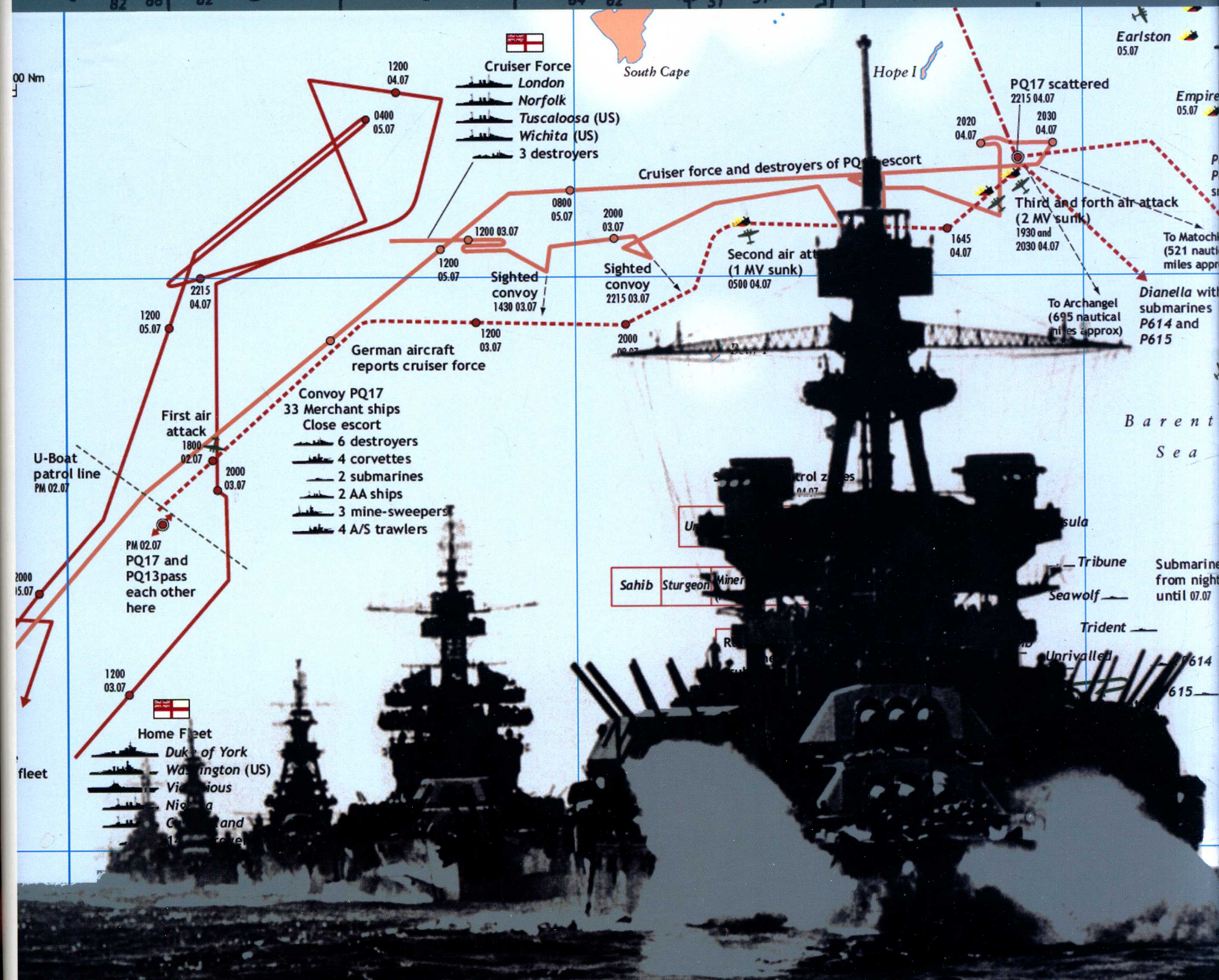
WAR AT SEA

A NAVAL ATLAS 1939–1945



MARCUS FAULKNER

Introduction
ANDREW LAMBERT

WAR AT SEA

A NAVAL ATLAS 1939–1945

MARCUS FAULKNER

Introduction
ANDREW LAMBERT

Cartography
PETER WILKINSON

NAVAL INSTITUTE PRESS
Annapolis, Maryland

TITLE PAGE: Capital ships bombard Salerno, by Richard Eurich
(© *National Maritime Museum, Greenwich, London, BHC1566*)

This book was brought to publication with the generous assistance of Marguerite and Gerry Lenfest

First published in Great Britain in 2012 by
Seaforth Publishing,
Pen & Sword Books Ltd,
47 Church Street,
Barnsley S70 2AS

Published and distributed in the
United States of America and Canada by the
Naval Institute Press,
291 Wood Road, Annapolis,
Maryland 21402-5034

www.nip.org

Library of Congress Control Number: 2012931089

ISBN 978 1 59114 560 8

This edition authorized for sale only in the United States of America,
its territories and possessions, and Canada

Printed and bound in China

WAR AT SEA

Preface

The war at sea spanned the entire duration of the Second World War, from the outbreak of hostilities in Europe in September 1939 through to the formal Japanese surrender on board the American battleship USS *Missouri* on 2 September 1945. For seventy-two months naval operations were conducted on a hitherto unprecedented scale across all the world's oceans, from the Arctic to the shores of small, unheard of islands in the southern Pacific. Key naval engagements like the *Bismarck* hunt and the battle of Midway, or major campaigns such Leyte Gulf have always been central to any histories of the war, and each year countless new books are published that focus on individual operations, technical aspects, or personal memoirs; as a result, the broader view of the war at sea has sometimes become neglected and distorted. The magnitude of the conflict has often driven historians to divide up the history of the war in terms of theatres, themes, or other subjects, and as armies and air forces are inclined to think and operate in terms of theatres or campaigns, such compartmentalisation does not necessarily hinder an understanding the war on land and in the air.

Navies, however, tend to think and operate on a far wider and often global scale. They derive their strategic flexibility from their ability to withdraw into the vastness of the oceans, and they may strike from the depths, taking the enemy by surprise. Naval warfare is more fluid than its counterpart on land, with frontlines being permeable and lines of communications more pliable. By focusing on battles or ships, or the aircraft and men that were brought together into the largest fleets ever assembled, the scale, complexity and interdependence between the various theatres is easily lost. The ability of maps to convey both space and time in a concise manner makes an atlas the ideal medium with which to retell the history of the war at sea between 1939 and 1945.

This book can be used in two different ways. First, as the maps are organised along largely chronological lines, it may be read cover-to-cover as a naval history of the war. Secondly, as each individual spread has been designed to be self-contained, it can be used as a reference for those seeking to understand a particular campaign or type of operation. Maps are often used in books to support the narrative, but here they are at the centre. The aim is to provide an overview of the war at sea and, at the same time, a comprehensive treatment; so all levels of war are covered with strategic overviews, operational movements and small-scale tactical actions, and all major types of operations, surface engagements, aircraft carrier operations and amphibious assaults are included.

Although short texts accompany the majority of the maps to provide some context, the emphasis is always on the latter to convey the key details. Colour enables another layer of information to be added without affecting the clarity of the maps themselves. The use of colour and ship symbols is designed to be illustrative rather than dogmatic. For example, on some of the strategic overviews Vichy French territory is depicted as being under axis control insofar as it was neither neutral nor available for allied use, while on more detailed maps a distinction between Vichy and Italo German controlled territory is made. Similarly, and depending on the context, at times allied territory is depicted in different shades of red when this matters. In the case of the small-scale tactical maps in the southwest Pacific, it is meaningless to attribute territorial control to one side or the other as many of the islands were largely unoccupied. Time poses another significant problem as the use of time zones differed between navies, but every effort has been made to be consistent within each map. Similarly, orders of battle have been checked against numerous sources, but it is not always possible to accurately determine which ship was with which force in large-scale, multi-day operations. Although a broad convention underpins the composition of the atlas, the level of detail differs from map to map. The ship symbols are employed to show types of vessels not individual classes. All vessels smaller than destroyers are collectively referred to as escorts.

Some maps will be familiar while others depict new material. The vast majority of naval maps in print today may be traced back to the maps and charts produced by the British Admiralty in the immediate aftermath of the events which formed the basis of those utilised in the British Official Histories, foremost in Stephen Roskill's *War at Sea*, but also in the various theatre histories. Similarly, Samuel Morrison's semi-official *History of the United States Naval Operations in World War II* contains a vast array of maps and charts. Both sources are invaluable, but need to be approached with a degree of caution as they suffer from inaccuracies, particularly regarding axis strengths and movements. All official maps need to be reinterpreted, and in the case of this atlas they have been modified and adapted in the light of more recent research.

I must thank a number of people who have assisted on this project. Gierr Haar, John Jordan, and David Hobbs deserve thanks for allowing some of their material – respectively on the battle of Norway, Mers el-Kebir, and aspects of the Indian Ocean – to be adapted for use here. My colleagues Alessio Patalano and Ben Jones came to the aid with materials when certain maps needed additional clarification. Jeffrey Michaels, Len Barnett, Quintin van Zyl, Carlos Alfaro-Zaforteza and Roger Arditti have kindly commented on drafts and made suggestions over the years. Andrew Lambert more generally has always provided encouragement where necessary. At Seaforth, Julian Mannering has provided invaluable guidance throughout and his dedication has seen this project through to it its conclusion. Special thanks must go to Peter Wilkinson who has persevered with my seemingly endless supply of sketches, notes and modifications, and translated these into what follows. Without him none of this would have been possible.

Marcus Faulkner
London, March 2012

The Second World War at Sea

For all the fighting on land, the extensive bombing offensives, and even the use of atomic weapons in 1945, the outcome of the Second World War was settled by allied control of global oceanic communications. Control of communications served three critical functions. First, it secured key allied states against invasion, across the English Channel, the Atlantic and the Pacific. Secondly, it allowed the allies to pool resources, to shift ships, troops and aircraft between theatres as distinct and distant as the White Sea and the Sea of Japan, by way of the Mediterranean, the South Atlantic, or the Panama Canal. Finally, it enabled the allies to deliver land power by amphibious assault from Sicily and France to the distant islands of the Pacific. Sea power bound together the Grand Alliance of the United Nations, while at the same time keeping apart the axis powers. It gave the allies control over those parts of the world that were not engaged in the war, notably South America, and thus access to the key resources that they produced. This was not a question of winning battles, although they could be essential to maintain or exploit command, but of keeping open supply lines. The battles that mattered were fought to secure communications. As the great maritime strategist Sir Julian Corbett (1854–1922) wrote: 'Command of the sea, therefore, means nothing but the control of maritime communications, whether for commercial or military purposes. The object of naval warfare is the control of communications, and not, as in land warfare, the conquest of territory.' The maps in this innovative volume, while they cover the key actions and events, provide the ideal medium to visualise this movement of fleets, the interrelationship between theatres and the overall impact of sea power.

Corbett did not claim that sea power alone could win major wars; it had to be translated into land power. This process was most easily achieved in states far distant from the fighting, and the creation of the United States Army and Army Air Force between 1941 and 1945 is the most striking historical example of this process. Maritime strategists agree that the real measure of naval power is the impact it can generate on a conflict ashore. This much was obvious before 1914.

The First World War (1914–18) challenged some aspects of Corbett's strategic pattern, largely from the use of new air and subsurface weapons, but it did not alter the larger dynamics. The ability of Britain and France to control the world ocean gave them access to global sources of food, raw materials and industrial output, while effectively denying them to the Central Powers by blockade and linked economic warfare. For all the drama of the battle of Jutland on 31 May 1916, and the 1917–18 U-boat campaign against merchant shipping, Britain had working global sea control in August 1914 and retained it down to November 1918. Events like the failure of a major amphibious operation at Gallipoli did not threaten that maintenance of sea control. Not only did Imperial Germany fail to block British oceanic communications, but their attempt to do so through illegal and unrestricted submarine warfare played a major role in bringing the United States into the war as a co-belligerent alongside Britain and France. American troops, hardware and food began to flow into France in startling quantities in 1918, just as the German army lost momentum on the Western Front. As if to emphasise the uselessness of the High Seas Fleet, German sailors mutinied in October 1918 while the new German government scuttled most of the fleet at Scapa Flow the following year.

Limitations Between the Wars

While post-war British, Japanese, American and French tacticians re-fought the battle of Jutland, seeking a 'decisive' result, and more reflective men studied the U-boat campaign, the critical contribution of sea control to allied victory remained undervalued by nations that measured success in blood. The escalating cost of new warships – battleships were now three times bigger than the *Dreadnought* of 1906 – saw post-war reconstruction brought to a rapid conclusion with a disarmament treaty in 1922. American reluctance to fund the massive 1918 programme prompted the administration to sacrifice the projected 1918 ships, if other powers took similar action. The resulting Washington Treaty restricted the size of future warships, the numbers each power could own, and their replacement ages. It also imposed a capital ship building holiday that would ultimately last fifteen years. Several half-finished American and Japanese battleships were scrapped, along with an armada of older battleships, including the many British dreadnoughts. The Washington Treaty allotted Britain and the USA a ratio of 5 ships to 3 for Japan and 1.75 each for Italy and France. The tonnage limits translated this ratio into small battle fleets: by 1930 Britain and the United States had a mere fifteen capital ships, nine for Japan and five each for France and Italy. No one else mattered. Submarine campaigns against merchant shipping were declared illegal, but few can have been under any illusion about the effectiveness of such a stipulation. Washington saved money and defused tension but the process proved disastrous for the western democracies.

Avoiding a naval race suited the disinterested Americans and bankrupt Europeans, but the price of this short-term success was a massive asymmetric weakening of naval power in contemporary strategy. This mattered because armies and air forces had remained unlimited in size and power throughout the inter-war period. This severely disadvantaged the British who depended on the fleet to secure their global communications, trade and possessions, and deter continental military states. By contrast, it enhanced the relative power of continental military states, not least Nazi

Germany. When deepened and extended at the 1930 London Conference, the treaty process left Britain without the naval power needed to defend the oceanic communications of a global empire, gravely weakened the unique deterrent role of naval power in British strategy, and devastated the industrial infrastructure needed to rebuild the fleet.

Naval arms limitation was abandoned in 1936. The real cost of the Treaty policy became clear three years later. The Royal Navy was too weak to uphold vital British interests between 1939 and 1941 against resurgent German, Italian and Japanese fleets. As war approached, Britain and France recognised the need to exploit sea power, their only strategic advantage, to defeat Italy while relying on the Maginot line to hold, and economic warfare to defeat Nazi Germany. They could only hope that success in Europe would deter Japan. While the United States had begun a major naval reconstruction programme as part of Roosevelt's New Deal, this was primarily intended to drag the country out of recession, and Britain and France doubted that America would enter the war. They knew that in the long run sea power would win, but had good reason to fear the initial impulse of German aggression on land.

The key tool of aggressive land power would be the aeroplane. By 1939 aircraft had evolved from 100mph biplanes, with a tiny weapon loads, into 300mph all-metal monoplanes, flying long distances with heavy weapons. Mines and submarines had limited the offensive use of naval forces in the 1914–18 war; adding aircraft to land power assets further challenged the offensive role of sea power. However, the experience of the Great War had thrown up new ideas and weapons: purpose-built landing craft, aircraft carriers for overland strike missions, and improved gunnery systems and projectiles for shore bombardment. While these developments were important, their impact on the strategic balance between land and sea down to 1941–42 was limited by the Washington process, which restricted the size and numbers of platforms. New sensors also aided navies; British anti-submarine sonar was in operational service by 1939, and radar soon followed. Both would be critical to restoring the advantage of sea power.

Sea power produces its greatest strategic effect from a position of unchallenged control, something the allies would enjoy in the first six months of the war, and only recover in the middle of 1943. In the interval sea power functioned as a largely defensive asset.

The Global War

The Second World War witnessed the ultimate demonstration of sea power in global strategy. Allied sea control, contested but never broken, allowed them to concentrate their resources and overwhelm the essentially isolated axis powers.

In 1939 The Royal Navy was rapidly rebuilding but the fleet was still far too small, only a shadow of the mighty armada available in August 1914. Furthermore, it was hampered by obsolete, worn out ships, outdated machinery and key weaknesses in air combat. However, other fleets were nowhere near as well prepared. None had the chain of global bases and support infrastructure needed to wage world war, let alone the number of skilled personnel, ships, or sonar. Recognising this weakness, Germany used its limited naval resources for diversionary attacks on oceanic trade, before throwing everything into a massive gamble to secure Denmark and Norway, using land-based air power to protect the invasion convoys and support troops ashore against the Anglo-French response. Crippled by a paucity of carrier-based fighters and ineffective anti-aircraft systems, the Royal Navy lost the Norwegian campaign. The first major contest between sea and land power had been won by land-based aircraft. The second blitzkrieg defeated France, and this time sea power was reduced to evacuating defeated troops from Dunkirk. But Germany lacked the warships and shipping to cross the Channel in the presence of the world's greatest navy, with or without air superiority. This time sea power won.

Unable to attempt an invasion, Germany used French Atlantic ports to open the 'battle of the Atlantic', around which all other campaigns revolved. With occasional surface and air support, U-boats attempted to interdict British supply lines, but allied losses were kept to manageable levels by the convoy system, intelligence breakthroughs, and improved weapons, sensors and training. Britain was aided by a massive addition of shipping provided by occupied European counties, especially Norway, which, along with increasingly effective American shipbuilding effort, denied the Germans any prospect of victory in an attritional battle.

British success in the Atlantic depended on maintaining a working command of the surface of the ocean. With the British Home Fleet based at Scapa Flow – the unseen, often unnoticed pivot point of the entire conflict, positioned to intercept German ships heading for the Atlantic – the defence of convoys could be left to anti-submarine forces. In June 1940 Italy entered the war and France surrendered, and this left Britain facing the dread prospect of being outnumbered at sea. Prime Minister Churchill moved quickly, despatching Home Fleet units to sink or demilitarise the French Fleet at Mers el-Kebir. This resolute action demonstrated that Britain would go to any lengths to secure sea control. Hitler, Stalin and Roosevelt realised Britain would fight on. When the Mediterranean Fleet crippled the Italian battlefleet at Taranto and sank three heavy cruisers at Matapan the British secured sea control, which they exploited to conquer Italian-held Ethiopia and Libya. An ill-fated British expedition to Greece and the arrival of German land and air units turned the strategic balance. The Luftwaffe sank or damaged many Royal Navy warships, effectively disabled the key base at Malta, and supported Rommel's ground offensive in North Africa. By the spring of 1942 the British Mediterranean Fleet had been reduced to a handful of cruisers and destroyers. Only the withdrawal of German air units for Operation *Barbarossa* and American entry into the war enabled the

British to rebuild, cut German supplies to North Africa, and build up the army in Egypt using supply lines around Africa, the famous WS convoys. This enabled the army to overwhelm Rommel at El Alamein.

In late 1942, American and British ground forces landed in Morocco and Algeria. Operation *Torch* linked up with the British army driving west. The American army had crossed the Atlantic direct to the North African beachheads, in what was the most impressive long-distance strategic movement of the war. After heavy fighting ashore, the German army, almost 250,000 men, was cut off by the Royal Navy and forced to surrender; this was a disaster on the same scale as Stalingrad. Further amphibious landings in Sicily and Italy defeated Fascist Italy, but did not secure the Italian peninsula.

By this stage, pre-war and wartime production had created a new Royal Navy; five battleships, six aircraft carriers and many more cruisers, destroyers, submarines and above all ocean escorts had entered service. These last were essential to winning the pivotal communications battle of the entire conflict. For much of the war, Britain, Canada and their allies were content simply to keep the Atlantic sea lanes open. The destruction of the *Bismarck* and the German surface logistics effort by the Home Fleet in May 1941 proved a critical turning point. Only the menace lingered. American entry into war gave the U-boats a brief period of success on the American coast, but Germany lacked the resources to mount a decisive threat to allied sea communications. The U-boats could only delay the inevitable. By early 1943 the main American army was ready to move to Europe. Unwilling to risk losing significant numbers of men and materiel on the Atlantic passage, Roosevelt and Churchill decided it was time to annihilate the U-boats. Allied naval, air and intelligence assets, with improved training, shattered the U-boat arm in April and May, sinking over fifty boats. This sudden shift from defence to attack was made possible by a surge of new ships, and ships temporarily released from other theatres.

Some ships came from the other great convoy route, the Arctic run to Murmansk and Archangel. Established soon after *Barbarossa*, the Arctic convoys were the shortest and most obvious link between Britain and her new Soviet ally. These convoys served several purposes. Initially, they provided vital hardware to hard-pressed Soviet forces. British Hurricanes helped defend the Russian ports, and stabilised the Norwegian frontier; British tanks, mainly Valentines, made up a large part of the Soviet tank fleet in the decisive battle for Moscow in December 1941. Once the Soviets could make enough tanks and guns, the convoys carried American trucks, boots, rations, machine tools and fuel. The convoys also helped stave off Stalin's demands for the early invasion of northwest Europe, but the Royal and Merchant navies paid a high price in lives and ships. The convoys faced determined German air, surface and submarine forces, which recognised their task as a defensive mission to support armies on the Eastern Front. Alongside the human enemy, the convoys faced a greater, more implacable foe – a bleak frozen hell of mountainous waves, pack ice, hurricane force winds and endless night or day. By any calculation these were the most difficult sustained naval operations of all time.

When Dönitz withdrew his submarines from the Atlantic in late May 1943 the British switched their efforts to the Arctic to keep up the unrelenting pressure that Admiral Horton knew would be the key to breaking the morale of the U-boat arm. Stalin no longer needed the supplies but the convoys continued, ostensibly to maintain allied solidarity, but in reality to draw out and destroy German forces. In December 1943 the battleship *Scharnhorst*, attempting to intercept a convoy, was caught and sunk by the Home Fleet.

In May 1944 the Arctic route was suspended, the escorting warships were withdrawn, and sent south for the last great maritime strategic task in the European theatre, the invasion of France. Operation *Overlord*, 6 June 1944, was an amphibious warfare master class that deployed American, British and Canadian armies into Normandy, demonstrating the offensive character of sea power despite powerful defences. Detailed and thorough planning, effective logistics, overwhelming firepower and complete air cover from British airfields saw the allied troops across four of the five beaches with relative success. Despite the losses at Omaha Beach, the experience of Gallipoli had been reversed. Operation *Dragoon* used much the same hardware to put another American army ashore in the south of France soon after.

With the European theatre safely in the hands of allied land and air forces, the main units of the modern Royal Navy began to prepare for another war, joining the United States Navy in the Pacific for the 1945 campaign. It was a far cry from the dark days of spring and early summer 1942.

The Pacific War had opened with a stunning strategic surprise attack carried out by a six-carrier task force, repeating a formula the Japanese had employed in previous wars, at Pearl Harbor on 7 December 1941. The Japanese then swept across South East Asia and the South Pacific, seizing the Philippines, Indonesia, Malaya and Burma. Off Malaya land-based Japanese bombers sank the British capital ships *Prince of Wales* and *Repulse*. Yet this startling Japanese success contained the seeds of disaster. Japan depended on massive imports of key strategic raw materials, notably oil, rubber, tin, iron, copper and food. The newly-won empire was so vast that it could not be effectively exploited by the existing Japanese merchant fleet, and very little extra tonnage was acquired in the early campaigns. From December 1941, the Japanese merchant fleet began to shrink as war losses and the stresses of the sea took a heavy toll, while both the navy and the army demanded ever more tonnage for military logistics. Many distant posts were effectively isolated. Nor should it be forgotten that Japan's main war effort from 1936 until 1945 was the conquest of China where vast armies were deployed. Every new possession only added to Japan's

catastrophic overstretch, leaving it vulnerable to a major assault on maritime communications.

As their Asian Empire collapsed the British could only scrape together an extemporised Eastern Fleet of old battleships and new carriers, the latter with precious few modern aircraft and no operational training. There was nothing else available. The Home Fleet could not spare more ships; it had already sacrificed two capital ships to defend Singapore and needed every remaining ship to keep the German surface fleet locked up and to cover the Atlantic and Arctic convoys. The lowest point of the war for British sea power, and in consequence the closest the allies came to defeat, came when the Pearl Harbor task force surged into the Indian Ocean in March 1943. Fortunately, the Japanese did not stay long; after beating up Ceylon, raiding the Bay of Bengal and sinking some isolated warships, they went back to the Pacific.

No sooner had the Japanese departed than a British amphibious operation seized Vichy French Madagascar, blocking any attempt to either cut the vital convoy system that supplied and reinforced the British army in Egypt, or to reach the South Atlantic. Operation *Ironclad* kept the German and Japanese wars isolated. Having demonstrated the resilience of sea power the Eastern Fleet broke up; the old battleships provided fire support for amphibious operations: the carriers prepared for another ocean. Skilled men were key assets throughout the naval war, and there were never enough in any navy.

In June 1942, only a month after *Ironclad*, the Japanese set up a decisive battle off Midway Island, hoping to wipe out the last American carriers. The plan was unnecessarily complex, deploying several formations across vast ocean spaces, well beyond the possibility of mutual support, while relying on the carriers to conduct two key tasks. Initially, the carriers would soften up Midway for an invasion. This, it was assumed, would bring the American carriers scurrying out from Pearl Harbor, over a submarine ambush, before the Japanese carriers struck. Making bold use of partial intelligence insights, the Americans ambushed and sank all four Japanese carriers while they were still engaged in the first phase operation.

Despite Midway the Pacific war would hang in the balance for another year. The American invasion of the Solomon Islands set up a massive land/sea/air battle of attrition, slowly grinding down Japanese fighting power and effectively wiping out the elite cadre of pre-war carrier pilots. The Americans paid a heavy price for their victory, and it was not until mid 1943 when new ships, notably Essex class fast carriers, entered service that the next round of offensives could begin. After Midway the Americans built up irresistible naval and amphibious power, using overwhelming mobile logistics and armadas of fast carriers to cut off and capture key islands from New Guinea to the Philippines. The invasion of the Marianas and the Philippines forced the inferior Japanese force to risk fleet actions, where American firepower and intelligent use of initiative at all command levels left the Imperial Japanese Navy a shattered remnant, without either the fuel to sail, or the trained pilots to fight. Resorting to Kamikaze suicide missions demonstrated that the Pacific war had become asymmetric. Japan could not win by conventional methods.

By late 1944 the Americans had secured island bases within heavy bomber range of the Japanese home islands. The bombing offensive culminated in fire-storm raids that devastated Tokyo. Meanwhile, the US submarine fleet annihilated largely unconvoyed Japanese merchant shipping. They succeeded because the Americans were dominant at sea and in the air. By 1945 American sea power had annihilated Japanese communications, dismantling the Empire, and paving the way for the amphibious conquest of Japan. Atomic bombs averted the need for invasion, or the slower sea power option of sustained blockade. The scale of the Pacific war forced the Americans to create new ways of using naval power, notably by adopting support forces to extend the operational range of fleets through refuelling and replenishing at sea.

The absolute ubiquity of allied sea power is eloquently exemplified by the wartime employment of two British capital ships. In 1939 the rebuilt Jutland veteran HMS *Warspite* was the flagship in the Mediterranean; in April 1940 she fought a major battle deep inside the Narvik Fjord in Northern Norway, before returning to sink an Italian cruiser at Matapan, and survive bomb damage off Crete. After a spell as flagship of the Eastern Fleet, *Warspite* supported the Salerno landings, only to be hit by a radio-guided bomb. Hastily patched up, with only three turrets working, she served at D-Day, and finally in the attack on Walcheren in November 1944. The new battleship HMS *King George V* entered service just in time to help sink the *Bismarck*, provided fire support in several European operations and then moved to the Pacific, where she was the last British capital ship to fire her guns in anger, on the very last day of the war.

The maps that follow offer a new and strikingly different approach to understanding the global naval war. They cover all the major events at sea, along with numerous smaller or largely unknown events. Critical battles are examined in detail, while the overviews set them in the wider strategic context, and illustrate where and how naval forces had an effect ashore. In a study that emphasises the maritime nature of allied grand strategy the maps cover air, submarine, and amphibious operations, as well as the critical convoys that linked the main theatres. Finally, this is a truly international perspective, covering the activities of all major and numerous minor navies. The scope, scale and cartographic nature of this volume offers a unique and rewarding new way of comprehending the sometimes unfathomable complexity of the naval war between 1939 and 1945.

ANDREW LAMBERT

General Key and Abbreviations

Allied Ships

British ships
- Battleship/Battle cruiser
- Carrier
- Escort carrier
- Cruiser
- Destroyer
- Submarine
- Escort
- Seaplane carrier
- Minesweeper
- Minelayer
- Gunboat
- Monitor
- MGB/MTB
- Motor launch

American ships
- Battleship
- Carrier
- Escort carrier
- Cruiser
- Destroyer
- Submarine
- Seaplane tender
- PT Boat
- Escort

French ships
- Battleship/Battle cruiser
- Carrier
- Cruiser
- Destroyer
- Submarine
- Torpedo boat
- Escort

Soviet ships
- Battleship
- Cruiser
- Destroyer
- Submarine
- Minesweeper
- Escort

Polish Ships
- Destroyer
- Submarine
- Torpedo boat
- Minelayer
- Minesweeper
- Escort

Axis Ships

German ships
- Battleship
- Panzerschiff/*Graf Spee*
- Cruiser
- Destroyer
- U-boat
- E-boat
- Torpedo boat
- Minesweeper
- Auxiliary cruisers

Italian ships
- Battleship
- Cruiser
- Destroyer
- Submarine
- Torpedo boat
- Escort boat

Japanese ships
- Battleship/Battle cruiser
- Carrier
- Cruiser
- Destroyer
- Submarine
- Submarine tender
- Seaplane carrier
- Torpedo boat
- Escort
- Auxillary cruiser

Generic ship symbols
- Escort carrier
- Armed merchant
- General cargo
- General cargo
- Tanker
- LS Tank
- LS Infantry
- Landing craft
- Troop transport - converted liner
- Tug
- Oiler

Circles denote airfields

Allied	German/Italian	Japanese
		Short range/fighters
		medium range bombers/patrol aircraft
		long range/heavy bombers/patrol aircraft

- Catapult aircraft
- Japanese seaplane base
- Allied seaplane base
- Submarines/beacon subs (Allied, German/Italian)
- Denotes Flag ship (Allied, German/Italian, Japanese)
- Plan view of ships (Allied, German/Italian, Japanese)
- Major Naval Bases/Facility
- Naval District Headquarters (US)
- U-boat base
- Convoy symbol
- Light house
- Radar
- Oil facility
- Anti-aircraft battery
- Gun battery battery
- Allied airborne attack
- German airborne attack
- Battle/Engagement

Mines
- Allied
- Axis
- French

- Torpedo attack
- Open fire
- Ships damaged
- Smoke
- Ship sunk

Military units
- XXXXX Army group
- XXXX Army
- XXX Corps
- XX Division
- X Brigade
- III Regiment
- II Battalion
- I Company

Military units-types
- Infantry
- Armoured
- Airlanding and Luftwaffe field
- Airborne
- Artillery

Territory
- Allied/British/American
- German/Italian Axis
- Japanese
- French
- Dutch
- Contested
- Neutral
- Largely unoccupied territory (Pacific)

Atlas Abbreviations

AA - Anti-aircraft
ABDA - American-British-Dutch-Australian
A/C - Aircraft
AMC - Armed Merchant Cruiser
A/S - Anti-submarine
BPF - British Pacific Fleet
CAP - Combat Air Patrol
CC - Coastal Command (RAF)
Cdo - Commando
CNO - Chief of Naval Operations
D/P - Dual purpose
HMS - His Majesty's Ship/HM Submarine
HMAS - His Majesty's Australian Ship
FAA - Fleet Air Arm
ID - Infantry Division
IJN - Imperial Japanese Navy
KGV - King George V (British battleship)
KM - Kriegsmarine
Kts - Knots
LCF - Landing Craft Flak
LCG - Landing Craft Gun
LCT - Landing Craft Tank
LRDG - Long Range Desert Group
LSI - Landing Ship Infantry
LSM - Landing Ship Medium
LST - Landing Ship Tank
MCAS - Marine Corps Air Station (US)
MGB - Motor Gun Boat
ML - Motor Launch
MotD - Motorised Division
MTB - Motor Torpedo Boat
NAS - Naval Air Station (US)
OKM - Oberkommando der Marine
PBY - Catalina patrol aircraft (US)
Pz - Panzer
PzGr - Panzergrenadier
RAF - Royal Air Force
RAAF - Royal Australian Air Force
RCN - Royal Canadian Navy
RCT - Regimental Combat Team
RM - Royal Marine
RMS - Royal Mail Ship
RN - Royal Navy
RNN - Royal Netherlands Navy
RV - Rendezvous
SBS - Special Boat Service
S/M - Submarine
Sqn - Squadron

Contents

WAR AT SEA

A Naval Atlas 1939–1945

British Seapower, 1939

On the eve of the Second World War Britain possessed the largest fleet and network of naval bases of any of the major powers. For Britain, as an island nation reliant on imports and at the centre of an imperial trading system, the maintenance of seapower was of fundamental importance. The traditional role of the Royal Navy was to secure maritime communications and trade protection. It was the only navy capable of operating worldwide and could also draw upon the resources of the small dominion navies.

Although financial and political factors had reduced the size of the Royal Navy since 1918 and limited its development throughout the inter-war years, the British remained at the forefront of naval innovation. In the 1920s British naval strategy focused on dealing with the Italian and Japanese navies, however, the re-emergence of the German naval threat after 1933 complicated planning and strained the available resources.

In response to the deteriorating international situation British naval rearmament increased considerably. First World War era battleships were modernised and new warships ordered. By 1937 Britain was already pulling ahead in the global naval arms race with five new battleships laid down that year along with four aircraft carriers having been ordered. More warships of all types were laid down before September 1939.

Operationally the Royal Navy was divided into two main fleets and a series of overseas stations. The Home Fleet, composed of the 2nd Battle Squadron, the Battle Cruiser Squadron and at least two carriers, was assigned to enforce a naval blockade of Germany. The 1st Battle Squadron served as the core of the Mediterranean Fleet assigned to deal with the Italians. The primary role of the overseas stations was local trade protection and around half the British cruiser strength was allocated to this role.

HOME WATERS
C-in-C HOME FLEET
ADMIRAL *SIR CHARLES FORBES*
9
4
20
83
21

ROYAL CANADIAN NAVY
REAR ADMIRAL *PERCY W. NELLES*, RCN
CHIEF OF NAVAL STAFF

TOTAL FLEET STRENGTH	
6	
MANPOWER	
Active	1910
Reserves	683

AMERICA AND WEST INDIES
VICE ADMIRAL SIR SYDNEY MEYRICK
4 (1 From RAN)
2

NORTH ATLANTIC STATION
REAR ADMIRAL *N. A. WODEHOUSE*
2
9
2

SOUTH ATLANTIC STATION
VICE ADMIRAL *G. H. D'OYLY LYON*
8 (South American Division composed of 3 cruisers)
4
4
2

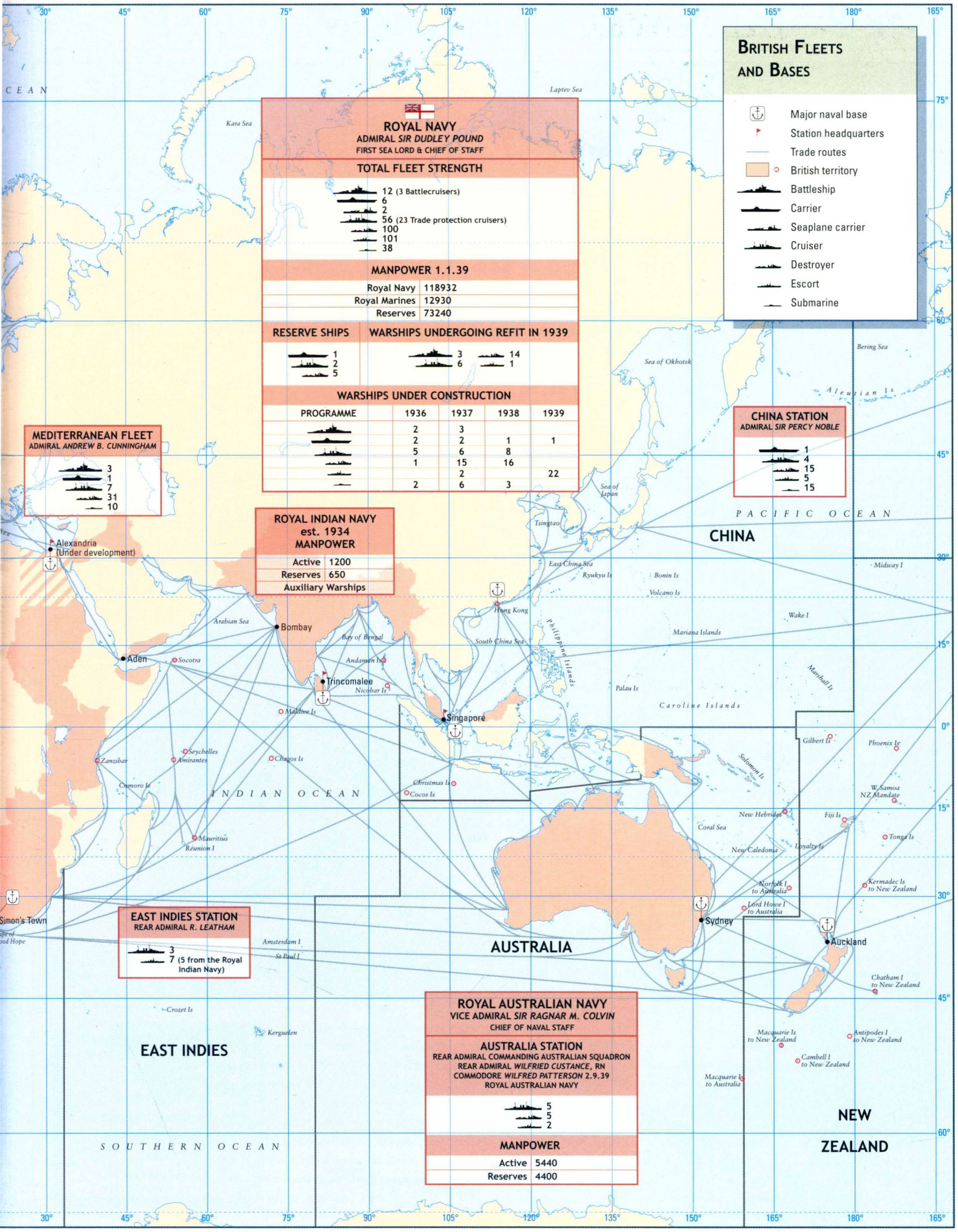
NEW ZEALAND DIVISION OF THE ROYAL NAVY
COMMODORE *E. H. HORAN*
CHIEF OF NAVAL STAFF

NEW ZEALAND STATION
COMMODORE NEW ZEALAND SQUADRON
CAPTAIN *EDWARD PERRY*
From 1.10.41 officially became
ROYAL NEW ZEALAND NAVY
2
6

MANPOWER	
Active	1954
Reserves	670

FLEET AIR ARM
Transferred from RAF in 1937
232 (Frontline)
191 (Training)

RAF COASTAL COMMAND
AIR MARSHAL *FREDERICK BOWHILL*
COAST COMMAND HQ - RAF NORTHWOOD
3 GROUPS UK (15,16,18)
11 Sqn - General Reconnaissance (Land)
4 Sqn - General Reconnaissance (Flying boat)
2 Sqn - Torpedo Bomber
200 Aircraft in total.
2 Flying Squadrons short of planned establishment


BRITISH FLEETS AND BASES
Major naval base
Station headquarters
Trade routes
British territory
Battleship
Carrier
Seaplane carrier
Cruiser
Destroyer
Escort
Submarine
ROYAL NAVY
ADMIRAL SIR DUDLEY POUND
FIRST SEA LORD & CHIEF OF STAFF
TOTAL FLEET STRENGTH
12 (3 Battlecruisers)
6
2
56 (23 Trade protection cruisers)
100
101
38
MANPOWER 1.1.39
Royal Navy 118932
Royal Marines 12930
Reserves 73240
RESERVE SHIPS
1
2
5
WARSHIPS UNDERGOING REFIT IN 1939
3
6
14
1
WARSHIPS UNDER CONSTRUCTION
PROGRAMME 1936 1937 1938 1939
2 3
2 2 1 1
5 6 8
1 15 16
2 22
2 6 3
MEDITERRANEAN FLEET
ADMIRAL ANDREW B. CUNNINGHAM
3
1
7
31
10
Alexandria
(Under development)
CHINA STATION
ADMIRAL SIR PERCY NOBLE
1
4
15
5
15
ROYAL INDIAN NAVY
est. 1934
MANPOWER
Active 1200
Reserves 650
Auxiliary Warships
EAST INDIES STATION
REAR ADMIRAL R. LEATHAM
3
7 (5 from the Royal Indian Navy)
ROYAL AUSTRALIAN NAVY
VICE ADMIRAL SIR RAGNAR M. COLVIN
CHIEF OF NAVAL STAFF
AUSTRALIA STATION
REAR ADMIRAL COMMANDING AUSTRALIAN SQUADRON
REAR ADMIRAL WILFRIED CUSTANCE, RN
COMMODORE WILFRED PATTERSON 2.9.39
ROYAL AUSTRALIAN NAVY
5
5
2
MANPOWER
Active 5440
Reserves 4400
Laptev Sea
Kara Sea
Bering Sea
Sea of Okhotsk
Aleutian Is
Sea of Japan
PACIFIC OCEAN
CHINA
Tsingtao
East China Sea
Ryukyu Is
Bonin Is
Volcano Is
Midway I
Hong Kong
Wake I
Mariana Islands
South China Sea
Philippine Islands
Palau Is
Caroline Islands
Marshall Is
Arabian Sea
Bombay
Bay of Bengal
Aden
Socotra
Andaman Is
Nicobar Is
Trincomalee
Maldive Is
Singapore
Gilbert Is
Phoenix Is
Solomon Is
W. Samoa
NZ Mandate
Zanzibar
Seychelles
Amirantes
Chagos Is
Comoro Is
INDIAN OCEAN
Christmas Is
Cocos Is
New Hebrides
Fiji Is
Coral Sea
Tonga Is
New Caledonia
Loyalty Is
Mauritius
Réunion I
Norfolk I to Australia
Kermadec Is to New Zealand
Lord Howe I to Australia
Sydney
Auckland
Simon's Town
Amsterdam I
St Paul I
AUSTRALIA
Chatham I to New Zealand
Crozet Is
Kerguelen
EAST INDIES
Macquarie Is to New Zealand
Antipodes I to New Zealand
Cambell I to New Zealand
Macquarie I to Australia
NEW ZEALAND
SOUTHERN OCEAN
30° 45° 60° 75° 90° 105° 120° 135° 150° 165° 180° 165°
75° 60° 45° 30° 15° 0° 15° 30° 45° 60°

THE ROYAL NAVY IN BRITISH WATERS