situation, the cruisers of the screening forces under the command of Rear Admiral Crutchley, R. N., took up a night disposition designed to protect the area between the Guadalcanal and Florida Islands and the channel on either side of Savo Island. The northern group covering the latter area consisted of the heavy cruisers *Vincennes*, *Quincy*, and *Astoria*, screened by the destroyers *Helm* and *Wilson*. The southern group consisted of the Australian cruiser *Canberra* and the *Chicago*, screened by the *Patterson* and *Bagley*. Two destroyers, the *Ralph Talbot* and the *Blue*, were stationed not far from Savo Island. Late in the evening of August 8, a conference was held on board Rear Admiral Turner's flagship, the *McCawley*. This conference included Rear Admiral Crutchley, in the *Australia*.

A force of enemy cruisers and destroyers entered the area undetected from the northwest at about 0145 and aided by flares dropped by enemy planes opened fire on our screening groups with guns and torpedoes. The result of the surprise and of the Japanese fire, which was sufficiently effective to inflict severe damage on our vessels in a few minutes, was that there was little effective return fire. The action ceased at about 0215 at which time the Japanese force, having rounded Savo Island, left the area on a northeasterly course. During those thirty minutes the *Quincy*, *Vincennes*, *Astoria* and *Canberra* were so severely damaged that they subsequently sank, and the *Chicago*, *Ralph Talbot* and *Patterson* were damaged.

The surprise, which was the immediate cause of the defeat, was the result of a combination of circumstances. Because of the urgency of seizing and occupying Guadalcanal, planning was not up to the usual thorough standards. Certain communication failures made a bad situation worse. Fatigue was a contributing factor in the degree of alertness maintained. Generally speaking, however, we were surprised because we lacked experience. Needless to say the lessons learned were fully taken into account.

The immediate consequence of this cruiser battle was the retirement of the enemy force, without any attack being made on our transports unloading men and supplies on the beaches of Guadalcanal. The loss of the four cruisers, however, and the subsequent loss of two aircraft carriers left us inferior in strength for several months. The Japanese did not take advantage of this opportunity to engage in a fleet battle with the balance of power on their side, probably because they did not know—and we did not let them know—how severe our losses were.

The Fight for Guadalcanal

Except as it affected the security of the islands to the south, and Australia and New Zealand, the island of Guadalcanal by itself was not particularly important, but having been selected by us as the point to step in and check the advance of the enemy, it became a focal point in the fighting front established. After we had landed there, the immediate situation was that of opposing ground forces on the island, and as each depended on naval forces for supplies and reinforcements it was inevitable that there would be naval engagements until the issue was decided.

After the battle of Savo Island, the Japanese began bombing Marine positions and making the adjacent waters almost untenable during the daylight hours. At night, enemy surface forces bombarded our surface installations almost at will. The Japanese, however, were unable to bring up reserve ground forces from the Western Solomons.

So far as naval activity was concerned there was a lull of about ten days. During that time the Japanese, who reacted violently to the reverses suffered in the initial landing, collected all available reinforcements near Henderson Field. The reinforced troops immediately attacked. The result was a night battle at Tenaru River in which the Marines were completely victorious.

Meanwhile, the enemy was concentrating his forces in the Rabaul area. By August 23, it was apparent that a major action was imminent.

The Battle of the Eastern Solomons

In anticipation of an enemy move, in force, Vice Admiral Ghormley had concentrated two task forces southeast of the island of Guadalcanal. These were built around the carriers *Saratoga* and *Enterprise*, and included the battleship *North Carolina*, the cruisers *Minneapolis, Portland, New Orleans* and *Atlanta*, and 11 destroyers. On the morning of August 23, a transport group was sighted by a search plane about 250 miles north of the island.

During the night our combined force moved north and contact was made the next morning. In the afternoon of the 24th, planes from the *Saratoga* bombed an aircraft carrier and in addition damaged a cruiser and a destroyer. While these attacks were in progress, a flight of about 75 planes attacked the *Enterprise* and her escort vessels and inflicted moderately severe damage on the *Enterprise*, in spite of the intense antiaircraft fire from escorting ships, particularly the *North Carolina*. That night, Marine air attack groups from Guadalcanal attacked and damaged two more enemy destroyers, and the next morning destroyed a transport. In addition to the foregoing attacks, Army planes believed they scored a hit on a cruiser, planes from the *Saratoga* reported hits on a battleship and two cruisers, and Marine pilots reported damage to still another cruiser. As a result of the action, the Japanese were all but stripped of carrier support and broke off the fight although their powerful surface forces were still largely intact.

* * *

Following the engagement in the Eastern Solomons, no major action took place in the South Pacific area for a period of about six weeks. During those six weeks, however, the supply lines had to be kept open to Guadalcanal. Japanese submarines and air forces were active in the vicinity, and there were numerous scattered actions, which cost us the carrier *Wasp*, the destroyers *O'Brien, Blue, Colhoun, Gregory*, and *Little*, and several other ships damaged. Also the Japanese made almost nightly runs of what came to be termed the "Tokio express" from the Buin-Faisi area to Guadalcanal, and enemy air forces bombed Marine positions by day and by night.

By September 13, enemy ground troops had been reinforced, and another attack was directed at Henderson Field. Although the issue was in doubt for several hours, the Marines, thanks to replacements and artillery support, succeeded in decimating the attacking force.

In spite of offensive operations directed against enemy ground troops and supporting naval forces by our ground troops and by our Marine air forces, the enemy by the end of September had succeeded in putting practically an entire new division on the island. In addition, more strong Japanese fleet units had been assembled to the northward, and the situation again was threatening. Reinforcements to the Marines had now become a necessity even though made in the face of enemy naval and air superiority. Contemplated reinforcements included Army elements available (the 164th Infantry).

Battle of Cape Esperance

After our carrier planes had attacked enemy shipping in the northern Solomons as a preliminary, our naval forces in the area were disposed in three groups. One was built around the carrier *Hornet*, to the westward of Guadalcanal. A second, to the eastward of Malaita Island, included the new battleship *Washington*. The third, under the command of Rear Admiral Norman Scott, was stationed south of Guadalcanal pending developments. Rear Admiral Scott's force consisted of the heavy cruisers *San Francisco, Salt Lake City*, the light cruisers *Boise* and *Helena*, and the destroyers *Buchanan, Duncan, Farenholt, Laffey* and *McCalla*.

On the afternoon of October 11, enemy forces were reported in "the slot" between Choiseul Island and the New Georgia group, headed for Guadalcanal. Simultaneously, Henderson Field on Guadalcanal was attacked by about 75 enemy aircraft. Rear Admiral Scott therefore headed north with his force, which rounded the northwestern end of the island about two hours before midnight. Just before midnight contact was made, and our force opened fire.

Taken by surprise, the enemy did not return the fire for nearly ten minutes, during which time our cruisers made the most of the opportunity and delivered a devastating fire on the enemy force. In less than five minutes four enemy targets had disappeared, two more were put out of action by the *Helena* and *Boise,* and the *Farenholt, Duncan,* and *Buchanan* each scored torpedo hits on enemy cruisers. In addition, the *Buchanan* wrecked an enemy destroyer with gunfire and set an unidentified enemy ship on fire.

When the Japanese opened fire, the *Boise* found herself engaged with a heavy cruiser, and although the enemy cruiser soon burst into flames, the *Boise* was damaged. During this exchange, the *Salt Lake City* scored hits on an enemy auxiliary and destroyer. At this stage of the battle, Rear Admiral Scott ceased firing to rectify his formation, and as most of the enemy targets had disappeared there followed a short lull.

The *Salt Lake City,* the *Helena,* and the *San Francisco,* reopened fire with telling effect. The *Boise* damage (fire) had been brought under control, and she reentered the action, engaging a heavy cruiser and an unidentified ship, but upon receiving further damage she was forced to retire. The *Salt Lake City,* meanwhile, had covered the *Boise,* and assisted by the *San Francisco,* concentrated her fire on an enemy heavy cruiser until the action was broken off by the enemy.

During the engagement the *Duncan* was so badly damaged that she had to be abandoned, and the *Farenholt* was damaged. The *San Francisco* had been hit, and as previously stated, the *Boise* was severely damaged. Even so, the engagement was a victory for us, attributable in part to surprise and confusion, and in part to the accuracy of our gunfire.

* * *

During the succeeding days, in spite of the reverses suffered in the Battle of Cape Esperence, the Japanese continued their attacks on Guadalcanal. Notwithstanding heavy losses inflicted on them, they succeeded in getting a number of transports through, and landed nearly another entire division. Our air attacks, however, left that division with little equipment, few rations, and inadequate artillery support. Meanwhile, support for our Marines had been arriving, and General Vandegrift had been able to improve his position. He now had better air support, made more effective by new landing strips constructed by the Seabees, but as shelling by enemy units continued, he was still in need of strong naval support, especially as the Japanese gave no signs of discontinuing their efforts to launch a full-scale attack.

Enemy submarines and aircraft renewed their efforts to interrupt our communications, and it became increasingly clear that the next Japanese move would be supported by powerful surface and air units. The destroyer *Meredith* was sunk on October 15, while engaged in keeping our line of communications open and a few days later the heavy cruiser *Chester* was damaged by enemy submarines, but our naval forces were reinforced by the new battleship *South Dakota,* and the damaged *Enterprise* was again ready for duty. Our naval forces were now divided into two parts, one being the *Washington* group under the command of Rear Admiral W. A. Lee, Jr. and the other consisting of two carriers, one battleship, three heavy cruisers, three anti-aircraft light cruisers and 14 destroyers under the command of Rear Admiral (now Vice Admiral) T. C. Kinkaid. The former group, reinforced by the ships surviving the Battle of Cape Esperance remained in the vicinity of Guadalcanal. The other moved northwestward in an effort to engage the enemy.

On the night of October 23-24, the Japanese began a land assault at the south of the Matanikau River, and although thrown back with heavy losses continued their attack the following day. On the 25th, enemy ground forces were supported by naval gunfire from two Japanese cruisers and four destroyers which slipped into Savo Sound, and on the night of October 25-26, the enemy ground offensive reached its peak. At this point the Japanese moved their naval units in force toward Guadalcanal.

The Battle of Santa Cruz Island

Early in the morning of October 26, our patrol planes made contact with three enemy forces. One of these forces included a carrier. Another consisted of two battleships, one heavy cruiser and seven destroyers. The third, which included two carriers, was attacked by the patrolling planes, and hits were scored on one of the carriers.

Simultaneously, our carriers launched three attack waves, one from the *Enterprise* and two from the *Hornet.* While en route, the *Enterprise* attack group encountered Japanese planes. After a short engagement during which some of our planes were shot down, it located the enemy force containing the battleships and made bomb hits on one of them. The first *Hornet* wave reached the enemy carrier group without interference and reported at least four 1000-pound bomb hits on a carrier. Other *Hornet* aircraft in that group registered three torpedo hits on a heavy cruiser. The second *Hornet* group discovered an enemy cruiser force and succeeded in bombing two heavy cruisers and a destroyer.

While our aircraft were delivering their attacks, our own carriers were being attacked by enemy carrier aircraft. The *Hornet* suffered one bomb hit and was set on fire by an enemy bomber which purposely dived into the carrier's stack. Blazing gasoline was spread over the signal bridge, which was further damaged by one of the bombs carried by the plane. Resulting fires were extinguished in about two hours, but while the dive bombing attack was being delivered, a torpedo attack developed and the *Hornet* received two hits which disrupted her power and communications. The torpedo hits were followed by three more bomb hits and another suicide plane crash which started more fires. Of 27 attacking aircraft, 20 were shot down by anti-aircraft fire, but the attack, which lasted 11 minutes, left the *Hornet* dead in the water with many fires on board and with a decided list. Our wounded personnel were promptly removed by destroyers, the fires were extinguished in about a half hour, and the *Hornet* was taken in tow by the *Northampton,* but in the afternoon she was again attacked by torpedoes and dive bombers and had to be abandoned and sunk by our own forces.

Just before noon the *Enterprise* was subjected to an attack by 24 enemy dive bombers, of which seven were shot down by anti-aircraft fire in which the *South Dakota* participated. Shortly after, she weathered two attacks by torpedo planes and one more attack from dive bombers.

The first dive bombing attack resulted in three hits on the *Enterprise*. Of the torpedo planes making the first attack, one dived on to the destroyer *Smith* setting her on fire forward and exploding the plane's torpedo. By energetic measures, however, the *Smith* brought the flames under control and was able to make port. During this action dive bombers scored a hit on the *South Dakota*, wounding her commanding officer Captain (now Rear Admiral) T. L. Gatch, and inflicted considerable damage on the light cruiser *San Juan*.

There were no further attacks and the two task forces were ordered to retire independently. During the night they were pursued by Japanese surface units, which turned back when it became clear that the enemy attacks were not succeeding.

Enemy planes estimated to have taken part in the attacks on the *Hornet* and *Enterprise* numbered between 170 and 180. Of that number 56 were shot down by anti-aircraft fire and about the same number by our own planes. Our own losses were the *Hornet*, the destroyer *Porter*, which was torpedoed while rescuing personnel of one of our planes, and 74 aircraft. We sank no enemy vessels in the engagement, and our carrier strength in the Pacific was now dangerously low, but there were partial compensations. Two enemy carriers had been put out of action and four Japanese air groups had been cut to pieces.

Battle of Guadalcanal

For a brief period on October 26, following the all-out enemy attack, the question of whether or not we could retain Henderson Field hung in the balance. A counter-attack by Marines and by Army troops, however, restored our lines—the enemy lost 2200 men killed in that attack—and General Vandegrift took the offensive on both flanks. Except for a minor setback the following day, this constituted the last serious threat by enemy land forces on Guadalcanal.

The enemy still exercised control over the waters adjacent to Guadalcanal, and for the next two weeks our forces were engaged in scattered actions calculated to interfere with that control. Our submarines attacked Japanese supply lines, inflicting considerable damage, and on the morning of October 30, our light cruiser *Atlanta* and four destroyers bombarded enemy positions near Point Cruz. On the next day the Marines, supported by naval gunfire, crossed the Matanikau River and by November 3, had advanced beyond Point Cruz. On the evening of November 2, the Japanese had landed about 1500 men and some artillery east of Koli Point but were unable to support that unit, and after our naval forces bombarded the beach heads, destroying stores and ammunition, the force was driven into the jungle and eventually exterminated. On November 7, our aircraft from Henderson Field inflicted heavy damage on an enemy light cruiser and two destroyers and shot down a number of enemy planes.

By this time it must have been apparent to the Japanese that their position was not being sufficiently improved by their continued night landings from surface craft dispatched from neighboring islands (our PT boats based at Tulagi attacked them repeatedly, sinking a destroyer and many landing craft). As evidence of that realization they again began to concentrate surface forces in the Rabaul-Buin area and by November 12, were estimated to be ready with two carriers, four battleships, five heavy cruisers, about 30 destroyers and enough transports for a decisive invasion attempt. To oppose this force we had two new battleships, four heavy cruisers, one light cruiser, three anti-aircraft light cruisers, and 22 destroyers. The damaged *Enterprise* was not ready for action and we were outnumbered in land-based aircraft.

Our troops on Guadalcanal had been reinforced on November 6, but more supplies and reinforcements were vitally needed. Under these circumstances, Vice Admiral (now Admiral) William F. Halsey, Jr., who on October 18, had replaced Vice Admiral Ghormley as Commander, South Pacific Force, realized that we would have to cover our supply lines and at the same time counter the expected enemy offensive, otherwise our position in the South Pacific would be seriously jeopardized. Following this general plan, Rear Admiral (now Vice Admiral) R. K. Turner was placed in charge of the supply operation and Rear Admirals D. J. Callaghan and Norman Scott assigned to command the covering forces. In addition, Rear Admiral Turner was to be supported by a task force commanded by Rear Admiral Kinkaid, built around the damaged *Enterprise* and the battleships *Washington* and *South Dakota*.

On the morning of November 11, three of our cargo vessels escorted by Rear Admiral Scott's task force reached Guadalcanal and began unloading off Lunga Point. Loading operations were interrupted by an air attack about four hours later which damaged the transport *Zeilin* and by a second air attack two hours after that. Our protecting aircraft and anti-aircraft batteries took a heavy toll of both attacking air groups. We lost a total of seven planes. Our escorts, under Rear Admiral Scott, retired to Indispensable Strait for the night.

On the morning of the 12th, the second contingent of ships with supplies and reinforcements, under Rear Admirals Turner and Callaghan, arrived and joined forces with Rear Admiral Scott. Unloading was immediately begun. As on the previous day, the enemy delivered an air attack in the afternoon but so effective was our air opposition that only one of about 25 bombers and torpedo planes escaped. One damaged enemy plane, however, dived onto the *San Francisco*, starting a number of minor fires and killing 30 men.

Meanwhile, our scouts had located strong enemy forces bearing down on Guadalcanal from the northwest, disposed in three groups. To meet that force Rear Admiral Turner assigned two heavy cruisers, one light cruiser, two anti-aircraft light cruisers and eight destroyers to Rear Admiral Callaghan and withdrew with the transports and cargo vessels, escorted by three destroyers. The plan was for Rear Admiral Callaghan to fight a delaying action, so that the battleship-carrier force under Rear Admiral Kinkaid would have time to intercept the Japanese landing forces believed to be en route.

After Rear Admiral Callaghan's force had escorted the transport group clear of the area, it reentered the sound shortly after midnight through Lengo Channel for the purpose of searching the vicinity of Savo Island. Near Lunga Point three groups of enemy ships were picked up to the northwestward and shortly afterward a fourth group to the northward. Our own force was a single column, with four destroyers in the van, five cruis-

ers in the center, and four destroyers in the rear. In that situation—which was by no means as clear then as it is now, it being a very dark night with no moon—accurate identification of enemy ships was almost impossible, and in the darkness the forces nearly collided with each other before a gun was fired:

The action began when the Japanese illuminated our ships with searchlights and both sides opened fire at close range. Immediate results of the exchanges of gunfire were favorable to us. An enemy ship in the right hand group blew up within a minute under the fire from the *San Francisco* and other ships, and on the other side, two enemy cruisers burst into flames. Other vessels were set on fire, and the *Atlanta* believed she sank one of a division of Japanese destroyers crossing ahead of her. Simultaneously, the *Atlanta,* after suffering some hits herself, took a light cruiser under fire. At this point the *Atlanta* was struck by a torpedo and with all power lost, her rudder jammed. While she was circling, an enemy heavy cruiser battered her heavily, starting intense fires and killing Rear Admiral Scott and many other personnel on board.

A few minutes later the *San Francisco* found herself engaged with an enemy battleship in the enemy center group. In addition to the fire of the *San Francisco,* the battleship was attacked by the *Laffey,* and the *Cushing,* although badly damaged, scored torpedo hits on her. The *Laffey,* during this part of the action, was hit by a torpedo and later blew up. The *Cushing* was put out of action by gunfire.

The *Barton* was also torpedoed and sank almost immediately, but the *O'Bannon* closed with the battleship and made more torpedo hits. By this time, the *Portland* had wrecked a destroyer, but had been torpedoed herself, and the *Juneau,* having lost all fire control, retired from the action.

The *San Francisco,* assisted by the *Portland* (which responded to Rear Admiral Callaghan's radio, "We want the big ones"), concentrated fire on the battleship, the *Helena,* meanwhile, engaging an enemy cruiser firing at the *San Francisco.* At this point, a salvo from the enemy battleship smashed the *San Francisco*'s bridge, killing Rear Admiral Callaghan, Captain Cassin Young, commanding officer of the *San Francisco,* and many other officers and men; but the *San Francisco* continued to fire, and before she was put out of action she had also accounted for a destroyer.

To recapitulate the damages sustained in the first 15 minutes of the action:

The *Cushing* had been put out of action by gunfire and was dead in the water; the *Laffey* had sunk, the *Sterrett* and *O'Bannon* had been damaged; the *Atlanta* was burning, and the *San Francisco* and *Portland* were badly holed. The *Juneau* had been forced to leave the action, and the *Barton* had blown up. The *Helena* had suffered minor damage. Only the *Aaron Ward, Monssen* and *Fletcher* remained undamaged.

The three undamaged destroyers continued the attack with gunfire and torpedoes, each scoring hits on cruisers and destroyers, the *Monssen* in addition having scored torpedo hits on the damaged enemy battleship. In delivering those attacks, however, the *Monssen* suffered damage which forced her to be abandoned, and the *Sterrett,* also damaged by gunfire, had to retire. The action, which lasted 24 minutes, and which was one of the most furious sea battles ever fought, was terminated when the *Fletcher* torpedoed an enemy heavy cruiser. During the last few minutes of the action the scattered Japanese forces had been firing at each other.

After the firing ceased, the *Helena, San Francisco,* and *Fletcher* joined up, proceeded out of the bay, and later fell in with the *Juneau, O'Bannon,* and *Sterrett.* At daylight the next morning the *Portland* observed a Japanese battleship circling slowly northwest of Savo Island, with a cruiser standing by. The *Atlanta* was near the beach, but her fires had been extinguished. The *Cushing* and *Monssen* were on fire, and the *Aaron Ward* was dead in the water. Observing an enemy destroyer south of Savo Island, the *Portland,* still turning in circles, sank it. Our planes interrupted the Japanese battleship firing at the *Aaron Ward.*

The *Cushing* and *Monssen* finally went down, and as the conditions on board the *Atlanta* were impossible to control she had to be sunk on the afternoon of the 13th.

Just before noon on the 13th, the damaged *Juneau* was attacked by an enemy submarine and sank almost immediately with heavy personnel losses.

On the morning of November 13, the *Enterprise* launched a flight of torpedo planes which found the Japanese battleship and fired three torpedoes into it. Other attacks on the battleship were made by Army planes and other land-based aircraft from Guadalcanal and Espiritu Santo, and sometime during the evening the battleship sank.

On the morning of the 14th, a strong enemy force of cruisers and destroyers shelled Henderson Field. A few planes were destroyed, but the field was not damaged, and the bombardment was broken off when the force was attacked by our PT boats. Subsequently, planes from Henderson Field (including *Enterprise* planes there) attacked and hit two heavy cruisers, one of which was later subjected to a second attack by *Enterprise* planes. Other planes hit a light cruiser, and still another attack group from the *Enterprise* scored hits on a second light cruiser.

As anticipated, an enemy transport force, preceded by a heavy advance guard of battleships, cruisers and destroyers, was discovered north of Guadalcanal. This obviously, was the main invasion force, and was escorted by fighter planes. Throughout the 14th, this transport group was subjected to heavy air attack by our forces, which resulted in the destruction of six transports, the probable destruction of two more, and the damaging of four. The four damaged vessels continued to Guadalcanal and beached themselves on Cape Esperance that evening. Our losses in these attacks were slight.

Rear Admiral W. A. Lee, Jr., with the *Washington, South Dakota,* and *Enterprise* had been unable to reach the scene of the action before early evening on the 14th. Upon arrival he was ordered to conduct a search, his objective being to intercept and destroy enemy bombardment forces and the transport force itself.

Shortly after midnight a Japanese force was reported north of Savo Island, headed west. Contact was made by the *Washington* which immediately opened fire on the leading target. The *South Dakota* also opened fire, selecting the third ship as her target. Both targets disappeared and were presumed sunk. Simultaneously, four of our destroyers, which were leading the battleships, attacked an enemy group of six to ten ships, which also were taken under fire by the secondary batteries of our battleships.

During this part of the action, the *Preston* was sunk by gunfire, the *Benham* was damaged by a torpedo, and the *Walke* was hit by both torpedoes and gunfire. The *Walke* was abandoned and sank in a few minutes. The remaining destroyer, the *Gwin,* was damaged and forced to retire.

At this stage of the action all of our destroyers had been eliminated but neither the *Washington* nor the *South Dakota* had been hit. The *Washington* soon located new targets, one of which was a battleship, and immediately opened fire. The *South Dakota* fired on an enemy ship which had turned on her searchlights. The enemy in returning the fire, concentrated on the *South Dakota.* The result of this exchange was that the *South Dakota* shot out all lights, and apparently sank one of the illuminating vessels, but was herself hit, suffering considerable damage to her upper works. The *Washington* continued to fire at the battleship, and after setting her on fire and after inflicting damage on other ships, forced the enemy to retire. The enemy battleship is believed to have been sunk in this action.

The action having been broken off, and the *South Dakota* and *Washington* having become separated, both ships retired, and joined up the next morning. At daylight on November 15, the four Japanese vessels which had beached themselves on Guadalcanal were bombed by aircraft from Henderson Field, and shelled by Marine artillery. The destroyer *Meade,* which now exercised complete control in the area, all by herself, then completed the destruction of the beached ships by leisurely bombardment. The three day fight ended with an air engagement between *Enterprise* fighters from Henderson Field and a flight of about 12 Zeros.

The Battle of Guadalcanal, in spite of heavy losses we sustained, was a decisive victory for us, and our position in the Southern Solomons was not threatened again seriously by the Japanese. Except for the "Tokio express" which, from time to time succeeded in landing small quantities of supplies and reinforcements, control of the sea and air in the Southern Solomons passed to the United States.

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After the Battle of Guadalcanal, our forces on the island retained the offensive, hunting down the Japanese in the jungles and gradually driving them westward. The First Marine Division was gradually withdrawn and replaced by Army troops, and in December General Vandegrift turned over command to Major General A. M. Patch, U. S. Army.

At the end of November, however, another powerful Japanese attempt to relieve Guadalcanal was suspected, and in order to counter such a move, Admiral Halsey placed a force consisting of the heavy cruisers *Minneapolis, New Orleans, Northampton* and *Pensacola,* the light cruiser *Honolulu,* and four destroyers under the command of Rear Admiral C. H. Wright.

The Battle of Tassafaronga (Lunga Point)

On November 30, Rear Admiral Wright reached the entrance to Savo Sound, where he was joined by two more destroyers. Late that night, while crossing the sound, his force made contact with seven enemy ships, and as the range closed, the destroyers in the van opened fire with torpedoes. Shortly afterward all ships were directed to open fire.

Immediate results of the fire appeared decidedly favorable but because of the visibility we were unable to get a clear picture of the enemy formation, and there was a temporary lull in the action.

The *Minneapolis* and *New Orleans* soon engaged new targets, one of which blew up. At this time, however, both the *Minneapolis* and *New Orleans* were struck by torpedoes and a few minutes later the *Pensacola* and *Northampton* were also torpedoed, the latter being so badly damaged that she had to be abandoned. Undamaged ships undertook to close with the enemy but were unable to regain contact.

The effect of this engagement was to break up a Japanese reinforcing attempt, but only at severe cost. Our three damaged cruisers, however, reached port safely and were repaired and refitted.

The Evacuation of Guadalcanal

With the exception of encounters with the "Tokio express," surface naval action in the Guadalcanal area ended with the Battle of Tassafaronga (Lunga Point).

On land, our forces gradually compressed and weakened the enemy, and by January the Japanese ground forces on the island, which had not been adequately supported, occupied a most unfavorable position. Under these circumstances, and bearing in mind the events of the past few weeks, it was reasonable to expect another effort on the part of the enemy to retake Guadalcanal. The Japanese had had time to repair and reorganize their surface forces and to replace their carrier air groups, and therefore when there were heavy increases in shipping at Buin and Rabaul late in January, and a stepping up of air activity, it appeared that they were ready to move. Ships available to Admiral Halsey to prevent such a move now consisted of three new battleships, four old battleships, two carriers, three auxiliary carriers, three heavy cruisers, seven light cruisers, two anti-aircraft light cruisers and numerous destroyers—a force considerably stronger than any we had had in the area up to that time.

On January 27, a convoy left New Caledonia for Guadalcanal. On January 29, the heavy cruiser *Chicago* (a unit of the covering force for the convoy) was torpedoed and badly damaged by enemy planes in a night attack, and the next afternoon she was again attacked by planes, the damage inflicted being so severe that she sank immediately after being abandoned. In an effort to cover the *Chicago,* the destroyer *Lavallette* was also torpedoed.

The convoy reached Guadalcanal without damage, unloaded, and departed on the 31st. On the following day Army troops were landed behind enemy ground forces at Vershue. While engaged in covering the landing craft used in this operation two destroyers, the *Nicholas* and the *DeHaven* were attacked by enemy dive bombers, and the *DeHaven* was sunk.

In anticipation of another attack on the Island our forces were disposed south of Guadalcanal, and aircraft dispatched by Admiral Halsey and General MacArthur carried out daily attacks on enemy air fields in the Bismarcks and Northern Solomons. The first week in February the "Tokio expresses" were increased in size, and it soon became apparent that the enemy was evacuating what little strength he had left on the island. On the night of February 7-8, 1943, exactly six months after our landing in the Solomons, the enemy completed his with-

drawal. On February 8, our troops on Guadalcanal, which had been closing in on the enemy from both sides, joined forces, and the first Solomons campaign, except for incidental mopping up, ended.

New Georgia and Bougainville Campaigns
(Includes New Guinea Operations)

The evacuation of Guadalcanal on February 8, 1943, was by no means an indication that the Japanese were retiring from the Solomon Islands. On the contrary, there was ample evidence that they would make every effort to retain their positions in the Solomons and in New Guinea. Conversely, having pushed them out of the Southern Solomons area our next undertaking was to push them out of the Northern Solomons.

The most important enemy position in the Northern Solomons was the airfield they had constructed on Munda Point on the southwest coast of New Georgia Island, but construction of a secondary base near the mouth of the Vila River on the southern tip of Kolombangara Island had begun in the latter part of December. These two airfields constituted a threat to our position on Guadalcanal, about 200 miles away, and were therefore repeatedly attacked by aircraft from Guadalcanal during January, February, and March. In addition, our surface forces conducted a series of bombardments of those positions. Munda was bombarded on the night of January 4, by a task group of cruisers and destroyers. The Vila-Stanmore District of Kolombangara Island was shelled on the night of January 23-24. On the nights of March 5-6, and May 12-13, both airfields were bombarded simultaneously. Neither the air attacks nor the bombardments were successful in putting the airfields out of commission for more than a day or two at a time.

On February 21, our forces made landings in the Russell Islands, 60 miles northwest of Guadalcanal, and immediately began the construction of strong defenses.

On March 1, in an attempt to reinforce New Guinea, the Japanese sent two convoys totalling 21 vessels through the Bismarck Sea. Both convoys were discovered and were almost completely destroyed by U. S. Army and Allied aircraft in a three day running attack.

Extensive preparations were now being made for the invasion of New Georgia, and although there were no noteworthy naval engagements for some time, serial operations were intensified throughout the South Pacific area. Japanese raids were frequent and heavy even though carried out at severe cost to the enemy. During this period of stepped up air operations, our advance base in the Russell Islands was in constant use by our planes.

On June 16, one of the most furious air battles of the Pacific war was fought over Guadalcanal. A force of enemy aircraft estimated at 60 bombers and 60 fighters was met by slightly more than 100 U. S. fighters manned by Army, Marine Corps, and Navy pilots. As a result of this encounter 107 enemy planes were shot down at a cost of six United States fighters lost, one landing ship (tank) and one cargo vessel damaged.

On the night of June 20, as a preliminary to the invasion of New Georgia, a task group of cruisers and destroyers under the command of Rear Admiral A. S. Merrill bombarded Vila-Stanmore and the Buin-Shortland area near the southeast end of Bougainville Island. After the operation was underway, both Munda and Vila airfields were repeatedly bombed.

On June 30, surprise landings were virtually unopposed in the Woodlark and Trobriand Island groups between the Solomons and New Guinea, and at Nassau Bay on New Guinea. On the same day landings were made simultaneously by the Army at Rendova Harbor and by marines at Viru Harbor. Two groups of destroyers covered the landing at Rendova, and effectually silenced enemy land batteries on Munda Point. Enemy aircraft attacking our transports and destroyers were beaten off by our protecting fighters or shot down by ships' anti-aircraft batteries, but not until they had succeeded in torpedoing and sinking the transport *McCawley*.

On July 2 and 3, landings were made on New Georgia and at Vanganu Island to the southeast of New Georgia.

During the night of July 4-5 a task group of U. S. cruisers and destroyers bombarded enemy positions and gun installations on the islands of Kolombangara and New Georgia, in order to support landings at Rice Anchorage. During this bombardment the destroyer *Strong* was sunk by a combination of torpedo hits and gunfire from the shore batteries. Immediately after the bombardment more landings were effected for the purpose of seizing the islands of Enogai and Bairoko.

First Battle of Kula Gulf

As the "Tokio express" was making nightly runs through Blackett Strait and Kula Gulf to supply and reinforce the Japanese at Vila and elsewhere, an American task force of cruisers and destroyers under the command of Rear Admiral W. L. Ainsworth, U. S. Navy, was dispatched to intercept the enemy. Early in the morning of July 6, contact with two enemy groups was made in Kula Gulf. Our forces opened fire with devastating effect on the first enemy group and subsequently took enemy ships in the second group under an equally effective fire. Enemy fire consisted chiefly of torpedoes. While the amount of damage inflicted on the enemy could not be accurately determined, it is probable that two Japanese destroyers were sunk in this action.

During the action the cruiser *Helena* was torpedoed and sunk. Some of her personnel were rescued on the spot, and others made their way to Vella Lavella Island where they were later rescued.

Second Battle of Kula Gulf

During the second week of the New Georgia campaign our ground forces consolidated their positions at Rendova, Rice Anchorage, Viru, and began to close in on Munda. Meanwhile, the Navy continued to protect American ground troops and to prevent the enemy from reinforcing his Munda garrison.

On July 12, another task group under Rear Admiral Ainsworth again intercepted the "Tokio express." As a result of the engagement which followed (on the 13th)—the enemy was again disposed in two groups—the first enemy group was badly shot up, and one cruiser was probably sunk. The second, however, inflicted considerable damage on our forces—the cruisers *St. Louis* and *Honolulu* were damaged by torpedoes, and the destroyer *Gwin* was set on fire and had to be sunk. The New Zealand cruiser *Leander* suffered a torpedo hit while engaged with the first enemy group.

The two engagements in Kula Gulf were costly, but they removed a threat of naval action by the enemy which might have jeopardized our landings on the north coast

of New Georgia. Furthermore, they effectively prevented the Japanese from using the Kula Gulf route to supply and reinforce their garrisons at Vila and Munda.

* * *

Our ground troops on New Georgia slowly converged on Munda, which was also subjected to bombardments from the sea and air. Other air attacks were delivered by Allied airplanes at Ballale, at Vila, at Vovine Cove, at Buin, at Kahili airdrome and at Shortland Harbor. The biggest single attack consisted of the dropping of 186 tons of bombs on Munda on July 25. During the 37 days of the Munda campaign our planes destroyed an estimated 350 Japanese aircraft at a cost of 93.

Munda airfield was captured on August 5, almost exactly one year after the first landing on Guadalcanal, and six weeks after New Georgia was invaded. The fall of Munda climaxed the Central Solomons campaign, and Bairoko Harbor, eight miles to the northward, was the last remaining Japanese strong point on New Georgia Island. Vila, on the southern tip of Kolombangara Island, was virtually neutralized as soon as the Seabees and Army engineers rebuilt the Munda air strip.

The Battle of Vella Gulf

Our rapid consolidation of our control over the sea routes and the heavy ship losses sustained by the enemy during June and July made it necessary for the Japanese to support their forces at Kolombangara by barge traffic moving at night close to the coast of Vella Lavella. As our PT boats inflicted considerable damage on enemy barges and landing craft in that area, the Japanese, on August 6, 1943, undertook to send equipment and troops, escorted by a cruiser and three destroyers, into Vila Gulf between Vella Lavella and Kolombangara Islands. This operation which was calculated to support enemy forces at Vila, led to the third surface action in the area within a month. A task group of American destroyers commanded by Commander Frederick Moosbrugger took the enemy force by surprise shortly before midnight. In an engagement lasting about 45 minutes, the three Japanese destroyers were believed sunk. Our forces suffered no damage.

Invasion of Vella Lavella

Vella Lavella Island, about 14 miles northwest of Kolombangara, was selected as the next objective in the Central Solomons campaign. Although the island was not occupied by the Japanese, and no opposition in force was expected, preparations were made to resist air attacks from enemy airfields to the north.

On August 15, three transport groups succeeded in making landings as planned. The anticipated enemy air attacks materialized, but did not seriously interfere with the landings, as our own air support broke up their attacks.

Action of August 17-18

On August 17, four enemy destroyers and a number of barges were reported en route from Bougainville on a southeasterly course. Four of our destroyers under the command of Captain T. J. Ryan, Jr., intercepted and attacked the enemy force north of Vella Gulf, at night. Our forces scored heavily with gunfire on enemy destroyers and barges, whereupon the enemy force broke off the action. Our destroyers sustained no losses.

The campaign on New Georgia ended successfully with the occupation of Bairoko Harbor on August 25. The Japanese lost heavily in attempting to evacuate personnel across Kula Gulf to Vila, when PT boats attacked and sank numerous barges filled with enemy troops. As a result of the occupation of Bairoko, Kolombangara Island, which was still occupied by a Japanese garrison, was now between our forces controlling New Georgia to the southeast and those occupying Vella Lavella to the northwest. Positions secured on Arundel, which was occupied on August 27, made it possible to bring artillery to bear on the Japanese installations at Vila.

With his air power weakened, the enemy decided to evacuate Vila during the month of September. Again barges were used for the evacuation, with costly results to the enemy. Toward the end of the month of September our destroyers conducted a particularly damaging attack on barges, which up to that time had been attacked chiefly by aircraft and PT boats. Enemy personnel losses during the evacuation of Kolombangara were undoubtedly heavy, and it was assumed that these heavy losses were the cause of increased activity to the northward shortly thereafter, particularly in the vicinity of Bougainville.

Action of October 6

On the night of October 6, a task group consisting of three destroyers, *Chevalier, Selfridge,* and *O'Bannon,* commanded by Captain F. R. Walker, U. S. Navy, sighted a superior force of enemy ships south of Choiseul. The enemy was disposed in two groups, one of which appeared to consist of a light cruiser and four destroyers, the other of four destroyers.

Our destroyers, in spite of their being outnumbered, closed in and attacked with gunfire and torpedoes. The result was the repulse of a superior force and the inflicting of considerable damage, at the cost, however, of the *Chevalier;* which was torpedoed and sunk.

* * *

By October 6, the enemy completed evacuating his troops from Kolombangara and Vella Lavella Islands, and the Central Solomons campaign ended.

Bougainille Campaign

Attacks on Bougainville and the small islands to the north and south of it began about three weeks after the evacuation of Kolombangara, our air forces meanwhile having softened up the airfields of Kahili, Ballale, and Karu by daily attacks.

On October 26-27 Mono and Stirling in the Treasury Islands were invaded and occupied, on October 28, a landing was made on Choiseul Island, and on November 1, landings were made on Bougainville Island. The landings on Mono Island were preceded by bombardments by a task force commanded by Rear Admiral Wilkinson. Another task force under Rear Admiral Merrill bombarded enemy positions on Bougainville at Buka and Bonis immediately preceding our landing. Rear Admiral Merrill's force then proceeded to the Shortland Islands off the southern coast of Bougainville and delivered another bombardment on Morgusaia Island.

In the meantime a landing force of marines under the command of Lt. General Vandegrift (who had returned to the area following the death of Major General Barrett) landed at Empress Augusta Bay, about midway up the west coast of the island of Bougainville.

Action of November 2

Shortly before noon on November 1, an enemy task force of four cruisers and eight destroyers was observed at the southern end of St. George's Channel but an attempt by Rear Admiral Merrill's force to intercept was not successful as the enemy retired before action could be joined. On the following morning, however, a Japanese force consisting of three groups of four ships each was picked up and attacked. After having suffered considerable damage, the enemy again retired. We lost no ships and sustained relatively light damage in this engagement.

The next day our ships, which had retired to Empress Augusta Bay, were attacked by enemy aircraft but suffered no appreciable damage.

* * *

Army troops reinforced the marines at Empress Augusta Bay on November 8, and after consolidating our beach heads, took the offensive against enemy troops on the Island. On November 8, the enemy delivered an air attack on a force of our light cruisers and destroyers under the command of Rear Admiral L. T. DuBose. The attack was not successful, in that we were able to protect our transports from enemy attacks while the transports were retiring from Bougainville.

On the night of November 12-13, while engaged in covering transports en route to Torokina Point, Admiral Merrill's task force was attacked by enemy forces.

On November 17, Japanese planes attacking another of our echelons bound to Torokina succeeded in sinking the destroyer transport *McKean*.

Action of November 25

On November 25, four of our destroyers patrolling the area between Buka and Cape St. George on the southern tip of New Ireland, attacked a superior enemy force with torpedoes and gunfire, inflicting considerable damage on the enemy. None of our ships was damaged.

* * *

During the month of December, American land-based aircraft continued vigorous operations against Japanese positions throughout the Northern Solomons, with the result that enemy airfields in the Buka-Bonis areas completely neutralized. Meanwhile, our troops and supplies continued to move unopposed into the base at Cape Torokina on Empress Augusta Bay.

On December 20, a force of American destroyers bombarded a Japanese concentration on Northeastern Bougainville and on the 23rd, a task force of cruisers and destroyers bombarded the Buka-Bonis area. On the 27th, another force shelled the Kieta area.

Operations in New Guinea

Concurrently with the attacks on Japanese positions in the central Solomons, a powerful attack had been launched in the New Guinea Theater. On the night of June 29-30 Allied troops made a successful landing on Nassau Bay, about ten miles south of the Japanese base at Salamaua and moved up the coast to Mubo and Komistum. After the landing, the Navy assisted in the new offensive by the use of planes and PT boats to harass enemy landing barges and prevent reinforcements from being put ashore. Task units of our destroyers also assisted by bombarding enemy defenses and installations.

On September 3, our amphibious forces were ready to move against the enemy's naval and air bases in the Huon Gulf area, and a task force of destroyers and smaller craft successfully landed the Australian Ninth division and other troops near Nopoi. During the following days other task forces escorted more landing craft to the beaches, successfully fighting off air attacks and on September 7-8, bombarded positions in the vicinity of Lae. On September 11, Allied forces captured Salamaua and five days later Lae, thereby giving our naval forces additional bases.

The next objective of the Allied amphibious forces was Finschhafen on the eastern end of the Huon Peninsula. On the morning of September 22, a task force of destroyers and landing craft proceeded to a beach about six miles north of Finschhafen and after a brief bombardment landed a strong Australian force. Enemy air attack was ineffectual. On October 2, Finschhafen was captured and our PT boats sank a number of barges loaded with enemy troops attempting to get clear of the island. On the following day our destroyer task forces suffered their first loss when the destroyer *Henley* was torpedoed and sunk.

On January 1, an Allied landing in force was made on Saidor on the New Guinea coast. There was no opposition to the landing, and there were no personnel casualties.

On February 13, a final occupation of the Huon Peninsula was completed by the meeting of Australian units coming from the eastward with the 32nd U.S. division.

Rabaul

As our forces moved toward control of the Solomons and New Guinea, it became possible to strike more directly at Rabaul. This Japanese held port is in a key position to control the general area to the south.

On November 5, a task force under Rear Admiral F. C. Sherman, built around aircraft carriers, delivered an air attack on Rabaul. Bombs and torpedoes directed at shipping at anchor resulted in heavy damage to enemy heavy cruisers and destroyers present. Although our planes met Japanese air resistance, we shot down about 25 enemy planes at the cost of three of our own. This carrier-based strike was supplemented the same day by a large group of Liberators, which did severe damage to Rabaul's waterfront.

A week later there was a second series of air attacks on Rabaul. This time two American task forces were engaged. Rear Admiral Sherman's ships sent in a large flight of planes, and although unfavorable weather prevented inflicting as much damage as on the prior raid, hits were scored on Japanese destroyers outside the harbor. The same day a task force under Rear Admiral A. E. Montgomery sent in a large flight of planes to attack Rabaul shipping. Heavy damage to cruisers and destroyers in the harbor was reported. Our planes shot down 24 enemy aircraft at the cost of seven of our own.

Early in the afternoon of November 11, a Japanese air attack was delivered against the carriers under Rear Admiral Montgomery. No damage was done to our ships and something over 50 enemy planes were shot down by a combination of our own planes and anti-aircraft fire. We lost three planes in the encounter. Another flight of Liberators attacked Rabaul on November 11.

During the last ten days of December the major Japanese base on Rabaul was struck by land-based planes operating from bases in the Solomons and elsewhere in the South Pacific area. On December 25, planes from a carrier task force attacked Kavieng, another important enemy base on the northern tip of New Ireland. Reports indicated the damaging of a destroyer, the sinking of two cargo ships and three barges, and damage to other enemy units afloat. Upon its withdrawal, our task force was heavily attacked by enemy planes, but received no damage. On December 28, Kavieng was again attacked, this time by our shore-based aircraft.

The attacks on Rabaul were significant in that they destroyed and damaged Japanese men-of-war, (always a main objective of our aircraft) which were thereby prevented from resisting our offensive in the Northern Solomons, New Guinea or the Gilbert Islands.

On January 1, another carrier strike on Kavieng was delivered by a task force under the command of Rear Admiral Sherman. This task force was supported by a group of battleships under the command of Rear Admiral Lee. Primary targets were two enemy cruisers and destroyers about to enter the port. Preliminary reports indicated that the attacks on the cruisers were successful, and that both were either sunk or beached. One of the destroyers was hit by a heavy bomb and both were strafed. Information is lacking as to the effect on the destroyers, but both were believed heavily damaged. Between 20 and 30 enemy aircraft intercepted the attack. Eleven were shot down. Our losses were two fighters and one bomber.

On January 4, a task force successfully attacked two destroyers off the entrance to Kavieng.

On January 8, cruisers under the command of Rear Admiral Ainsworth bombarded the Shortlands without incident.

On February 15, an Allied landing in strength on Green Island, 120 miles from Rabaul, was virtually unopposed. On the same date two destroyer task groups, one commanded by Captain R. W. Simpson and the other by Captain A. A. Burke, bombarded Rabaul and Kavieng without suffering damage from enemy air attack. The task force making the landing was under the command of Rear Admiral Wilkinson, assault forces being composed of American and New Zealand troops. A task force of cruisers and destroyers commanded by Rear Admiral Ainsworth covered the advance and retirement of the assault forces. The aircraft task force under Vice Admiral Fitch and a support force of cruisers and destroyers commanded by Rear Admiral Merrill participated in the operation.

Occupation of the Admiralty Islands

On February 29, amphibious forces from the South West Pacific Force under the command of Rear Admiral W. M. Fechteler (these forces included the First Cavalry Division, dismounted) conducted a reconnaissance in force on Los Negros in the Admiralty Islands. As the reconnaissance revealed insufficient enemy strength to warrant withdrawing our reconnaissance forces, the Island was promptly occupied. Covering forces were cruisers and destroyers under the command of Rear Admiral D. E. Barbey, U. S. Navy. This was a brilliant maneuver in the campaign in that part of the Pacific, conducted under the direction of General MacArthur.

The Central Pacific Campaign

Our only operations in the Central Pacific following the Battle of Midway had consisted of a diversionary damaging raid on the island of Makin, in the Gilberts, by a small party under the command of Captain J. M. Haines, U. S. Navy. On August 17-18, the submarines *Nautilus* and *Argonaut* transported officers and men of the Second Marine Raider Battalion to the Island, where they annihilated the Japanese garrison and did severe damage to enemy installations.

Toward the end of August 1943, while Allied forces in the Southwest Pacific were advancing toward the Japanese bases at Rabaul and Truk, and while other forces in the Aleutians were consolidating their positions, Admiral Nimitz organized important units of the Pacific Fleet for a series of assaults on the enemy's outposts in the central Pacific. These task forces succeeded in capturing certain islands on the western rim of the enemy's defenses and in diverting the Japanese from the Northern Solomons and New Guinea. In addition, these operations represented valuable combat training for new air and surface units of the fleet.

Capture of the Gilbert Islands

The Gilbert Islands are a group of coral atolls lying athwart the equator. They had been held by the British up to the outbreak of war in December 1941, when they were seized by the Japanese. Their location is of great strategic significance because they are north and west of other islands in our possession and immediately south and east of important Japanese bases in the Carolines and Marshalls. The capture of the Gilberts was, therefore, a necessary part of any serious thrust at the Japanese Empire.

In August, September, and October, carrier-based air strikes on Marcus, Tarawa, Apamama, and Wake served to soften Japanese installations and keep the enemy guessing as to where our next full-scale attack would be delivered. The attack on Wake was particularly effective as it included considerable bombardment in addition to air attacks. Enemy air opposition was overcome, and a heavy toll of enemy planes was taken, both on the ground, and in the air. During October and early November, planes from our bases attacked the Japanese in the Gilberts and also the Marshalls. The Japanese retaliated by raiding our establishments in the Ellice Islands.

During October and November, various units of the Pacific Fleet were placed under the command of Vice Admiral (now Admiral) R. A. Spruance, U.S.N., who was designated Commander, Central Pacific Force. Vice Admiral Spruance had commanded one of the task forces at the battle of Midway and had more recently been Chief of Staff to the Commander in Chief, Pacific Fleet. Rear Admiral (now Vice Admiral) R. K. Turner, U.S.N., who had been in command at sea during the campaigns in the Solomon Islands, was placed in charge of our amphibious forces and Major General (now Lieutenant General) H. M. Smith, U.S.M.C., in charge of the landing forces. Other forces in the command were placed under Rear Admiral H. W. Hill, U.S.N. The entire force consisted of battleships, cruisers, aircraft carriers, destroyers and destroyer escorts, transports and numerous auxiliaries and landing craft. Shore-based aircraft were commanded by Rear Admiral J. H. Hoover, U.S.N.

During the second week in November, while operations in the Bougainville area and attacks on Rabaul were in progress, the force under Vice Admiral Spruance headed west. On November 19, our cruisers bombarded Tarawa, and on the morning of November 20, our attack groups were off both Tarawa and Makin Islands.

Heavy shore bombardments by battleships and cruisers preceded the landing at Makin. Army units which landed there met little opposition at first, and although the Japanese eventually put up a stiff resistance the issue there was never in serious doubt. The capture of Makin was announced on November 22.

The assault on Tarawa was bitterly contested. Tarawa was heavily fortified, and garrisoned by about 3,500 Japanese troops on Betio, the principal island in the group. They had been attacked repeatedly from the air for weeks preceding the assault and on the day before they had been heavily bombarded. In spite of these attacks, which silenced the Japanese heavy guns, wrecked everything above ground and killed approximately half of the enemy troops, their dugouts, pillboxes, and bombproof shelters were still partially intact.

The enemy was able to concentrate his forces beside the only beach where a landing was possible. In spite of fire support from the air and from ships, our casualties were heavy. The fighting which ensued was considered by many to be the most intense of any in the war, and the personnel of the Second Marine Division under the command of Major General Julian C. Smith and of the naval units which accompanied them in their landing, demonstrated magnificent courage and tenacity. The assault lasted nearly four days, at the end of which the island was captured.

During the assault period on both Tarawa and Makin, our transports covered by their escorts, lay off the islands unloading. In some cases, ships were able to enter the lagoons and unload. During this period enemy submarine attacks which developed off Tarawa were successfully combatted, but the *Liscome Bay,* an escort carrier, was torpedoed and sunk off Makin. Rear Admiral H. M. Mullinnix, U.S.N., and the commanding officer, Captain I. D. Wiltsie, U.S.N., and a large number of officers and men were lost. Enemy air attacks were successfully driven off by our own aircraft.

After the completion of the assault phase of the operation, our task forces withdrew to their bases to the north and south. Carrier task groups under Rear Admirals C. A. Pownall, U.S.N., and A. E. Montgomery, U.S.N., attacked enemy air bases in the Marshalls on December 4, the main attack being directed against the atoll of Kwajalein, where enemy naval and merchant vessels, aircraft and shore installations were heavily struck with torpedoes and bombs. A lighter attack was made on the island of Wotje. Another task force under Rear Admiral W. A. Lee, U.S.N., proceeding southward from the Gilberts attacked the island of Nauru. Carrier planes bombed the island, and battleships subjected it to heavy bombardments, starting large fires and destroying a number of planes.

During the remainder of the year, Army and Navy land-based planes carried out repeated attacks on enemy holdings in the Marshall Islands and at Nauru, inflicting considerable damage on ships and shore installations. Enemy air attacks on our newly acquired bases in the Gilberts were delivered, but no serious damage was sustained.

Operations in the Marshall Islands

On January 30, offensive operations on the largest scale yet undertaken were directed against the Marshall Islands by task forces under the command of Vice Admiral (now Admiral) Spruance. On that date simultaneous attacks were delivered on Kwajalein by carriers commanded by Rear Admiral F. C. Sherman, on Roi by carriers commanded by Rear Admiral A. E. Montgomery, on Taroa by carriers commanded by Rear Admiral J. W. Reeves, U.S.N., and on Wotje by carriers commanded by Rear Admiral S. G. Ginder, U.S.N. In addition, cruisers under the command of Rear Admiral E. G. Small, U.S.N., bombarded Taroa and Wotje, and shore-based aircraft under Rear Admiral J. H. Hoover, U.S.N., bombed all four islands, together with Mille and Jaluit.

On January 31, carrier attacks were resumed on Kwajalein by forces under Rear Admiral Reeves and the island was also bombarded by battleships. Roi was again attacked by Rear Admiral Montgomery's carrier force, and in addition was heavily bombarded by battleships. Taroa and Wotje were again struck by a carrier force under Rear Admiral Ginder and in addition were bombarded by cruisers. Forces under the command of Rear Admiral Small assisted in the bombardment of Wotje and Maloelap. Ebeye was struck by carrier forces under Rear Admiral Reeves, and Eniwetok was attacked by carriers under Rear Admiral F. C. Sherman, U.S.N. Mille, Jaluit and Wake were bombed by shore-based aircraft.

Other forces under Admiral Spruance's command in this operation consisted of a joint expeditionary force (southern attack group) under Rear Admiral (now Vice Admiral) R. K. Turner, U.S.N. Defense forces and land-based aircraft were under the command of Rear Admiral Hoover. Rear Admiral H. W. Hill, U.S.N., commanded an attack group and Rear Admiral R. L. Conolly, U.S.N., another, (the northern attack group). Expeditionary troops were under the command of Major General (now Lieutenant General) H. M. Smith, U.S.M.C. The carrier task forces were commanded by Rear Admiral M. A. Mitscher, U.S.N.

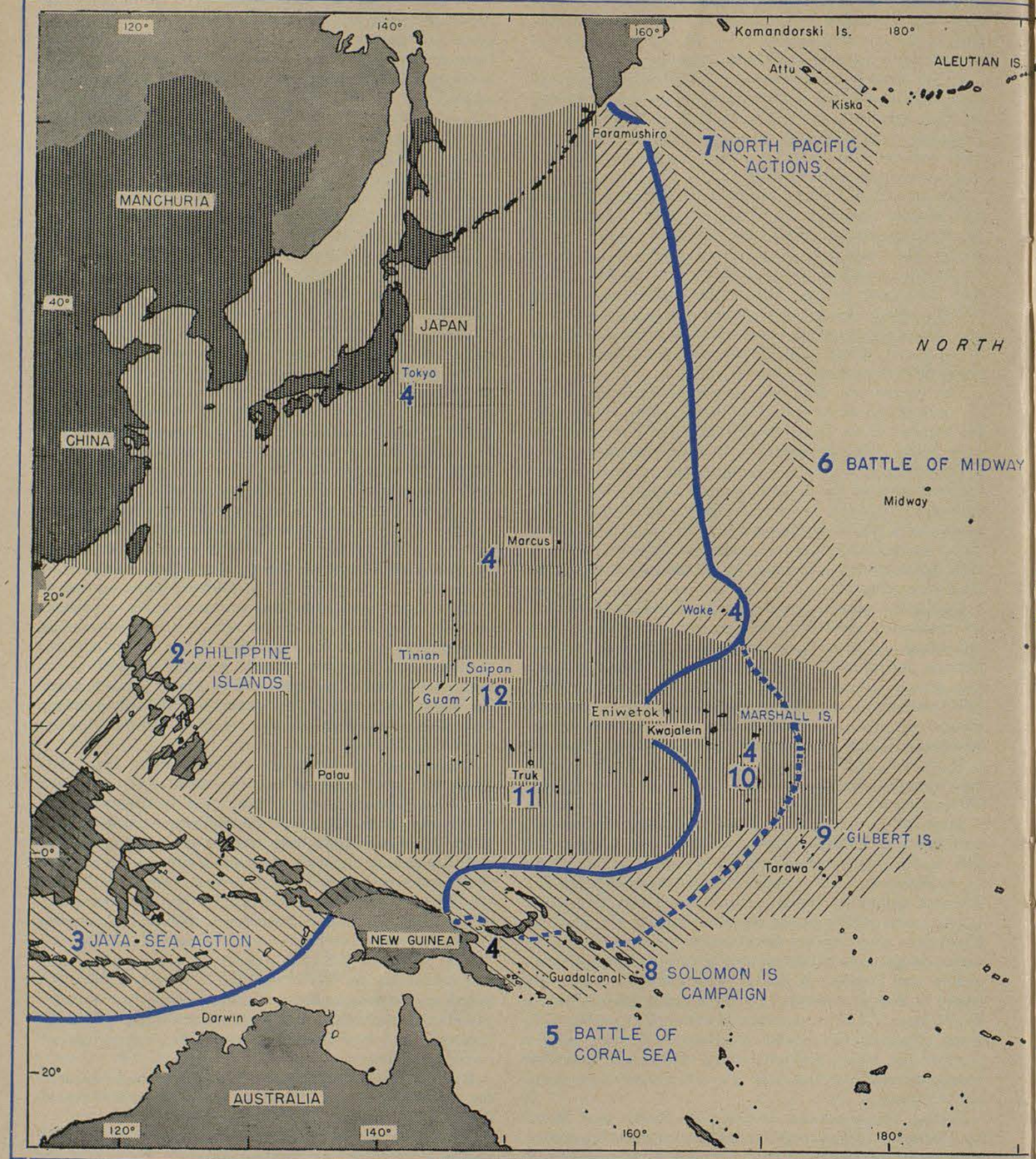
On January 31, the forces commanded by Rear Admiral Hill proceeded against the atoll of Majuro, but found no Japanese present there. On the following day troops were sent ashore and the atoll was occupied.

On February 2, landings were made on Roi, Namur and Kwajalein. Roi was secured and enemy resistance on Namur was confined to the northern part of the Island. By the middle of the afternoon all organized resistance on Roi and Namur was overcome and the Commanding General of the Fourth Marine Division (Major General Harry Schmidt, U.S.M.C.) assumed command ashore. Our casualties on these two islands were less than 100 killed and 400 wounded. Simultaneously four smaller islands were occupied. At Kwajalein our troops (Seventh Division, U. S. Army) made considerable progress against increasing resistance.

By February 5, our troops on Kwajalein had captured the island, and by the 8th, the entire atoll was in our possession.

Taroa, Wotje, Jaluit, Mille and Ponape were bombed and/or bombarded at frequent intervals during the remainder of the month.

On February 17-18 forces under the command of Vice Admiral (now Admiral) Spruance delivered an attack on



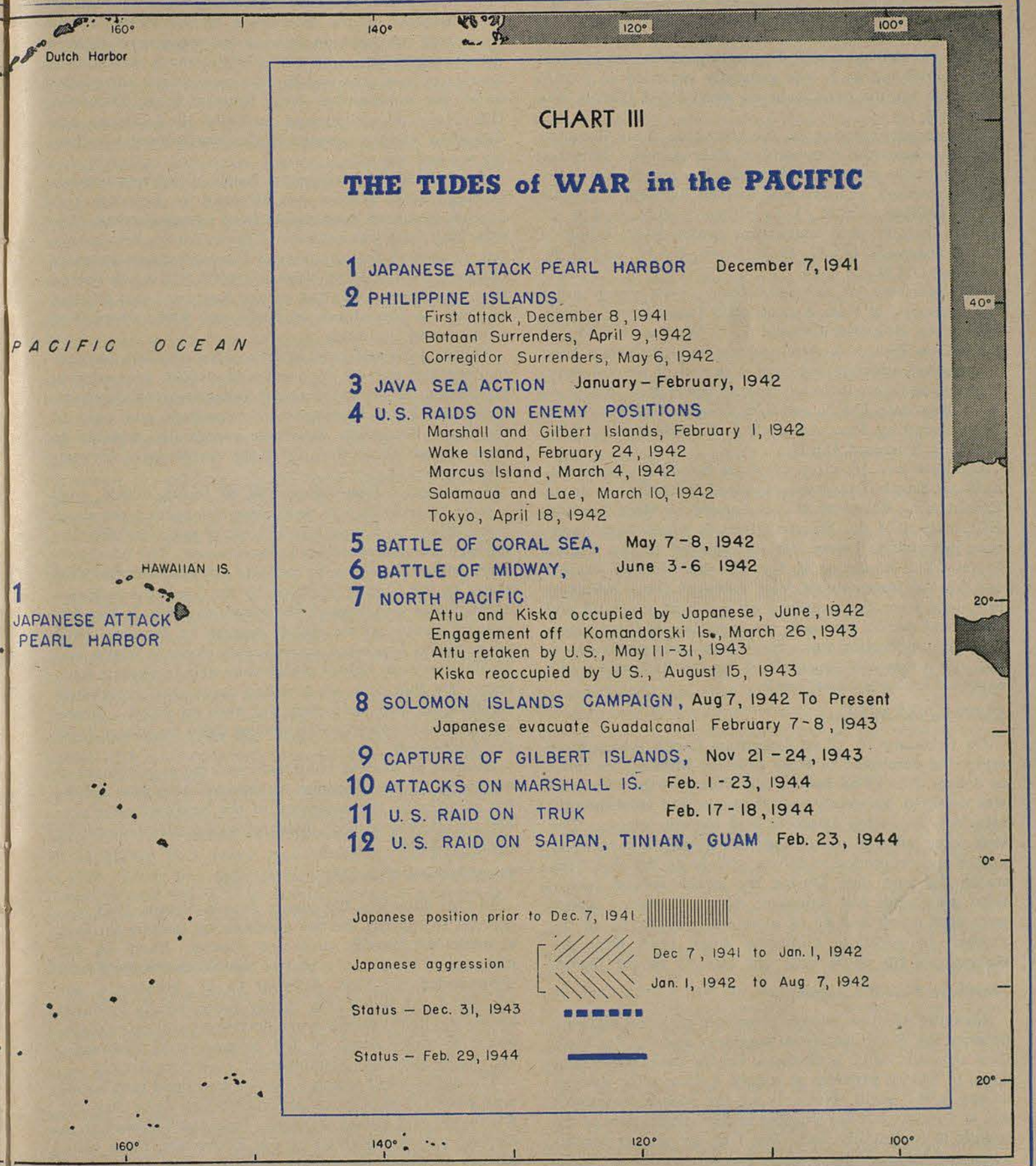


CHART III

THE TIDES of WAR in the PACIFIC

1 JAPANESE ATTACK PEARL HARBOR December 7, 1941

2 PHILIPPINE ISLANDS
- First attack, December 8, 1941
- Bataan Surrenders, April 9, 1942
- Corregidor Surrenders, May 6, 1942

3 JAVA SEA ACTION January – February, 1942

4 U.S. RAIDS ON ENEMY POSITIONS
- Marshall and Gilbert Islands, February 1, 1942
- Wake Island, February 24, 1942
- Marcus Island, March 4, 1942
- Salamaua and Lae, March 10, 1942
- Tokyo, April 18, 1942

5 BATTLE OF CORAL SEA, May 7–8, 1942

6 BATTLE OF MIDWAY, June 3-6 1942

7 NORTH PACIFIC
- Attu and Kiska occupied by Japanese, June, 1942
- Engagement off Komandorski Is., March 26, 1943
- Attu retaken by U.S., May 11-31, 1943
- Kiska reoccupied by U.S., August 15, 1943

8 SOLOMON ISLANDS CAMPAIGN, Aug 7, 1942 To Present
- Japanese evacuate Guadalcanal February 7-8, 1943

9 CAPTURE OF GILBERT ISLANDS, Nov 21-24, 1943

10 ATTACKS ON MARSHALL IS. Feb. 1-23, 1944

11 U.S. RAID ON TRUK Feb. 17-18, 1944

12 U.S. RAID ON SAIPAN, TINIAN, GUAM Feb. 23, 1944

Japanese position prior to Dec. 7, 1941

Japanese aggression — Dec 7, 1941 to Jan. 1, 1942; Jan. 1, 1942 to Aug 7, 1942

Status – Dec. 31, 1943

Status – Feb. 29, 1944

—Official U. S. Navy Chart

the island of Truk. The first part of the attack by carrier-based planes, was followed up by battleships, cruisers and destroyers. Heavy damage was inflicted on the enemy, both in ships sunk and damaged, and in planes shot down and destroyed on the ground. This attack, which was delivered with devastating effect, was particularly satisfying as it was generally regarded as partial payment for the debt incurred when Pearl Harbor was attacked.

Forces participating in the attack on Truk included carriers under the command of Rear Admiral Mitscher (under whom were Rear Admirals Reeves, Montgomery and Sherman), cruisers commanded by Rear Admirals L. T. DuBose, U.S.N., J. L. Wiltsie, U.S.N., and R. C. Giffen, U.S.N.; and battleships under Rear Admirals O. M. Hustvedt, U.S.N., G. B. Davis, U.S.N., and E. W. Hanson, U.S.N.

On February 17, an expeditionary task group under the command of Rear Admiral Hill (assault troops were headed by Brigadier General T. E. Watson, U.S.M.C.,) landed on Eniwetok Atoll, which had previously been bombarded and bombed over a period of several days. Supporting forces included carriers under Rear Admirals V. H. Ragsdale, U.S.N. and S. G. Ginder, U.S.N., cruisers commanded by Rear Admirals J. B. Oldendorf, U.S.N., and L. H. Thebaud, U.S.N.

On February 18, after extensive bombing and bombardment Engebi Island was captured. With the capture of Eniwetok on February 20, announced by Rear Admiral Hill, control of the Marshall Islands which were Japanese possessions before the war, passed to the United States. The operation in the Marshall Islands carried out by the forces under Vice Admiral (now Admiral) Spruance were characterized by excellent planning and by almost perfect timing in the execution of those plans. The entire operation was a credit to all who participated, and is a noteworthy example of the results that may be expected from good staff work.

Raids on the Marianas

On February 22, (East Longitude Date), a task force under the command of Rear Admiral Mitscher en route to deliver attacks on Saipan and Tinian in the Marianas was detected by enemy search planes and subsequently attacked by enemy bombers and torpedo planes. The task force suffered no damage, shot down a number of planes and proceeded to deliver attacks on the objectives stated the next day. During the attack several enemy ships were sunk and damaged. About 30 enemy planes were shot down and 85 or more were destroyed on the ground. In addition, numerous small craft were destroyed. At the same time our aircraft raided Guam.

Northern Pacific Campaign

Since the Aleutian Islands constitute an aerial highway between the North American continent and the Far East, their strategic value is obvious. On the other hand, that chain of islands provides as rugged a theater for warfare as any in the world. Not only are the islands mountainous and rocky, but the weather in the eastern part of the islands is continually bad. The fogs are almost continuous, and thick. Violent winds (known locally as "williwaws") with accompanying heavy seas make any kind of operation in that vicinity difficult and uncertain. The Bering Sea has been termed a "storm factory," because during the winter months the storms form up there and at the rate of one or two a week, travel east and southeast.

In May, 1942, when we were calculating the various risks involved in the disposition of our forces, Dutch Harbor in the Aleutian Islands was considered to be a definite possibility as an enemy objective. A task force to operate in that area was therefore organized and placed under the command of Rear Admiral R. A. Theobald, U.S. Navy. His command included all American and Canadian Army personnel in the North Pacific, including sea and air units.

On June 3, 1942, just as the battle of Midway was beginning, Dutch Harbor was attacked by Japanese high altitude bombers, presumably from enemy carriers. The attacking force was not located immediately, because the fog set in, and the intention of the enemy was therefore obscure. Within a few days, however, it was discovered that the enemy force had turned westward and effected landings on the islands of Kiska and Attu, where they were erecting buildings.

During June and July, in spite of the weather, our submarines and aircraft, by a series of attacks, succeeded in preventing the arrival of major Japanese reinforcements. Army Air Force bombardment squadrons and units of the Royal Canadian Air Force contributed notably to these operations, as they did to the operations of the succeeding months.

On August 7, Rear Admiral W. W. Smith, U.S.N., with a force of cruisers and destroyers bombarded the shore installations on Kiska, but because of poor visibility the damage inflicted could not be ascertained. The bombardment served, however, to indicate the need for air bases closer to the islands occupied by the Japanese and as a consequence we occupied the island of Adak, in the Andreanof Group, at the end of August. In January, 1943, we occupied Amchitka, considerably closer to Kiska, and by February our fighter planes were able to operate from there. By that time, we also had made good progress in establishing and equipping the base on Adak. Meanwhile, Kiska was attacked almost daily by planes from the Andreanofs.

Because of weather conditions and the employment of our forces in other theaters, no attacks, other than bombing raids, with the exception of the bombardment previously referred to, were delivered on the islands until the spring of 1943.

Battle of the Komandorski Islands

In that situation, the enemy, late in March, 1943, undertook to support the two garrisons by sending through a small but heavily protected convoy. Early on the morning of March 26, a unit of our North Pacific Force, commanded by Rear Admiral C. H. McMorris, encountered the advancing enemy force, which included heavy and light cruisers, some destroyers and cargo ships, about 65 miles south of the Komandorski Peninsula. Our force, although outnumbered, closed for attack.

The engagement which followed developed into a running gunfire duel between our cruisers *Salt Lake City* and *Richmond* and enemy cruisers. This was followed by a torpedo attack delivered by our destroyers, upon completion of which the enemy retired in the direction of Paramushiru, 500 miles to the westward. Our damage was small and our casualties were light. While the damage inflicted on the enemy is not definitely known, a

superior enemy force, after being engaged for three and one-half hours, had been prevented from supporting Japanese garrisons at Kiska and Attu.

The Capture of Attu

During the month of April, severe weather interfered considerably with our operations, but later in the month a detachment of cruisers and destroyers was sent to bombard the island of Attu.

Meanwhile, plans had been completed for an assault on Attu, and a force consisting of battleships, an auxiliary aircraft carrier, destroyers, auxiliaries and transports was placed under the command of Rear Admiral F. W. Rockwell, who operated under the direction of Rear Admiral Kinkaid. In addition to Rear Admiral Rockwell's force there was a unit consisting of cruisers and destroyers under the command of Rear Admiral Robert C. Giffen and another under Rear Admiral McMorris. The entire operation was to be supported by the Army Air Forces under the command of Major General Albert F. Brown. These troops were embarked in the transports.

On the morning of May 11, landings were made on the north coast of Attu, and our troops proceeded inland. In the afternoon other landings were made at Massacre Bay, and also at Holtz Bay. These landings were covered by our naval forces, and in the bitter fighting which followed, various naval units assisted Army troops by furnishing fire support and air cover. Enemy attacks on our naval forces were ineffective. On May 31, the "mopping up" stage ended, and the Island was in our possession. Enemy forces there had been virtually annihilated.

Occupation of Kiska

Following the assault on Attu, preparations were made for a similar assault on Kiska. In anticipation of that assault, Kiska was heavily bombed during July and August, and on numerous occasions was also bombarded by our naval forces.

When assault troops landed on the island on August 15, it was found that it had been evacuated by the Japanese under cover of the fog. Thus, the Aleutian campaign ended, with our forces once more in possession of the entire chain of islands.

NOTE: Although it had no connection with the campaign herein described, the bombardment of Paramushiru by a task force under the command of Rear Admiral W. D. Baker, U. S. Navy, was carried out on February 4, 1944. Large fires were started. No damage was sustained by our forces. The bombardment is included in this part of the report because it took place in the Northern Pacific.

Submarine Operations

Because of their ability to operate effectively in enemy controlled waters the weakness of our Asiatic Fleet was partially compensated by virtue of the 29 submarines assigned to it—our submarines took the offensive immediately upon the outbreak of war. When our surface forces retired to the south from the Philippine Islands, submarines [under the command of Captain (now Rear Admiral) John Wilkes] succeeded in delaying the enemy's advance and in giving intermittent support to our forces remaining in the islands. As the Japanese advanced through the Netherlands East Indies and into the Solomons, submarines continued to interrupt enemy lines of communications, and since that time have continued their attacks on enemy men-of-war and merchantmen with telling effect.

At the beginning of the war Rear Admiral T. Withers was in command of the submarines in our Pacific Fleet. Rear Admiral R. H. English, who relieved him in May 1942, was killed in an airplane accident in January 1943. Since that time the uniformly excellent operation and administration of Pacific Fleet submarines has been continued under the direction of Vice Admiral C. A. Lockwood, who previously commanded submarines of the South West Pacific Force. Rear Admiral R. W. Christie succeeded to command of the submarines in the South West Pacific Force.

Atlantic Fleet submarines have been commanded since the spring of 1942 by Rear Admiral F. A. Daubin. Submarine operations in the Atlantic, which have been chiefly fitting out and training, have done much to make effective combat submarine operations possible within a minimum time after each submarine joins the Pacific Fleet.

Without adequate shipping, Japan can not hold out, much less support her forces in the islands of the Pacific. Furthermore, the Japanese shipyards have limited capacity. Her shipping, therefore, was a natural target for our submarines, and they have taken a tremendous toll.

For reasons of security, our submarine operations throughout the Pacific can be discussed only in very general terms. No branch of the naval service, however, has acquitted itself more creditably. Submarine commanding officers are skillful, daring and resourceful. Their crews are well trained and efficient. Their morale is high, and in direct ratio to the success of submarine operations. Materially our submarines are in excellent shape, and we have kept up to the minute in all features of design and scientific development and research.

The versatility of our submarines has been so repeatedly demonstrated throughout the war that the Japanese know only too well that in no part of the Pacific Ocean are they safe from submarine attack. When the full story can be told, it will constitute one of the most stirring chapters in the annals of naval warfare.

ATLANTIC THEATER

General

At the outbreak of the war our operations in the Atlantic Ocean consisted chiefly of escorting convoys to Great Britain, and to Russian and Near East ports (also West Indian and South American ports) and of training. Concurrently, with these operations, it was necessary to dispose the heavy units of our Atlantic Fleet so that they would be available immediately in case ships of the German Fleet, basing at various ports in Germany, Norway, and France, attacked our shipping. From time to time, in order to maintain a satisfactory distribution of Allied strength, as insurance against such a breakout by units of the German Navy, certain of our ships operated with the British Fleet.

By agreement with the British, emphasized at the Casablanca conference and at each subsequent conference, the maintenance of the war-making capacity of the British Isles has been a continuing commitment of the United States. Obviously, such a commitment requires, as a prerequisite to the furnishing of the necessary support, the maintenance of overseas lines of communica-

tion, so that the safe passage of Lend-Lease shipments, supplies to our own forces, and troop convoys can be accomplished.

The responsibility for those naval operations required to keep open not only those lines of communications, but, as well, all lines of communications in the Atlantic Ocean, has rested with Admiral R. E. Ingersoll, the Commander in Chief of the Atlantic Fleet. Faced with the threat of the U-boat fleet (the methods taken to combat and overcome that menace are covered elsewhere in this report) and with the possibility of attack by other enemy units, escort of convoy operations was of paramount importance.

Early in the war the attempts of the enemy to interrupt our lines of communications, while not successful, nevertheless were a matter of considerable concern. By judicious use of escorts, however, and by other means, our convoys continued to go through. The magnitude of those escort operations which have been continuous, is not likely to be overestimated, as we have expended tremendous effort in providing the ships and training them, and in the execution of their duties. The record of safe overseas transportation of troops and material speaks for itself, in so far as the efficiency of these operations is concerned.

Direct support of units of the British Fleet in any operation requiring combined effort, has been another Atlantic Fleet activity calling for careful planning and execution.

In addition, Admiral Ingersoll has had the responsibility for the defense of the Western Hemisphere by our naval forces. That has involved the stationing of air and surface forces at various points in North and South America and in certain islands in the Atlantic Ocean, and, of course, such changes in their disposition as might be warranted by the situation. The South Atlantic Force, under the command of Vice Admiral J. H. Ingram, whose headquarters are in Brazil, has operated in harmony and close combination with forces of the Brazilian Navy in contributing to our control of the South Atlantic.

In order to facilitate the passage of convoys to Russia and Great Britain, and in order to provide a base for our heavy surface forces, considerable use has been made of Iceland, where we originally established a base for forces engaged in escorting Lend-Lease convoys. All of the bases acquired from Great Britain in exchange for the 50 destroyers have been in constant use, and of great value.

Except for anti-submarine actions and for occasional aircraft attacks, units of the Atlantic Fleet have not been in any extensive combat in the Atlantic Ocean. As covering and supporting forces, however, they have accompanied our expeditions which landed in North Africa, and later in Sicily and Italy, and in the case of the landings in North Africa, there were some engagements in the Atlantic Ocean. The details of those expeditions are covered separately in this report.

For the purpose of training the large number of newly commissioned ships on the East Coast, which report to the Commander in Chief, United States Atlantic Fleet as soon as they are completed, a training command, under Rear Admiral D. B. Beary, was established as a part of the Atlantic Fleet. That command took over all ships (except submarines) as soon as they were ready for sea, and conducted such operational training as was necessary to fit each ship for duty in the fleet to which assigned. In addition to that type of operational training, the Commander in Chief, United States Atlantic Fleet was charged with extensive amphibious training.

From the foregoing it will be seen that the Commander in Chief, United States Atlantic Fleet has had a wide variety of responsibilities which have been contributory to the success of the multiplicity of operations, some of which were carried out by the Atlantic Fleet and some by other fleets. Because of the situation, there has been a continuous shift in the strength and disposition of the Atlantic Fleet, in which connection its flexibility, and the manner in which adjustments and readjustments were made have been of tremendous assistance to the Navy as a whole.

The Atlantic Submarine War

The submarine war—particularly the Atlantic phase of it—has been a matter of primary concern since the outbreak of hostilities. Maintenance of the flow of ocean traffic has been, and continues to be, a vital element of all war plans.

Operating on exterior lines of communication on almost every front, the United Nations have been dependent largely upon maritime transportation. The success of overseas operations, landing attacks, the maintenance of troops abroad and the delivery of war materials to Russia and other Allies concerned primarily with land operations has depended to a large extent upon the availability of shipping and the ability to keep it moving. Shipping potentialities have been the major factor—often the controlling factor—in most of the problems with which the Allied High Command has had to deal.

The principal menace to shipping has been the large fleet of submarines maintained by Germany. Our enemies have employed the submarine on a world-wide scale, but the area of greatest intensity has always been the Atlantic Ocean where the bulk of German U-boats have operated.

The German U-boat campaign is a logical extension of the submarine strategy of World War I which almost succeeded in starving Great Britain into submission. Unable to build up a powerful surface fleet in preparation for World War II, Germany planned to repeat her submarine campaign on a greater scale and to this end produced a U-boat fleet of huge size. The primary mission of this underwater Navy was to cut the sea routes to the British Isles, and the enemy undersea forces went to work on this task promptly and vigorously.

The United States became involved in the matter before we were formally at war, because our vessels were being sunk in the transatlantic traffic routes. Consequently, in 1941, we took measures to assist the Royal Navy to protect our shipping. As stated in more detail elsewhere in this report these measures included the transfer of 50 old destroyers to the British, and in the latter part of 1941—the assignment of our own naval vessels to escort our merchant shipping on threatened transatlantic routes.

The submarine situation was improving as 1941 drew toward a close. Escort operations on threatened convoy routes were becoming more and more effective. British aviation had become a potent factor, by direct action against the U-boats, and also by bringing under control the German over-water air effort that had augmented the submarine offensive. Our resources were stretched, how-

ever, and we could not, for a time, deal effectively with the change in the situation brought about by our entry into the war on December 7, 1941. Our whole merchant marine then became a legitimate target, and the U-boats, still maintaining full pressure on the transatlantic routes, had sufficient numbers to spread their depredations into wide areas hitherto immune. Our difficulty was that such part of the Atlantic Fleet as was not already engaged in escort duty was called upon to protect the troop movements that began with our entry into the war, leaving no adequate force to cover the Navy maritime traffic areas newly exposed to possible U-boat activity.

The Germans were none too quick in taking advantage of their opportunity. It was not until more than a month after the declaration of war that U-boats began to expand their areas of operation. The first move took the form of an incursion into our coastal waters in January, 1942. We had prepared for this by gathering on our Eastern seaboard our scant resources in coastal anti-submarine vessels and aircraft, consisting chiefly of a number of yachts and miscellaneous small craft taken over by the Navy in 1940 and 1941. To reinforce this group the Navy accelerated its program of acquiring such fishing boats and pleasure craft as could be used and supplied them with such armaments as they could carry. For patrol purposes we employed all available aircraft—Army as well as Navy. The help of the Civil Air Patrol was gratefully accepted. This heterogeneous force was useful in keeping lookout and in rescuing survivors of sunken ships. It may have interfered, too, to some extent with the freedom of U-boat movement, but the heavy losses we suffered in coastal waters during the early months of 1942 gave abundant proof of the already well-known fact that stout hearts in little boats can not handle an opponent as tough as the submarine.

The Navy was deeply grateful for the assistance so eagerly volunteered by the men who courageously risked their lives in order to make the best of available means, but there had to be better means, and to provide them no effort was spared to build up an anti-submarine force of adequate types. Submarine chasers, construction of which had been initiated before the war, began to come into service early in 1942. The British and Canadian navies were able to assign some anti-submarine vessels to work with our coastal forces. Ocean escorts were robbed to reinforce coastal areas. These measures made it possible to establish a coastal convoy system in the middle of May, 1942. Anti-submarine aviation had concurrently improved in quality and material and training of personnel. The Army Air Force had volunteered the services of the First Bomber Command which was especially trained and outfitted for anti-submarine warfare.

The effect of these measures was quickly felt in the Eastern Sea Frontier (the coastal waters from Canada to Jacksonville) where they were first applied. With the establishment of the initial coastal convoy (under the command of Vice Admiral Adolphus Andrews, Commander of the Eastern Sea Frontier) in the middle of May, 1942, sinkings in the vital traffic lanes of the Eastern Sea Frontier dropped off nearly to zero and have so remained. While it has not been possible to clear those routes completely—there is evidence that nearly always one or more U-boats haunt our Atlantic Coast—submarines in that area long ago ceased to be a serious problem.

When the Eastern Sea Frontier became "too hot", the U-boats began to spread farther afield. The coastal convoy system was extended as rapidly as possible to meet them in the Gulf of Mexico (under the command of Rear Admiral J. L. Kauffman, Commander Gulf Sea Frontier), the Caribbean Sea, (under the command of Vice Admiral J. H. Hoover, Commander Caribbean Sea Frontier), and along the Atlantic Coast of South America. The undersea craft made a last bitter stand in the Trinidad area in the fall of 1942. Since then coastal waters have been relatively safe.

The problem was more difficult to meet in the open sea. The submarine chasers that do well enough in coastal waters are too small for ocean escort duty. Destroyers and other ocean escort types could not be produced as rapidly as the smaller craft. Aircraft capable of long overseas patrol were not plentiful, nor were aircraft carriers. In consequence, protection of ocean shipping lagged to some extent. By the end of 1942, however, this matter began to come under control, as our forces slowly increased, and there has been a steady improvement ever since.

The Atlantic anti-submarine campaign has been a closely integrated international operation. In the early phases of our participation, there was a considerable mixture of forces, as the needs of the situation were met as best they could be. For a time some British and Canadian vessels operated in our coastal escorts, while our destroyers were brigaded with British groups in the Atlantic and even occasionally as far afield as North Russian waters. As Allied strength improved in power and balance, it became possible to establish certain areas of national responsibility wherein the forces are predominantly of one nation. This simplifies the problem of administration and operation, but there still are—and probably always will be—some areas where forces of two or more nations work together in a single command, and always there is close coordination in deploying the forces of the several Allies.

There is a constant interchange of information between the large organizations maintained in the Admiralty and in the United States Fleet Headquarters (in the form of the Tenth Fleet which coordinates United States anti-U-boat activities in the Atlantic) to deal with the problems of control and protection of shipping. These organizations, also, keep in intimate touch with the War Shipping Administration in the United States and with the corresponding agency in Great Britain.

Command of anti-submarine forces—air and surface—that protect shipping in the coast-wise sea lanes of the United States and within the Caribbean Sea and Gulf of Mexico is exercised by "Sea Frontier Commanders," each assigned to a prescribed area. The command is naval except in the Panama area where the Naval Sea Frontier Commander is under the Commanding General at Panama.

Since aircraft and surface combatant ships are most effective when working as a closely knit team, it is the policy—in anti-submarine as well as other naval operations—to weld together air and surface forces in a single command in each area.

In the Atlantic Ocean, beyond the coastal area, anti-submarine forces—air and surface—are part of the Atlantic Fleet under the command of Admiral R. E. Ingersoll. One of the units of Admiral Ingersoll's fleet is the South Atlantic Force (Vice Admiral J. H. Ingram com-

manding) which guards shipping in the coastal waters south of the Equator and throughout the United States area of the South Atlantic. Vice Admiral Ingram's command includes highly efficient surface and air units of Brazil, which country has wholeheartedly joined our team of submarine hunters. This team, incidentally, turns its guns on surface raiders and other bigger game when the enemy provides the opportunity.

It is appropriate to express here appreciation of the services of Netherlands anti-submarine vessels which have operated with exemplary efficiency as part of the United States Naval Caribbean Force ever since we entered the war.

Anti-submarine warfare is primarily a naval function, but, in accordance with the general policy of working together, Army and Navy forces that are available turn to together on the enemy when need arises. Thus it happens that there are instances in which Army aircraft join in the submarine hunt. The assistance of the Army Air Force has been of great value, particularly in the early phases of the war, when naval resources were inadequate. An example of this is the formation of the Army Air Force anti-submarine Command in the spring of 1942, which was given the equipment and training necessary to make its members anti-submarine specialists. It operated, under the command of Brigalier General (now Major General) T. W. Larson, in the United States and abroad until last November, when the Navy obtained enough equipment to take over the tasks so well performed by this command.

It is regretted that it is not possible at this time to go into the details of our anti-submarine operations in this report. It would be a great pleasure to recount the many praiseworthy exploits of our anti-submarine forces, but to do so now would jeopardize the success of future operations. The U-boat war has been a war of wits. The submarine is a weapon of stealth, and naturally enough the German operations have been shrouded in secrecy. It has been of equal importance to keep our counter measures from becoming known to the enemy. There is a constant interplay of new devices and new tactics on the part of forces working against the submarines as well as on the part of the submarines themselves, and an important element of our success has been the ability to keep the enemy from knowing what we are doing and what we are likely to do in the future. It is, also, of the utmost importance to keep our enemies from learning our anti-submarine technique, lest they turn it to their own advantage in operations against our submarines.

Submarines have not been driven from the seas, but they have changed status from menace to problem.

THE MEDITERRANEAN THEATER

Landings in North Africa

In July, 1942, after several months of discussions and study by the Combined Chiefs of Staff, it was decided to effect landings in force in North Africa and there establish our troops in opposition to the German forces. The strategic significance of that move since has become apparent, in that the troops which were transported and landed in North Africa subsequently moved through Sicily to Italy, and there engaged enemy land forces.

The invasion of North Africa was a complicated operation. In the first place, in view of the uncertainty of the relationships existing between the French forces in that area and the Vichy Government, the political situation in North Africa required the most careful and diplomatic handling. Obviously it was to our advantage to effect unopposed landings, and the problem therefore was to pursuade the French forces not to resist. We could not afford, however, to take any chances in revealing our own plans, and the dealings with the French authorities had to be undertaken with utmost discretion. As it turned out, the French forces resisted initially, but within a few days agreed to an armistice.

In addition to the foregoing difficulty, it was agreed that the forces participating in the operations would consist of British and American units. Furthermore, the nature of the operations was such that the American units had to be both Army and Navy. Command relationships were worked out accordingly, and Lieutenant General (now General) D. D. Eisenhower, U. S. Army, was appointed Commander in Chief of the Allied force. His principal naval subordinate was Admiral Sir Andrew Browne Cunningham, Royal Navy.

The plan agreed upon called for three points of attack; Oran and Algiers, both Algerian seaports on the Mediterranean, and Casablanca on the Atlantic coast of French Morocco. The attack forces assigned to effect landings at Oran and Algiers consisted of United States Army troops supported by British naval units (with a few exceptions). The Casablanca attack force was composed entirely of United States forces. This report deals chiefly with the part played by United States naval forces in the operation.

Rear Admiral (now Vice Admiral) H. K. Hewitt, who was placed in command of the United States naval forces designated to support the Casablanca attack, [Major General (now Lieutenant General) George S. Patton commanded the Army troops in this attack] left the United States on October 24, and the movement overseas proceeded without untoward incident. On November 7, the forces separated and the three attack groups, the covering force (under the command of Rear Admiral R. C. Giffen, U. S. Navy) and the air groups proceeded independently to their assigned positions for the landing attacks.

Operations in French Morocco

Operations in French Morocco were conducted by United States forces under the unified command of Rear Admiral Hewitt until General Patton's headquarters were established on shore and he was ready to assume command. The plan called for a main landing at Fedala, 14 miles north of Casablanca, and secondary landings at Port Lyautey, 65 miles north of Casablanca, and Safi, 125 miles south of Casablanca. The object of the main landing was to capture Casablanca from the land side. The principal objective at Port Lyautey was the airfield nearby, and the objective of Safi was to capture the port by direct assault and then to assist in the reduction of Casablanca.

Early in the morning of November 8, shortly after our troops had been landed, shore batteries opened fire on the naval forces supporting the landings at Fedala. These shore batteries were engaged at intervals during that morning by the *Augusta*, the *Brooklyn*, and accompanying destroyers. Early in the afternoon the shore batteries on Point Fedala were captured.

Several naval actions took place between Fedala and Casablanca on November 8. Shortly after daylight, eight submarines left Casablanca. Three others were sunk at their moorings. Early in the forenoon, two French destroyer leaders and five destroyers sortied and stood toward Fedala. They were taken under and forced to retire. Shortly afterward the French light cruiser *Primaguet* sortied and joined the French destroyers outside the harbor. The group, which stood toward Fedala, was promptly engaged by the *Augusta* and *Brooklyn,* and vessels of the covering force. With the exception of one transport which managed to get back to the harbor, all French ships were either sunk or beached. Meanwhile, the covering force, consisting of the *Massachusetts, Wichita, Tuscaloosa,* and four destroyers, exchanged fire with the shore batteries at El Hank, and the French battleship *Jean Bart,* which was moored in the harbor, and with the French forces that had sortied from Casablanca.

Another action took place on November 10. Late in the forenoon the enemy vessels took up a position outside of the harbor at Casablanca and opened fire on our troops ashore, whereupon the *Augusta* and four destroyers stood toward Casablanca and engaged the two enemy vessels. While in that position, the *Augusta* was fired upon by the *Jean Bart.* The *Augusta* and accompanying destroyers immediately retired.

Sometime between November 8 and November 10, the *Jean Bart* was sunk at her moorings, but the water was shallow and she was able to continue to fire.

Thanks to the elimination of the French forces at Casablanca the landings at Fedala were successfully completed, but the aftermath was costly. On November 11, the transport *Joseph Hewes,* the oiler *Winooski* and the destroyer *Hambleton* were torpedoed. The *Hewes* sank in an hour, and the other two ships were later taken to Casablanca for repairs. On November 12, the transports *Hugh L. Scott* and *Edward Rutledge* were torpedoed and immediately caught fire and burned. All these attacks were assumed to be from Axis submarines.

The Attack on Safi

The attack on Safi was made principally by two destroyers, the *Bernadou* and *Cole,* which were supported by gunfire from a covering group under the command of Rear Admiral L. A. Davidson, consisting of the battleship *New York,* the cruiser *Philadelphia,* and the destroyer *Mervine.* The *Bernadou,* carrying Army troops, and the *Mervine,* with naval personnel, made a daring entry into the harbor early in the morning of the 8th, and there landed their troops without serious difficulty.

Port Lyautey

The landings at Port Lyautey were made with comparatively little difficulty. Stiff resistance was later encountered south of the mouth of the Oued Sebou River, and shore batteries were not silenced until November 9. Ships furnishing naval gunfire and naval aircraft support included the *Texas,* the *Savannah,* and a number of destroyers under the command of Rear Admiral Monroe Kelly, U.S. Navy.

The Oran Operation

The naval support for the landings at Oran was furnished by the British naval forces. In order to facilitate the capture of Oran, however, it was decided to seize the harbor of Arzeu, about 25 miles east of Oran, and by a daring and well executed assault, a small raiding party, under Captain Walter Ansel, U. S. Navy, captured the harbor early in the morning of November 8.

Also assigned to assist British naval forces was a small United States naval unit commanded by Lieutenant Commander George D. Dickey, U. S. Navy. This unit, together with Army units, was embarked in two British ships, *HMS Walney* and *Hartlett,* both of which were formerly U. S. Coast Guard cutters. Upon entering the harbor early in the morning of November 1, both ships were discovered and sunk.

The Algiers Operation

Included in the naval task force assigned to assist in the Algiers landings was a division of four American transports. These vessels had proceeded from Great Britain in time to arrive on the Algerian coast simultaneously with the forces arriving on the Moroccan coast from the United States. Late in the afternoon of November 7, the transport *Thomas Stone* was torpedoed. Her troops thereupon were put in landing boats about 160 miles from Algiers. After a hazardous trip, during which a number of the landing craft were lost, they succeeded in reaching the Algerian coast, but by that time, hostilities had ceased.

The transport *Leedstown* was attacked by German aircraft on the evening of November 8, and again on the following afternoon, and was sunk by torpedoes. The loss of personnel was light.

* * *

With the successful negotiation of the armistice on November 11, resistance from the French forces ceased, and in so far as the immediate participation of United States naval forces was concerned, the operation ended. Meanwhile, however, a naval unit on the east coast of French Morocco was established as a Sea Frontier, under the command of Rear Admiral John L. Hall, Jr., U.S.N., and a Naval Operating Base at Oran, under the command of Rear Admiral A. C. Bennett, U. S. Navy, was also established.

The United States naval forces participating in these operations were taken from the United States Atlantic Fleet.

Landings in Sicily

By May, 1943, German forces had been driven from Tunisia, and by that time our fighting strength was such that we were able to make definite plans for a major offensive move against the enemy in his own territory. Sicily was selected as the immediate objective, and an amphibious operation on the largest scale yet undertaken was planned. Generally speaking, one part of the operation was to be a ship-to-shore movement in which our troops were to be taken to the scene of the landing in transports and there embarked for the actual landing in small boats. The second part was a shore-to-shore movement, the troops being transported directly to the landing beaches from the point of embarkation.

Like the North African operation, the landings in Sicily were to be combined British and American. General Eisenhower was given command of the expeditionary force and Admiral Cunningham was given command of all naval forces participating. Under these officers were three task forces, one of which was (with the usual provisions for change-over in command) under the com-

CHART IV

NAVAL OPERATIONS in the NORTH AFRICAN and MEDITERRANEAN THEATRES

1 THE NORTH AFRICAN LANDINGS, November 8–11, 1942

U.S. naval forces guarding Casablanca engage French cruiser and destroyers supporting Fedala landings. Support is provided for landing at Port Lyautey.

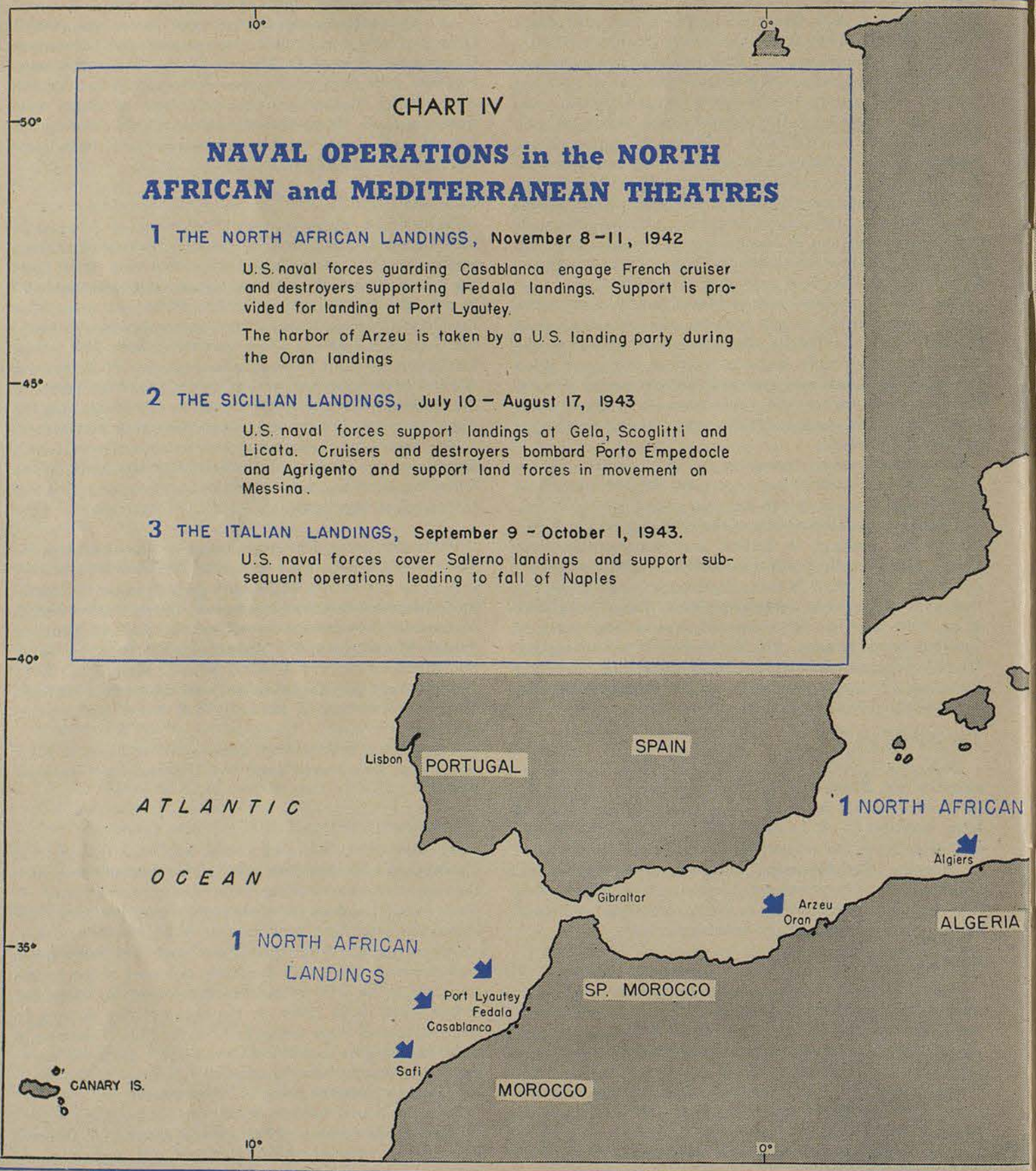
The harbor of Arzeu is taken by a U.S. landing party during the Oran landings

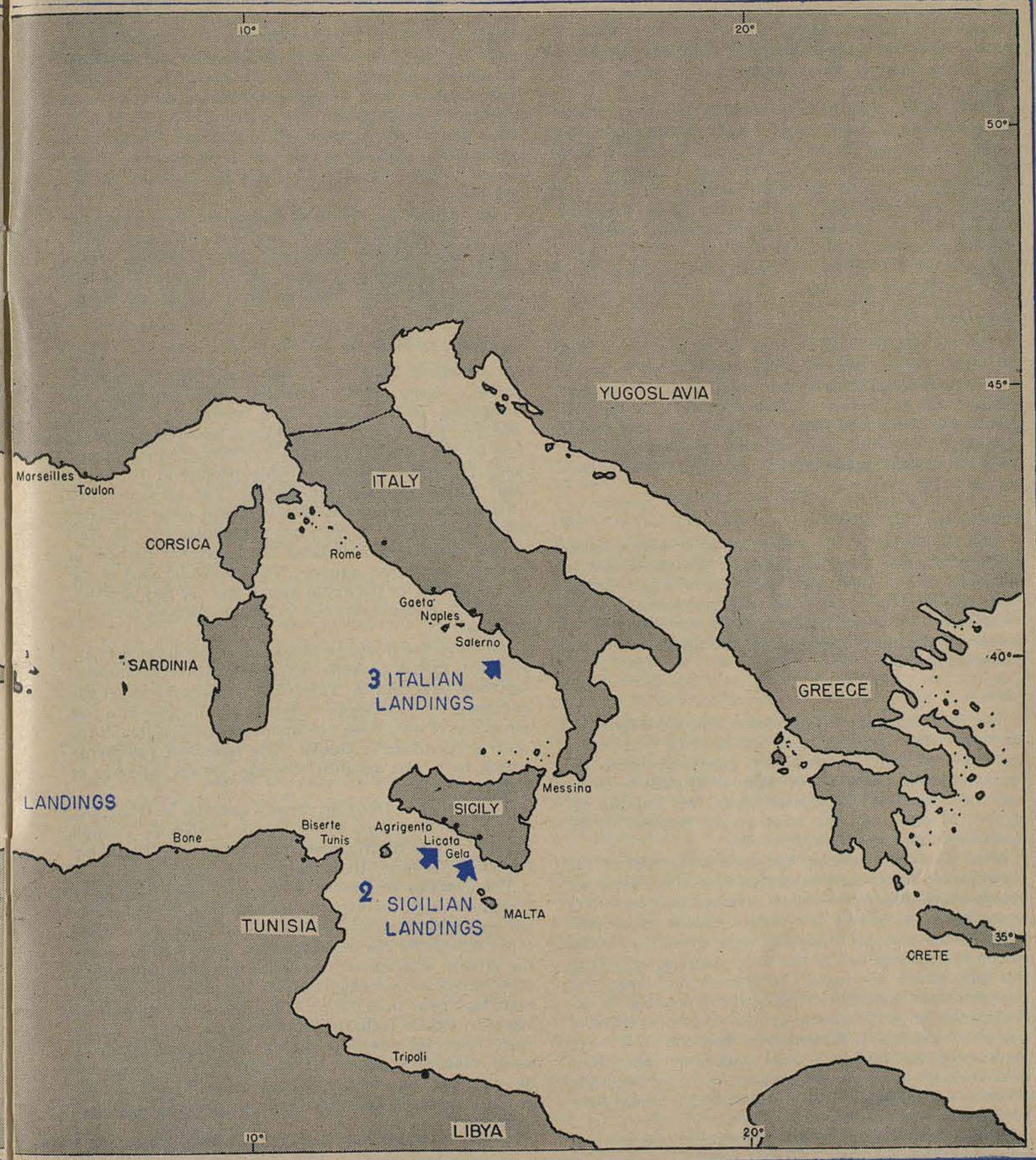
2 THE SICILIAN LANDINGS, July 10 – August 17, 1943

U.S. naval forces support landings at Gela, Scoglitti and Licata. Cruisers and destroyers bombard Porto Empedocle and Agrigento and support land forces in movement on Messina.

3 THE ITALIAN LANDINGS, September 9 – October 1, 1943.

U.S. naval forces cover Salerno landings and support subsequent operations leading to fall of Naples





—Official U. S. Navy Chart

mand of Vice Admiral Hewitt, and Lieutenant General George S. Patton. Army air forces were under the command of Brigadier General (now Major General) Carl Spaatz. Under the plan agreed upon, landings were to be made at five places on the Island of Sicily. Three of those objectives, namely Scoglitti, Gela, and Licata, on the south coast of Sicily, were to be attacked by the American task force.

This report concerns itself primarily with the activities of the American naval forces in the operation.

In anticipation of the operation, transports, cruisers and destroyers were assembled at Oran and Algiers. Various types of landing craft were assembled at Tunis and Bizerte. There were some exceptions to that arrangement. On July 5, the largest ships of the Scoglitti force left Oran and on the following day they were joined by the ships of the Gela force from Algiers. As the force passed Tunis and Bizerte they were joined by the small craft.

Scoglitti

The landing at Scoglitti, early in the morning of July 10, which was preceded by bombardment of shore batteries and beach positions by our naval units, was accomplished with comparatively little opposition, as the Italian troops abandoned their positions at the first attack. Landings at Scoglitti were both ship-to-shore and shore-to-shore operations, and by early forenoon all troops were on the beach.

Gela

The landings at Gela were more of a shore-to-shore undertaking than those at Scoglitti. Troops landed on schedule, and the first wave encountered slight opposition, but the second wave met stiff resistance and suffered heavy casualties until the shore batteries were silenced by the naval gunfire from the light cruisers *Savannah* and *Boise*.

Licata

The landing at Licata was almost entirely a shore-to-shore operation, practically all troops being transported in small craft. After comparatively heavy opposition was encountered, all beaches were captured by early forenoon and the unloading of supplies begun. We lost the destroyer *Maddox* and the minesweeper *Sentinel* in the operation, both being sunk by bombs.

After the Licata landing had been accomplished, the participating forces were subjected to intense enemy air attack which lasted three days. During that three-day period, also, the enemy launched a counterattack with tanks, which took up a position from which they could fire on the beaches and at the ships standing by. When this tank attack developed, our cruisers and destroyers moved inshore and opened fire on them, pending the establishment of anti-tank fire on the beach. So effective was naval gunfire on this occasion that the tanks were successfully repulsed at a most opportune time. Had there been no naval gunfire support, or had it been less effective, our landing force in all probability would have been driven into the sea.

By the 13th, most of our ships had completed unloading and left the area.

* * *

As our troops advanced inland and along the coasts from their landing points, their advance was supported from time to time by naval gunfire. During the period July 12-14, our cruisers and destroyers bombarded Porto Empedocla and Agrigento, this bombardment being one of the factors which contributed to the capture of those towns on July 17. This bombardment was followed by a short lull, in so far as naval participation was concerned (a second contingent of transports had already arrived) and it was not until the end of the month that our forces were again employed directly in the attacks. On July 31, fresh troops were transported to Palermo. These transports were attacked by German air forces when in Palermo harbor, but were effectively protected by our destroyers.

Throughout the month of August the Navy supported the movements of land forces as they closed in on Messina. Naval gunfire destroyed shore batteries, roads, bridges, and other objectives, and on August 17, a task force of cruisers and destroyers proceeded against Southern Italy.

Landings in Italy

Landings in Italy were in logical sequence to the occupation of Sicily. Shortly after the Sicilian operation was completed, British forces began crossing the Straits of Messina, and in order to assist these forces in their progress up the Italian Peninsula, a combined Anglo-American attack was undertaken some distance in the rear of Axis troops opposing the British. The general region chosen was that portion of the Italian coast extending from Cape Circeo to the southern headland to the Gulf of Policastro and containing the important harbors of Naples, Gaeta, and Salerno. The particular part of the coast selected for the initial assault was the Bay of Salerno, which offered a number of beaches suitable for troop landings.

Although the troops employed in the landings were exclusively British or American, the naval forces supporting them were mixed. The latter were placed under the command of Vice Admiral Hewitt and divided into two parts, one of which was predominantly American and the other predominantly British. The American (southern) attack force was assigned coverage for the landings at Salerno.

The principal American convoy assemble at Oran, and British forces formed up at Tripoli, Palermo, Termini (in Sicily) and Bizerte, and from time to time, beginning September 5, sailed from the points of assembly.

The landings were made on the morning of September 9, and although successfully accomplished, met immediate resistance from the Germans, who delivered a series of air attacks for the next two days. Also, enemy fire on the ground was intense, exceeding anything previously experienced and proving considerably more troublesome than had been anticipated. In spite of the resistance, however, (which included counterattacks, some of which were broken up most opportunely, as at Licata, by fire of naval vessels) the port of Salerno was captured by the 10th, and after heavy fighting on the 11th and 12th in the vicinity of Salerno, the town of Battipaglia was captured.

On the 13th and 14th, the enemy succeeded in retaking some of the ground previously gained by our troops. Our naval units, however, continued to lend reinforcements and supplies, and Allied warships, including battleships, cruisers, and destroyers bombarded enemy posi-

tions. During the remainder of the operation, our naval forces kept up a steady flow of supplies to the various beaches, bombarded shore objectives, helped to repel air raids, and finally on October 1, took the city of Naples under bombardment.

For several months our naval forces continued to operate in the Mediterranean area chiefly in supplying our troops in that theater and in keeping open the lines of supply.

On January 21, 1944, a joint force landed at Anzio, Italy, and there established a beachhead. The amphibious task force participating was under the command of Rear Admiral F. J. Lowry. Gunfire support for the operation was furnished by cruisers and destroyers.

IV — *Teamwork*

The Navy Team

Representing as it does intense scientific research and the development of various methods of fighting for hundreds of years, modern naval warfare is admittedly complex. Historically, any new method of fighting, whether with or without new weapons, has been productive of counter measures which are usually successful in reducing its effectiveness. This may be expected to continue. So far as new methods and weapons are concerned, we are in a position to set the pace.

The Navy, perhaps more than any other of the services, is dependent on a high quality of engineering skill and practice. All our ships and planes, the establishment which designs and builds them, and the equipment which operates and arms them could not exist without the engineer and the technical expert. We are fortunate in having in the United States in an unequaled degree the necessary engineering brains, educational facilities and technical knowledge.

Each technician on board ship must learn not only how to operate his own particular part of its machinery, he must also learn how to operate it so that it will contribute most to the efficiency of that ship as a unit. There is no better example of the necessity of team work than a modern man-of-war. In a submarine, for instance, every man in the crew and every officer, has a job which directly affects the handling and operating of the ship, her hitting power, and her survival, and each depends on the other to do the right thing at the right time.

Once a unit is trained to operate efficiently by itself, the next problem is to train it to operate with other ships and planes so that all may function as parts of a powerful but smooth running machine. Each unit must learn to play its position on the team, and the whole team must be equipped, coached, drilled and taught to fight and win, anywhere in the world.

Mobility is one of the prime military qualities. The surface, submarine and air forces of the Navy possess mobility in a high degree. With the increased tempo of our operations, therefore, the question of timing—strategically and tactically—is all important. It is the basis of the coordinated striking power—the over-all "teamwork"—which has been successfully used in past operations, and which we count upon with confidence for even more successful operations, yet to come.

The Army and Navy Team

In February, 1942, the President established an agency known as the U. S. Chiefs of Staff, (frequently called the "Joint Chiefs of Staff") whose function it is to exercise strategic control of our armed forces in the war. The members of the U. S. Chiefs of Staff are the Chief of Staff to the Commander in Chief of the United States Army and Navy; the Chief of Staff of the United States Army, the Commander in Chief, United States Fleet and Chief of Naval Operations; and the Commanding General, Army Air Forces.

By effective coordination of strategic plans and their execution the U. S. Chiefs of Staff have in effect operated the Army and Navy as one national military force. Furthermore, by continuous exchange of information of all kinds, including that relating to operating techniques, new weapons, and strategic and tactical problems, the two services have been able to derive the maximum benefit not only from each other, but from all other agencies whose activities have a direct bearing on the conduct of the war.

In keeping with the unity of action taken by the U. S. Chiefs of Staff, that agency has worked out and established certain principles relating to unity of command in joint operations. Under those principles, and having due regard for the qualifications of the officer and the type of operations likely to predominate in a given theater, the supreme commander in the theater, and his principal subordinates, may be officers of any one of the services. For example, it was agreed that under certain conditions unity of command in our sea frontiers (which correspond generally to Army defense commands) would be exercised by naval officers. Under other conditions, unity of command would be vested in Army officers. Another example was the unity of command vested in General Eisenhower in the North African operation. Still another is the unity of command exercised by Admiral Nimitz in the Pacific Ocean.

The principle of unity of command as it exists within our own forces, by agreement with the British Chiefs of Staff, is extended to situations where forces of more than one nation are engaged in the same operation. The operations in the Mediterranean theater illustrate that arrangement, which has worked well.

The Allied Team

The British Chiefs of Staff or their representatives in Washington and the U. S. Chiefs of Staff working together are known as the Combined Chiefs of Staff.

The headquarters of the Combined Chiefs of Staff, consisting of the U. S. Chiefs of Staff and representatives of the British Chiefs of Staff are in Washington and there the day to day problems of the war are under continuous consideration. Representatives of other Allied nations and dominions attend the Washington meetings from time to time.

At intervals the Combined Chiefs of Staff, consisting of

the U. S. and British Chiefs of Staff, together with the heads of their respective governments, have met to discuss and decide upon the over-all conduct of the war. In meetings at Casablanca, Washington, Quebec and Cairo-Teheran during the year 1943, agreements of far reaching importance were reached. Russian representatives attended the Teheran and Chinese representatives were present at Cairo.

These international conferences, which are of sufficient duration to allow thorough presentations of matters of mutual interest, make possible on-the-spot decisions not only with respect to strategy and command relationships for combined operations but also with respect to the commitments of each country.

In addition to the foregoing, the discussions relating to the war effort in the Pacific area were made possible by the formation of the Pacific War Council. That body over which the President of the United States presides, is composed of representatives of the United States, Australia, Canada, China, the Netherlands, New Zealand, the Philippine Commonwealth, and the United Kingdom. The Council does not meet regularly, but was established as a means to promote informal exchanges of views and information.

V — *Conclusion*

As this report is concluded we can look back with satisfaction on the progress of the war to date, and with just pride in the part played therein by the United States.

In the European theater, our forces have taken part in driving the enemy out of Africa, and have shared in the occupation of Sicily and in the invasion of Italy, which resulted in its capitulation. The Russian army, turning against the Germans in an irresistible offensive has driven them back to the borders of Poland and Rumania. France has been given new hope. Instead of being a daily target for the German air forces, Great Britain has become a base for an air offensive against the heart of the Axis on a scale which dwarfs the greatest German attacks of the war. The German submarine fleet has been reduced from a menace to a problem. The encirclement of Germany is in sight.

As of March 1, 1944, the situation in the European theater is increasingly desperate for the Axis and correspondingly encouraging for us.

The German structure of satellite states is crumbling. Italy has fallen and is a battlefield in which 20 German divisions are taking heavy punishment. Rumania, Bulgaria, Hungary and Finland are weakening. The Balkans are aflame with guerrilla war, and other occupied countries wait only the signal.

The Russian armies continue to advance, a massive invasion threatens in the West, and with all this, Germany is scientifically and remorselessly being bombed on a scale whose magnitude and increasing tempo have flattened her cities, wrecked her factories, and can not but be a major factor in her eventual collapse.

In the Pacific theater, the Japanese, after their attack on Pearl Harbor, advanced with impressive speed and power through the Philippines and the Netherlands East Indies into the Solomon Islands, in the general direction of Australia and New Zealand. Following these successful advances, they effected landings in the Aleutian Islands and attacked Midway. The Japanese advance was checked, however, almost as abruptly as it had begun. Our successes in the Solomons, in the Central Pacific, and in the Northern Pacific, are now matters of record, and we have had time to build up our strength, and to test our power. Our outposts, which two years ago were on a line running from Dutch Harbor in the Aleutians to Midway, thence to Fiji, Samoa, and Australia, now begin at Attu, on the tip of the Aleutians, and extend south through the Marshall Islands to the Bismarcks and New Guinea.

Through experience, we have mastered and improved the technique of amphibious operations, in which the Japanese were so proficient in the early days of the war. Our Army and Navy forces have learned how to fight as one team. We have learned how to make the most of what we have, but it is no longer necessary to ask our commanders to get along as best they can on inadequate means. The numerical inferiorities which were so pronounced in the Java Sea campaign, and in subsequent actions in the Solomons have been reversed. Our submarines and planes are cutting deeper and deeper into the vital Japanese shipping, and our fleets move in the Central Pacific unchallenged.

The war against Japan has gone increasingly well of late. From their posts of maximum advance in the Pacific, the Japanese have been driven back progressively by a series of offensive operations. Important as our own advances toward Japan are, they do not fully represent the improvement in our position. Japanese capacity to maintain the war at sea and in her advanced areas has suffered increasingly, due to the loss of vital shipping, while the growth of our power in the Pacific enables us to threaten attack on the Marianas and Carolines and Kuriles, which may be called the intermediate zone of defense of the Empire.

Japan will not be directly under attack as Germany is now, until the citadel area of that empire, island and continental, is under our threat or control, but the current and prospective circumstances in the Pacific Theater present a situation which must be as dark and threatening to Japan as it is full of promise to us.

Both in Europe and in the Pacific, long roads still lie ahead. But we are now fully entered on those roads, fortified with unity, power, and experience, imbued with confidence and determined to travel far and fast to victory.

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