US Pacific Victory in World War Two

BY

BILL BRADY

FREE eBooks

WHOEVER
WHENEVER
WHEREVER
YOU ARE

INSTANTLY DOWNLOAD THESE MASSIVE BOOK BUNDLES

CLICK ANY BELOW TO ENJOY NOW

3 AUDIOBOOK COLLECTIONS

Classic AudioBooks Vol 1 ▪ Classic AudioBooks Vol 2 ▪ Classic AudioBooks Kids

6 BOOK COLLECTIONS

Sci-Fi ▪ Romance ▪ Mystery ▪ Academic ▪ Classics ▪ Business

GRATIAE

My deepest gratitude goes to my long-suffering family. I have now written several books and each one has impacted on them more than I would like and they deserve. My wife Kathleen, daughters, Lorraine and Michelle and grandchildren Devin, Tayla, Chloe and Ava have tolerated my preoccupation with 'the book' and all that goes with being a busy writer and military historian, with great fortitude and understanding.

Finally, to my wider family and close friends who have inspired me throughout. I am particularly grateful to my long-standing friend and former colleague Dr. Graham L Coggin for his outstanding editorial skills and constructive criticism throughout this work.

Thank you.

Bill Brady
Umhlanga Rocks
South Africa
2014

FOREWORD

This book is absorbing and is written persuasively. In the *US Pacific Victory in World War Two,* the author furnishes his readers with multiple intellectual dimensions, and makes it possible for us to learn from alternative military cultures in this broad overview of the making of war; from conventional weaponry to nuclear destruction.

Brady provides ample evidence that the advances of technology not only provided more deadly means of making war, but created conditions that made warfare more deadly. He has a wonderful command of his subject that involves the reader in his main argument while intriguing him with the unsuspected significance of seemingly minor details.

He accomplishes this feat with amazing dexterity. A brilliant feat of scholarly compression in which the author deploys the fruits of years of research, teaching, and thought, on the subject of war; I do not know a work in which such an encyclopaedic range of military knowledge is so well arranged. This is military history at its very best.

Dr. GL Coggin

Also by Bill Brady

World War Two, Cause and Effect
The Global Tragedy and Triumph 1939-45


THE UNION OF SOVIET SOCIALIST REPUBLICS
Irkutsk
ALEUTIAN ISLANDS
ATTU
KISKA
SAKHALIN IS.
KURILE ISLANDS
MONGOLIA
MANCHURIA (MANCHUKUO)
Vladivostok
Beijing
KOREA
JAPAN
HONSHU
TIBET
Sian
CHINA
KYUSHU
Shanghai
Chongqing
OKINAWA
INDIA
IWO JIMA
MIDWAY ISLANDS
FORMOSA (TAIWAN)
BURMA
Hanoi
HONGKONG
PEARL HARBOR
Rangoon
WAKE IS.
HAWAIIAN ISLANDS
LUZON
THAILAND
Manila
SAIPAN
Bangkok
INDOCHINA
GUAM
PHILIPPINE ISLANDS
MARSHALL ISLANDS
Saigon
YAP
MINDINAO
CAROLINE ISLANDS
MALAY PENINSULA
PALAU
TRUK
SINGAPORE
BORNEO
GILBERT ISLANDS
SUMATRA
INDONESIAN ARCHIPELAGO
equator ------- 0°
BISMARCK SEA
BOUGAINVILLE
Jakarta
NEW GUINEA
SOLOMON ISLANDS
Surabaya
JAVA
Port Moresby
CORAL SEA
GUADALCANAL
Darwin
SAMOAN ISLANDS
FIJI
NEW CALEDONIA
AUSTRALIA
Sidney
NEW ZEALAND
Japanese domination,
to Kiska, Wake, the Gilberts, Marshalls, and Guadacanal.
1600 km
1000 miles
©Frank E. Smitha 2001

CONTENTS

Chapter one

The U.S. Enters World War Two

In September 1939, when the European war broke out, opinion polls showed that the great majority of Americans favoured the Allies, although most were firmly opposed to joining them in their struggle against the Nazis. This dilemma was only to be resolved by factors unrelated to Europe. President Roosevelt was committed to the Allied cause, yet to win acceptance for this policy of support, he had to promise that he would not send American troops to fight in Europe. Roosevelt and his closest advisers, felt unable to say openly what they recognised in private: that Britain, by the end of 1940 could not win the war without American armed intervention. Therefore, rather than risk alienating the American public, Roosevelt judged that the best course was to win support for a policy of all aid; short of war. This was a significant shift away from strict neutrality.

All he could do was try and break down, bit by bit, the extreme neutrality behind which the United States had chosen in the 1920's and 1930's. Isolationism was as old as American history, it was the expression of a newly-independent nation's attitude towards its European ancestry. In general, Europe represented the corrupt and the decadent. Americans had no interest in European power politics, and wished to be left alone to construct their new society.

The product of this combination of moral disdain and political self-sufficiency took the form of a rigid abstention from what were described as 'entangling alliances', whether defensive or offensive. The much invoked Monroe Doctrine, which, with its hemispheric demarcation line between the virtuous New World and the amoral Old World was accepted by Americans as self-evident as those 'rights' which had justified their original breakaway.

Lacking any commitment to action, condemnation of Japan's aggression in the Far East served only as an irritant to the Japanese without deterring them in the slightest from realising their imperial goals. The fear of foreign entanglement was so intense that the administration went to great lengths to avoid open cooperation with the League of Nations. The refusal by the United States to agree to any positive commitment in the event of aggression killed the Geneva disarmament conference in 1934, for in the pursuit of the preservation of American freedom of action, America steadfastly refused to commit herself to action.

The results of the United States joining World War One in 1917 were the exact opposite of what they had expected. The Americans sincerely believed that the war had been 'the war to end all wars'. They had set out to put the world to rights, but the war itself, the peace negotiations, and the Treaty of Versailles had disillusioned them. And when in 1920 the Senate failed to ratify American membership in the League of Nations, the cause of collective security suffered a setback from which it did not recover for 20 years. By the time Roosevelt himself had become Democratic presidential candidate in 1932, he had hopelessly compromised his stand on foreign policy by repudiating the League. Whatever his private views on internationalism, Roosevelt was content, throughout his first term as President, to swim with the tide of isolationism which was sweeping the country.

The lessons of 1917-19, economic nationalism, the failure of the European nations to honour their war debts, all these seemed to confirm Washington's original opinion that it was in the United States' best interests to dissociate itself entirely from European affairs. The most extreme expression this attitude of mind came from was the isolationist bloc in Congress, and it was they who were responsible for those self-imposed shackles on American foreign policy; the neutrality laws.

The pressure for such legislation stemmed from the Senate's investigation of the munitions industry. It was alleged that the United States had gone to war in 1917 to protect the interests of profiteering bankers and munitions makers. The Senate pressed for legislation to prevent the circumstances of 1917 from recurring. The 1935 Neutrality Act put an embargo on the export of all war materials to belligerents, so as to preclude the possibility of arms manufacturers involving the nation in another foreign war (a ban on loans to belligerents was added in 1936).

The act also forbade American vessels to carry munitions to belligerents, and gave the President power to withhold protection from United States citizens travelling on belligerent vessels. The effect of these clauses was to surrender the freedom of the seas, and so the rights of neutrals which Wilson had gone to war to defend in 1917 were voluntarily given up. In 1937, however, the Neutrality Act *was* amended so as to incorporate a cash-and carry principle, whereby belligerents could purchase goods in America, but only if they paid cash, and transported them in their own vessels. This was the logical conclusion of Congress's concern to prevent contact with belligerents as far as was possible; short of undermining the American economy

Roosevelt was, however, becoming increasingly disturbed by the spread of violence in the world, and America's negative response to it. In an effort to abate the tendency to seek solution to political problems without resorting to war. He formulated an ambitious plan to call together a world conference to lay down the basic principles to be observed in international relations.

Roosevelt had succeeded only in puzzling his chiefs of staff, and infuriating his Secretary of State, Cordell Hull, who promptly vetoed publication of the world conference plan, which Roosevelt was forced to let drop, therefore, the Conference never got off the ground.

At Munich in 1938, he would not arbitrate, and he refused even to allow an American representative to attend the conference. Rather, he announced on 27th September that “the government of the United States seeks no political involvements in Europe, and will assume no obligations in the conduct of the present negotiations’. What steps he did take in 1938 were entirely within the context of hemisphere defence. His speech at Kingston, Canada on 18th August pledged American support to Canada, and in November he announced a $300 000 000 increase in defence expenditure.

As it happened, while expanding the home defence, Roosevelt was well aware that the armaments system he was developing could be brought to the aid of Britain and France in the event of a war with Germany. He hoped to give the maximum aid to the democracies consistent with remaining neutral. This meant rearming the democracies in peacetime, and amending the neutrality legislation so as to supply

them in wartime. During the course of 1939, both Roosevelt and his Secretary of State issued numerous warnings against leaving the neutrality laws as they were. For instance, in January, the President sent a message to Congress stating “we have learned that when we deliberately try to legislate neutrality, our neutrality laws may operate unfairly, and may actually give aid to an aggressor and deny it to the victim”. He cautiously concluded that “calling attention to these facts does not suggest that the Congress or the President have any thought of taking part in another war on European soil”.

Roosevelt had been considering action against Japanese aggression in China and the Far East for a long time. But up to this point he had done no more than endorse the State Department's repeated complaints to Japan, although it was to be many more months before even the most limited sanctions were applied. It should be realised that the adherents to the isolationist tradition were also believers in another traditional American foreign policy- the 'Open Door' in China. Americans considered the Far East more their sphere of interest than Europe. But their interest did not prevent them from greatly underestimating Japan's military strength.

If the administration was prepared to flex its muscles in the Pacific, its reaction when war eventually broke out in Europe illustrates perfectly the view of the world that Americans had created for themselves. Its first step was to demand a new neutrality law, without any arms embargo. Roosevelt used all his skill to overcome Republican opposition.

After six weeks, Congress conceded the main points: the arms embargo was dropped, and the Allies could now have access to American resources. The 1939 act, although a step away from the blinkered isolationism of 1935 and 1937, reaffirmed America's basic intention of clinging to a rigidly defined neutrality - a neutrality which specifically surrendered the internationally recognised rights of neutrals. Woodrow Wilson's 'mistake' of fighting to uphold the freedom of the seas would not be repeated. Hitler had won this first Battle of the Atlantic without a blow being struck.

The basic intention of the administration was firmly expressed by Roosevelt as soon as the war broke out: “I hope the United States will keep out of this war. I believe that it will. And I give you assurance and reassurance that every effort of your government will be directed to that end”.

On the face of it, this seems a complete concession to the isolationist case. Yet it is difficult to see what else Roosevelt could have said. An opinion poll taken immediately after the outbreak of war revealed that 30% of Americans wanted complete neutrality and a total embargo on belligerents, and another 37% wanted neutrality while allowing trade on a cash-and-carry basis. In other words, two-thirds of the nation wanted strict neutrality observed.

Only a tiny percentage of those polled were pro-Hitler, though this was only to be expected from a nation which abhorred Hitler's politics and aggression, and which had fought with Britain and France against Germany in 1917-18. But the lesson of the First World War which had made the deepest impression on the American people was that if war could not achieve everything, it could achieve nothing. For all

the pro-Allied feeling, Americans were strongly in favour of the neutrality laws, with their avowed intention of preserving the United States from entering the war. In a speech a few hours after the British and French declarations of war, Roosevelt had expressed the mood of the nation very accurately: “This nation will remain a neutral nation, but I cannot ask that every American remain a neutral in thought as well. Even a neutral has a right to take account of facts. Even a neutral cannot be asked to close his mind or his conscience”.

The simple truth of the matter was that while United States foreign policy was based on purely moral and legal considerations, which excluded the possibility, except where the Western hemisphere was concerned, of even the threat of action, it was doomed to failure. A nation's moral influence is in direct relation to its preparedness to use physical force. Roosevelt could condemn aggression as often as he liked, but while the tradition of isolationism forbade any intervention, and while the neutrality laws failed to make any distinction between aggressor and victim; Russia and Germany could safely invade Finland, and Denmark, and Norway, in the certainty that American protests would never be translated into deeds.

This was exemplified by the Finnish episode, which illustrated this in a particularly unhappy way. Americans were almost unanimous in condemning Russia's attack at the end of November 1939, and Roosevelt immediately imposed a moral embargo on the USSR. But neither the administration nor Congress was willing to allow the Finns to borrow money to buy arms abroad, which they desperately needed; and by the time Congress passed a bill allowing Finland $20 000 000 credit for non-military supplies, the 'Winter War' was practically over.

However, Hitler's offensive in the West, beginning on 10th May 1940, completely changed all American calculations. No longer could Roosevelt assume that the Allies would win with American material aid only; no longer could the nation assume that it was in no direct danger; indeed, there was a widespread fear that Hitler would soon be reaching across the Atlantic.

The President therefore immediately demanded a billion dollars from Congress to mechanise the army and enormously to expand aircraft production - and Congress granted a billion and a half. On 31st May, in the middle of the Dunkirk evacuation, Roosevelt sent another message to Congress: “The almost incredible events of the past two weeks necessitate another enlargement of our military program. As long as a possibility exists that not one continent or two continents, but all continents, may become involved in a world-wide war, reasonable precaution demands that American defence be made more certain”. In reply, Congress voted another billion dollars for the army, and nearly 700 million dollars for the navy. By October, defence appropriations totalled over 17 billion dollars.

Little could be done, however, to alleviate the plight of the Allies. Roosevelt made repeated efforts to dissuade Mussolini from entering the war; but he turned down the suggestion that he should send the American Atlantic Fleet to the Mediterranean to give weight to his persuasion. And he was helpless to answer the French and British pleas to enter the war.

It was at this point that Churchill made a series of specific requests, of which the most important was for the loan of 40 or 50 destroyers; and he also suggested that supplies from America should continue to flow even after Britain's financial reserves had been exhausted. Roosevelt pledged what little surplus was available. But the destroyer loan had to be rejected, for the administration did not relish the prospect of asking Congress to authorise the dispatch of vessels which, though old, were still on active service, and seemed essential for hemisphere defence. As for sending Britain supplies without cash payment, this was specifically forbidden by the neutrality laws.

On 10th June 1940, the day Italy declared war, Roosevelt made a major policy speech in Charlottesville, Virginia; in the heat of his indignation, he bitterly denounced Mussolini's 'stab in the back' (and so lost thousands of Italian-American votes in the 1940 presidential election). More important, he gave the most explicit pledge to the Allies, and linked it to a full-scale rearmament programme: “We will extend to the opponents of force the material resources of this nation, and at the same time we will harness and speed up the use of those resources in order that we ourselves in the Americas may have equipment and training equal to the task of any emergency”.

But this commitment, firm as it was, could not save France, nor even that element in the French cabinet which wanted to prolong the battle. Reynaud, the French Prime Minister, had repeatedly begged Roosevelt to, declare war on Germany, but Roosevelt did not go beyond his Charlottesville stand. Indeed, this stand represented American public opinion accurately: 67% of the nation favoured all aid to the Allies, but only 27% were prepared to go to war-and by July this figure had dropped to 15%.

Churchill was quick to ask for the material pledge in the Charlottesville speech to be honoured. The day after the speech, he reiterated his urgent request for destroyers, to ward off the threatened German invasion and to counter the intervention of the Italian navy.

Roosevelt’s advisers came up with a brain-wave. They suggested that the destroyer loan could be made more attractive to Congress by swapping the ships for British bases in the western hemisphere. The administration could argue that the deal would strengthen American defence, and would therefore conform to the provisions of the new act. The idea was quickly adopted, and effectively killed any opposition, as the isolationists had long argued acquisition of such bases.

The destroyers deal was of striking significance. First of all, it made it crystal clear that the United States had adopted, to all intents and purposes, a non-belligerent posture: neutrality precluded only armed intervention. Secondly, it was widely approved by the American public, and was not made the subject of partisan debate. It is the emergence of this new consensus which was the most important development in the United States in 1940.

It was undoubtedly the German conquest of France that brought about the acceptance of this loose interpretation of neutrality The humiliating defeats inflicted on the Allies brought home to the American people that the only barriers between the United States and Germany were the empty Atlantic and an ill-equipped, hard-pressed Britain. The possibility suddenly opened up of Hitler attacking South

America, and it seemed to more and more people that America's western frontier extended as far as Europe. The impact of the German successes was thus immediate and striking and there was a sudden upsurge in Roosevelt's popularity. Faced with the European crisis, Roosevelt decided to flout tradition, and stand for a third term as President.

On 19th June Roosevelt shrewdly appointed two leading Republicans, Stimson and Knox, to key positions in his cabinet: Secretary of War and Secretary of the Navy. The sympathies of both were strongly pro-Allied, and Stimson quickly persuaded Roosevelt to introduce peace-time conscription. The United States, in the name of hemisphere defence, had taken another step towards intervention in Europe.

The support of leading Republicans for Roosevelt's foreign policy was highly significant. Constantly in American history, Presidents had been unable to pursue an active foreign policy in the last year of their term of office, because they lacked any guarantee of continuity. But with the Republicans approving selective service and the destroyers, the whole issue of support for Britain was removed from the election campaign.

After June 1940, it was not *whether,* but *when,* America would enter the war. But this could not be asked openly: the illogical American public wanted to help Britain, but did not want to go to war. Towards the end of the presidential campaign, Roosevelt, for all his support for Britain, was forced repeatedly to insist that the United States would not be dragged into foreign conflicts. It was impossible to avoid giving this pledge: but it was a dishonest one, for by that time nearly all Roosevelt's advisers - and the President himself - realised that in the last resort America would have to intervene to defend Britain.

It was a cruel dilemma for Roosevelt: having made this pledge, he could not possibly enter the war till Germany or Japan thought it opportune to strike at America. Yet without such a pledge, Roosevelt could not be sure of winning a third term in which to give Britain the fullest possible aid.

The first priority was to keep the lifeline open, food had top priority, and Stimson and Knox advocated seizing German and Italian vessels in American ports, and handing them over to the British to fill the gaps in their cargo fleet. But this could only be a stop-gap. The two long-term measures which might save Britain were for the United States to supply all Britain's needs, without thought of payment, and to provide US Navy escorts for the British cargo vessel convoys.

The idea of Lend-Lease developed from a number of schemes suggested by cabinet members, and Roosevelt himself played a major part in the final formulation of the plan. In one of his most effective press conferences, on 17th December, 1940, he argued that, if your neighbour's house were on fire, you would lend him your garden hose to stop the fire spreading, and not demand cash payment for the hose. Lending or leasing American war material would keep Hitler at bay, without contravening the letter (if not the spirit) of the neutrality laws. Britain's desperate financial straits made Lend Lease essential.

In a 'fireside chat' on 29th December, Roosevelt developed the idea that the fullest possible aid to Britain would keep America out of the war: 'We must be the great arsenal of democracy,' he urged. 'We must admit there is a risk in any course we may take. But I deeply believe that the great majority of our people agree that the course I advocate involves the least risk now and the greatest hope for world peace in the future.'

There was a tremendous popular response to this speech. Taking up Roosevelt's calculated gamble, the opinion polls discovered that 70% of the electorate were now prepared even to risk war in order to help Britain. But there was a still a large percentage opposed to immediate American entry into the war, and Lend-Lease had yet to pass the Congressional hurdle. The debate in Congress dragged on for two months before Lend-Lease was finally approved, by reassuringly large majorities.

Churchill welcomed Lend-Lease as a 'new Magna Carta', and the *New York Times* hailed it as the end of the great retreat which had begun with rejection of membership of the League of Nations in 1920. Roosevelt himself described Lend-Lease as a commitment to collective security. But although the passing of the Lend-Lease bill was one of the turning points in the war, it certainly did not mark a sudden change in American foreign policy. This much is clear from Roosevelt's 'State of the Union' speech to Congress at the beginning of 1941. In this, he identified the two guiding lines of American foreign policy, national defence, and support for democracies resisting aggression: “We are committed to principles of morality and considerations for our own security”. And as if to underline the moral basis of his foreign policy, Roosevelt pledged himself to the defence of the four freedoms: freedom of speech and of worship, and freedom from fear and from want.

For the American people, Lend-Lease constituted no revolution in foreign policy: it was just another step in their slow weaning from isolationism. Indeed, the whole point of the operation was to keep within the limits of the neutrality laws. The isolationists were quick to denounce Lend-Lease as an evasion of the laws. They were undoubtedly right: but the administration was not yet prepared to challenge the Neutrality Act itself

Lend-Lease in itself would not win the war. The first appropriation of seven billion dollars (approved on 27th March) would make no difference to the Battle of the Atlantic. American industry in any case responded sluggishly to the increased demand; and there still remained the problem of making sure that the goods were delivered once they had been produced. But the question of convoying was one which Roosevelt was only too anxious to avoid.

The President was prepared to commit himself to a certain extent, and he took a number of steps to ease the pressure on the British. He secured from Congress authority to take over the Italian and German vessels in American ports, which enlarged the hard- hit shipping pool. The neutrality zone from which German warships had been warned to keep clear, was extended so as to take in the whole of Greenland; and eventually, Greenland was officially taken under United States protection. America also gradually took over the supplying of British troops in Egypt.

Throughout 1941, secret staff conferences were hammering out a joint Anglo-American strategy, in the event of the United States entering the war. From convoying, however, Roosevelt held back. Logic pointed towards it, and, indeed, this was just what Roosevelt feared, for the isolationists insisted that the logic of the President's actions would inexorably drag America into the war.

If a lack of public support dissuaded Roosevelt from establishing a convoy system, long-term strategic considerations also argued against a confrontation with Germany in the Atlantic, for the most direct threat to America came from Japan, whose ambitions could not be frustrated indefinitely. The danger from Japan had been contained in February 1941, by the strong hint of possible Anglo-American action, but the signing of the Russo-Japanese neutrality pact in April cancelled this out to some extent and brought about a renewed belligerency in the tone of Japan's pronouncements on Asian affairs.

American strategy was consistently aimed at keeping Japan quiet while ensuring that Britain held her own against Germany. On the one hand, this meant avoiding a German-American clash in the Atlantic, for fear of bringing Japan into the war under the terms of the Tripartite Pact, by which Germany, Italy, and Japan agreed to come to each other's aid if attacked by any power not' yet in the war. On the other hand, it meant that the Pacific fleet had to be maintained as a deterrent against Japan, and could not be used to reinforce the Atlantic patrols.

The German invasion of Russia in June 1941 changed all these calculations. In the short run, it provided a breathing space for Britain, and allowed Churchill and Roosevelt to make the first of their wartime rendezvous. This resulted in little progress in military planning but, almost as an after-thought, the two leaders issued the Atlantic Charter. Although this document was welcomed by Churchill as another opportunity to identify United States' interests with those of Britain, its main significance was its anachronistic references to the moral issues which had always preoccupied American politicians, such as free trade and disarmament. It was a depressing throwback to the age-old moralising of American foreign policy.

Yet the invasion of Russia was simultaneously undermining this old approach. How could America continue preaching high ideals while providing (admittedly with great misgivings) Lend-Lease to the world's greatest totalitarian country, and endorsing, however reluctantly, the Anglo-Soviet takeover of Persia? Again, the attack on Russia emphasised once more the urgent need for American intervention in the European war. Stalin himself told Hopkins, Roosevelt's emissary to Moscow: “The one thing that would defeat Hitler, and perhaps without ever firing a shot, would be the announcing that the United States was going to war with Germany”. .

The most important result of the invasion of Russia was that it released, much more effectively than the Russo-Japanese neutrality pact, all of Japan's forces for the long expected expansion into South-East Asia. It was in this area that America was to discover the real meaning of collective security, Japan threatened British, Dutch, and American interests equally. So closely did they depend on each other that a direct attack on any of them would almost certainly bring war between America and Japan, and not even the four-year-long Japanese invasion of China had brought this about. So great now was the Japanese menace that the administration found itself faced

with the agonising prospect of fighting Japan while staying at peace with Hitler who everyone agreed was the real enemy.

Consequently, a much harsher note entered Roosevelt's Atlantic policy. From July, preparations were made to occupy Iceland, which would release much-needed British troops for other tasks. This highly provocative act brought plaintive demands from Admiral Raeder, Commander-in-Chief of the German navy, to Hitler, to be allowed to attack all American shipping. But Hitler was by no means anxious to bring America into the war (despite his contemptuous assessment of America's war potential), and withheld permission.

Roosevelt's next step was to organise protection of convoys as far as Iceland, though once again, his nerve failed him, and at the last moment, he excluded British ships from American protection. But a clash between an American destroyer and a U-boat gave Roosevelt an excuse to extend the American protection to all merchant shipping in United States 'defensive waters'. Although the clash had been provoked by the destroyer, Roosevelt announced a policy of 'shoot-on-sight'. This still failed to dislodge Hitler, who maintained his orders to avoid, as far as possible, any incidents with American ships.

The repeal of the Neutrality Act, and Roosevelt's orders to shoot on sight, were undoubtedly good enough reasons for Hitler to declare war on America. Yet he maintained his stiffly correct posture, and ordered his navy to defend itself, but not to fire the first shot. If America was fighting an undeclared war, Hitler was doing all he could to keep out, and succeeded for another month.

Meanwhile, war was drawing closer in the Far East. The movement of Japanese troops into French Indo-China had at last provoked the United States into freezing Japanese funds in America, and a ban on oil exports to Japan brought trade between the two countries almost completely to a halt. This severe economic pressure was backed by Britain and the Netherlands, and was bound to push Japan one way or the other. A majority of the Japanese cabinet favoured seizing the materials they needed by conquest; and the American Secretary of State, Cordell Hull, was under no illusions about Japan's intentions. “Nothing will stop them except force. The point is how long we can manoeuvre the situation until the military situation in Europe is brought to a conclusion”.

The Japanese Prime Minister, Prince Konoye, in an effort to contain the pressures from his military colleagues, appealed to Roosevelt throughout August and September of 1941 for a personal meeting to resolve their countries' differences. But the President replied that he saw no point in such a meeting while Japan was still intent on expansion. Intercepted messages (the US navy had broken the Japanese codes) from Tokyo to Nomura, the Japanese ambassador in Washington, confirmed Secretary Hull's opinion that Japan was preparing to go to war in South-East Asia.

The replacement in October of Konoye by War Minister Tojo was not a hopeful development. But Tojo's Foreign Minister, Togo, persuaded the cabinet to wait for another round of talks before starting military operations. Yet at this very moment, the Japanese navy was making its final preparations for the attack on Pearl Harbour, and the proposed negotiations, if they were not successful, were clearly intended to

act as a cover for a surprise attack. In a message to Nomura, immediately deciphered by the US navy, Togo warned: “This is our last effort, the success or failure of the pending discussions will have an immense effect on the destiny of the Empire. In fact, we gamble the fate of our land on the throw of the dice”.

Although a number of plans were drafted by both sides, the Japanese could not hope to satisfy American demands that they end the war in China, withdraw their troops from Indo-China, renounce their obligations under the Tripartite Pact, and pledge themselves to peaceful methods of resolving disputes. The only hope was for a limited *modus vivendi.* But the Chinese reaction to such a proposal, the starting of Japanese troop movements, and the knowledge that the Japanese war deadline had been fixed for 29th November persuaded Hull to give up the idea of a *modus vivendi.* Instead, on 26th November, he presented a ten-point peace plan, which was totally unacceptable to the Japanese. From then on, despite a last-minute diplomatic flurry by Roosevelt, it was simply a question of when the war would start.

Although cabinet members gave solemn warnings to the nation to expect a surprise attack at any moment, the strict legalism of American foreign policy reasserted itself for one final, paralysing fortnight. Despite the sure knowledge of an impending Japanese attack, the administration could not conceive of striking the first blow: it could only sit and wait. Indeed, it was intensely worried by the possibility that Japan would strike at Siam first: could the United States go to war to defend Siam? It was almost a relief and a complete surprise, despite a warning from the American ambassador in Tokyo that Japan attacked Pearl Harbour.

In a wave of conquest unmatched in both world wars, Imperial Japan launched several operations simultaneously against American, British, and possessions across several thousand kilometres of the Pacific Ocean. One by one the great bastions of American and European possessions fell before the Japanese conquerors.

7th December 1941 effectively introduced the Americans to “total war.” Nothing experienced by any nation in both world wars even remotely compared with the catastrophic naval defeat suffered by the United States on that fateful day in world history. Their unsuspecting fleet at Pearl Harbour was caught completely unawares when over three hundred and fifty aircraft from six Japanese aircraft carriers decimated the US Pacific Battle Fleet, inflicting the worst military defeat suffered in America's two hundred year history, leaving them totally bewildered and completely astonished.

The sheer audacity of the raid on Pearl Harbour is without parallel and merits a special place in naval warfare. In a masterful stroke, a Japanese carrier task force steamed undetected across five thousand kilometers of open sea to launch the greatest combined air/sea operation of all time. Japan’s success at Pearl Harbour was made possible due to superb training and remarkable duplicity. As a result she was placed in a position of overwhelming strength throughout the Far East.

Even as the attack on the U.S. Pacific Fleet was taking place at Hawaii, Japanese troops were already landing on the Malay Peninsula and preparing to advance overland to Singapore, later to capitulate after Japan inflicted on the British their most humiliating defeat in its history. This was accomplished by skillfully executed

tactics that almost entirely eliminated the British as combatants in the Far East.

On the 10th December, just three days after Pearl Harbour; HMS Prince of Wales and HMS Repulse under the command of an admiral totally disbelieving in air power, also made history by becoming the first battleships to be sunk from the air in open sea. In an era when the battleship was considered to be the ultimate maritime weapon, the fate of these two great ships proved once and for all that powerful naval vessels battleships were prone to destruction from the air. With great reluctance it was now accepted that naval air power had come of age. Ironically, this was only accepted after every allied battleship in the Far East, ten in all, were either sunk or put out of action.

Imperial Japans political concept was to promote a self-sufficient bloc of Asian nations led by Japan, free of Western colonialism and influence. In reality it was nothing more than a scheme to control countries in which puppet governments would manipulate its economies and peoples for the benefit of Imperial Japan. Without these economic resources and raw materials Japan would never become a dominant power in the region.

Facing economic collapse and withdrawal from recently acquired territories, Japan had come to the conclusion that further talks towards the lifting of sanctions were futile. Their only alternative was war, or the abandonment of their objectives to dominate the Far East.

On this basis, if there had to be war, then the present time seemed opportunistic for Japan. At this stage the German armies were threatening both Moscow and Egypt. A great part of the United States Navy was engaged in an undeclared war in the Atlantic against the U-Boat menace. Therefore, the Japanese military leaders prepared to exploit this deepening world crisis and seize the mineral rich territories in Asia; which, they considered to be theirs by right and were prepared to challenge the Western powers for possession.

Admiral Yamamoto, the commander of Japan's Combined Fleet believed if there was to be war with the U S, Japan would have no hope of winning unless the US Fleet at Pearl was knocked out. He calculated that the United States would be so weakened by this proposed attack that she would be unable to mobilise sufficient strength to go over to the offensive for about two years. By that time, the conquered territory would be strengthened and Japanese resistance would undermine American determination to continue the war. The Japanese speculated that the United States, in the face of potentially unacceptable losses would negotiate peace, thus allowing Japan to retain her territorial gains.

Yamamoto had been strongly influenced by the successful British Fleet Air Arm operation at Taranto, Italy, the previous year when three Italian battleships had been put out of action by only twenty-one Swordfish torpedo planes launched from a single aircraft carrier. Consequently, Yamamoto planned and organised a massive Strike Force consisting of six aircraft carriers, two battleships, three cruisers and eleven destroyers to attack Pearl Harbor.

The strike force left Japan on 26th November and proceeded in utmost secrecy on a

mission intended to deal a fatal blow to the U.S. Pacific fleet. Just prior to launching their aircraft at dawn on 7th December from a point three hundred and fifty kilometres north of Hawaii, the Japanese received an intelligence report that no American aircraft carriers were at Pearl Harbor.

If diplomatic negotiations with the US were successful the ships were to return to base and no one would have known of its presence in the area. An hour before the Japanese air strike on Pearl Harbour, the first action of the Pacific war took. An American destroyer sighted, attacked and sunk a Japanese midget submarine outside the harbour entrance, thus, the first shots fired to launch the Pacific war, came from the United States, not from Japan, and the first casualties were Japanese not American. The Destroyer captain promptly reported this encounter with the Japanese submarine, but unfortunately for the Americans, no one took any interest. If the alarm had been raised it would most certainly have provided sufficient time for Pearl Harbor fighter aircraft to take to the air and enabled American ships to raise steam and make for the open sea.

Almost one hundred warships were anchored at Pearl Harbour. Admiral Kimmel, Commander in Chief, Pacific Fleet, and Army OC Lt. Gen. Walter C. Short had both received a signal from Washington stating "*hostile Japanese action at any moment". "Consider this to be a war warning".* Of significant importance, they were also informed that Naval Intelligence was unaware of the location of the Japanese Carriers and that diplomatic efforts had failed. Despite this, General Short and Admiral Kimmel refused to believe that disaster was about to strike.

General Short had become so obsessed and totally preoccupied with preventing acts of sabotage. Therefore, he ordered the army aircraft to be close-packed on airfields rather than dispersed and ready for action. Thus, on the morning of 7th December the aircraft for the defence of the Pacific Fleet at Pearl Harbor were huddled together and no ammunition was readily available. American air strength at Hawaii was about to be completely shattered, and two thirds of the entire American aircraft in the Pacific theatre destroyed.

They never envisaged an air strike aimed at the destruction of the U.S. Pacific Battle Fleet. So, when the attack did come, General Short actually thought it was an air attack prior to the Japanese invasion of Hawaii. Meanwhile the military authorities in Washington expected their men on the spot to take full defensive measures at Pearl Harbour. They anticipated that submarines would be sent out on patrol and the battleships with their protective vessels would be at sea deployed in readiness for war. Anti-aircraft defences were expected to be placed on full alert around the clock.

After all, it is the responsibility of the military commanders on the spot to prepare for the worst possible contingency whether in peace-time or war. However, the commanders at Hawaii were convinced that the Philippines or Malaya would be the prime Japanese targets, not Pearl Harbor. They, therefore, took no action in preparation for war. Their view was that Japan would never deliberately initiate war with the United States. The idea was considered too preposterous. For the defenders of Pearl Harbor, events were about to go irretrievably and horribly wrong.

Operators at the Army Radio Station detected a large number of aircraft 220

kilometers away to the north heading for Oahu. They tried to raise the alarm but as a flight of B-17s were expected from the US mainland, it was assumed by the Information Centre to be them.

Japanese Zero fighter planes appeared suddenly to make low level strafing sweeps, shooting up aircraft as well as ground installations. Coordinated attacks were then made on the battleships moored in battleship row by dive bombers, level bombers and torpedo planes. The primary attack led by Commander Fuchida consisted of one hundred and eighty four aircraft and caused the greatest amount of damage in a very short space of time. From endlessly repeated practice runs and the meticulous study of maps and models of Pearl Harbour, every Japanese pilot knew exactly what they had to do and aimed at their targets with cool precision.

Oklahoma capsized almost immediately after being struck by three torpedoes; trapping below decks four hundred and fifteen men. One aerial bomb blew up the forward magazine of Arizona, while another dropped down the funnel and exploded in the engine room. The ship went down with over one thousand men out of a crew of one thousand five hundred. A torpedo and two bombs hit the Nevada. The Japanese then launched their second carrier strike to complete the work of the first wave.

Over Ford Island, numerous aircraft were observed as smoke and debris shot into the air. Japanese aircraft skimmed low over the harbour accompanied by muffled explosions. Within five minutes, four battleships had been holed or severely damaged below the waterline by torpedoes. Dive bombers smashed the decks, bridges and gun turrets to finish off the job. Within half an hour Battleship Row had been devastated and out of one hundred and forty eight first line aircraft one hundred and twelve were destroyed. The first attack wave withdrew having lost only nine aircraft

One hundred and seventy one aircraft attacked in a second wave consisting of thirty six fighters and one hundred and thirty five bombers to attack smaller warships, airfields and targets of opportunity. The defenders were better prepared, therefore, this was far less effective than the first attack and more aircraft were lost.

The Japanese Combined Fleet Commander, Admiral Nagumo was urged to launch a third strike, which possibly would have destroyed fuel tanks, dockyard facilities and command control structures. Admiral Nagumo, however, decided to withdraw because he believed the objective, the neutralising of the US Pacific Fleet, had been achieved, considering the unknown whereabouts of the US Carriers.

More than two thousand four hundred Americans were dead and one thousand three hundred more were wounded. Some two hundred and thirty aircraft had been destroyed or heavily damaged. The Japanese lost just twenty nine planes and less than one hundred men. Eighteen ships had been hit and Battleship Row was a shambles. The Arizona and the Oklahoma were a total loss. The California and the West Virginia were sunk at their moorings. The Nevada, the Maryland, the Tennessee, and the Pennsylvania were all heavily damaged.

General Short prepared for the invasion that he thought was bound to follow. Now the alertness and preparedness that could have provided such a hot reception for

the Japanese was brought to life after they departed. Nervous sentries opened fire at anything that moved and friendly planes were shot down in the belief this was a renewed aerial assault.

President Roosevelt at a Joint Session of Congress on 8th December delivered his famous "Day of Infamy speech". In less than an hour the US was officially at war with Japan; declaring that a state of war existed between the United States and the Empire of Japan. The President then proceeded to waste little time in sacking Admiral Kimmel and General Short for a gross neglect of duty. The entire blame was laid squarely on their shoulders for ignoring all the warnings and indications of obvious Japanese intentions.

However, the disaster at Pearl Harbor resulted from a vast combination of interrelated factors. On the one hand, human errors, false assumptions, and a vast store of intelligence information had been badly handled by the Americans. On the other, precise planning, tireless training, fanatical dedication, iron determination and tactical excellence, led to a daring and brilliant naval operation by the Japanese.

Japan had gambled on the US agreeing to negotiate when faced with a sudden and massive defeat. But, the response was the exact opposite. Public opinion to declare war on Japan united the Americans as never before.

A major flaw in Japanese naval strategy was a belief that the ultimate Pacific battle would be fought between battleships in Japanese waters. Failure to attack shore facilities enabled the Pacific Fleet to continue operating from Pearl Harbor. Thus the threat to Japan's Eastern flank still remained. Japan didn't get the twelve month respite she needed to secure her gains and six months later the tide of war turned against her at the Battle of Midway

The loss of her battleships forced the US to use carriers and submarines to take on the Japanese at sea which was to reverse the Japanese advance and lead to her defeat. The battleship, regarded as the most powerful and significant element of naval power was relegated to a support role. One Japanese Naval Commander summed up the result when he remarked "We won a great tactical victory at Pearl Harbor and thereby lost the war".

American and colonial powers hopelessly underestimated Japan's military capacity and offensive capability. In their ignorance they claimed as a well-established fact that due to a deficiency of vitamin C the Japanese lacked good vision; hence, they would make poor air pilots and their naval personnel would be no match for their Western adversaries, particularly after sunset. What is more, the Americans held the Japanese in utter contempt, viewing them as funny little creatures with buckteeth and horn-rimmed glasses covering slanted eyes. They were viewed as slow brained, inefficient, and incapable. The Americans assured themselves that Japan was virtually bankrupt and exhausted from being bogged down in China. They considered Japan to be one hundred years behind the times, and if she engaged in a major conflict, her fragile economy would simply shatter. This is quite amazing, considering that on the eve of Pearl Harbor, more than half of Japan's budgetary expenditure for the year 1941 went on armaments.

The British and American press maintained that the Japanese navy consisted of only four small aircraft carriers and two hundred aircraft that could not possibly meet the requirements of a modern war. Perhaps, this only goes to prove how successful the Japanese were in concealing their military strength from foreign observers. Nevertheless, these ludicrous assumptions accurately reflect the Western underestimation of Japanese air power and this is best illustrated by the reliance they placed upon the antiquated Brewster Buffalo fighter plane. The Americans actually thought this aircraft was far superior to anything that the Japanese could put in the air.

Arrogant propaganda claimed that Japanese planes and Japanese airmen were no match for their British and American counterparts and that Japanese aircraft were poor imitations of outdated allied aircraft. In actual fact, as the Western powers were soon to realise at a terrible cost, the Japanese aircrews were superbly trained for a whole range of offensive and defensive missions. The daring and expertise of first rate experienced airmen contributed immeasurably to Japan's early conquests.

In fact by 1941, the Japanese had the best naval arm in the world and were the pioneers of the large carrier striking force. At Pearl Harbor. Japanese pilots had undoubtedly attained the world's highest bombing standards and were extremely skilful. They had torpedoes that were of a far superior design and much more effective than the Allied torpedoes.

The Japanese Zero fighter was scornfully described by an American aviation expert as "nothing more than a light sports plane". While in fact, in the hands of highly trained Japanese carrier pilots, the Zero was a most effective and deadly weapon. The Allies mistakenly thought the Japanese were incapable of producing anything like the Spitfire or the Messerschmitt. They soon received a monumental shock. The Zero was faster than any opposing plane of the period, and it could out-manoeuvre, out-climb, out-range and packed a heavier punch than opposing aircraft. At the start of the Pacific war, the Zeros quickly gained air control over any battle area. American and British aircraft fell like flies before the agile Zero fighters; especially the Brewster's that literally flew on suicide missions against the Zeros.

From a realistic perspective, the Japanese also made mistakes. The most notable being the refusal to order a third strike at Pearl Harbor. They could have destroyed the repair facilities and, more importantly, the oil storage tanks. This vital target stored four and a half million barrels of oil and escaped undamaged. The Japanese carrier commander later explained that he thought the Americans still had a large number of land based aircraft in operational condition at Hawaii and considered it too risky to remain within their range.

Was he being over cautious, or was it being pragmatic? Taking into consideration that a successful counter strike by the Americans against the Japanese carriers would have reversed the entire situation. The defenders at Pearl Harbor, although caught napping, had quickly recovered as had been observed by the much heavier losses incurred during the second strike. Undoubtedly, a third strike would have met with strong opposition and would possibly render Japanese losses disproportionate to any additional damage inflicted.

This was a grave error because the loss of the oil supplies at Pearl Harbor would have hindered American naval operations in the Pacific far more than the damage done to the fleet. It must be borne in mind that Hawaii produced no oil and every drop had to be transported almost four thousand kilometers from the mainland. This accumulated fuel reserve would have taken many months to replace. Without it, the Pacific fleet could not have been able to operate from Pearl Harbour and the surviving warships would have been entirely immobilised and incapacitated. The failure to destroy the fuel tanks and service facilities reflected Japanese preoccupation with tactical rather than logistical targets.

Escaping damage from the attack, were the three all-important American aircraft carriers in the Pacific, the Lexington, the Enterprise and the Saratoga. In failing to seek out and dispatch the American carriers, Japan committed its first and probably its greatest strategical error of the entire Pacific conflict.

Chapter two

Darwin

By February 1942 the war against the Japanese was not going well for Australia and the Allies. The collapse of Singapore and the loss of fifteen thousand Australian troops of the 8th Division had convinced the country that invasion might no longer be just a bad dream. An invasion of northern Australia was considered a real possibility, and this fear was well founded.

The Japanese had taken Rabaul in New Britain before the fall of the Philippines and had invaded Burma before the surrender of Singapore. It was more than conceivable that they might try to eliminate Darwin as they moved on Java, Timor and New Guinea in their remorseless drive south.

Japanese incursions in the Darwin area had already taken place. On 1st January, 1942, a Japanese submarine was detected in the harbour. On 20th January, another Japanese submarine was sunk by HMAS *Deloraine,* 80 kilometres from Darwin. On 28th January, Japanese planes were spotted on reconnaissance flights 3 kilometres from the centre of Darwin. Despite these sightings and engagements, Australia did little to prepare or guard against a full-scale Japanese attack. And the Japanese were fully aware of this. On the night of 18th February 1942 Vice Admiral Nagumo of the Imperial Japanese Navy led a force of 4 aircraft carriers, 4 heavy cruisers and 9 destroyers south from the Celebes to a point east of Timor Island to fly off their aircraft.

The task force Nagumo commanded included four of the carriers *Kaga, Hiryu, Akagi, Soryu that* had launched the devastating 7th December 1941 attack on Pearl Harbor. Task force Air Commander Fuchida, had also been the air leader at Pearl Harbor. As dawn broke on the quiet sea Nagumo launched his188-plane Darwin raiding force. Seventy-one Val dive bombers, 81 Kate level-bombers and 36 Zero fighters flew off the decks of the carriers. From recently captured land based airfields in the Timor Sea, another 54 medium twin-engined Betty bombers took off.

The first sighting of enemy aircraft was made by Father John J. McGrath at the Catholic Mission on the Bathurst Island settlement, 50 miles north of Darwin. Father McGrath only had time to tell the Darwin wireless operator of an unusual large air formation bearing down from the north-west before the channel was jammed and the priest was diving for cover as Japanese fighters made a low pass over the mission. A US Beechcraft parked at the edge of a makeshift runway burst into flames.

The Wireless station operator passed on McGrath's message to the RAAF operations officer at 09 51 hours. Just like the early sightings at Pearl Harbor, however, McGrath's message plus the report of the Melville Island coast-watcher John Gribble were discounted. RAAF operations had been told that 10 American P40s *en route* to Java had turned back and were expected in the area. The message was filed. No warning was given.

American Major Pell leading 10 P40 Kittyhawks, arrived over the city minutes ahead of nine Japanese fighters sent ahead of the main attack force. The Americans were only at Darwin because they had run into bad weather on their way to the Dutch East Indies and had turned back. They were the only aircraft in the area capable of defending Darwin from the Japanese. The meagre Allied air force at Darwin included 17 Hudson bombers (6 without crews), 14 Wirraway single-engine trainers that were being used for short-range reconnaissance, and 10 of Major Pell's USAAF Kittyhawk fighters. In the harbour there were 47 naval and merchant vessels including the old four stacker US destroyer *Peary* and the US seaplane tender *William B. Preston,* two sloops and five corvettes of the RAN, two Catalina flying-boats of the USN, and the Qantas Empire flying-boat, *Camilla.* It all made a tempting and important target for a Japanese strike.

Intensive air activity over Timor during the previous few days had caused several air raid alerts to be sounded in Darwin, and a raid was expected; although not quite so soon. The military warning to the city, which could have been sounded earlier, was delayed until the attack was underway. An officer looked out of his window and saw enemy planes making bombing runs. But even this personal sighting was not enough to convince everyone. A trooper of the 19th Machine Gun Regiment screamed at his sergeant: "The Japs are here"! The sergeant was sceptical. "They are probably our own. What makes you think they're Japs"? "They've got bloody great red spots on 'em", the trooper replied.

The sergeant picked up the phone and called 23rd Brigade HQ, only to be asked how he knew the aircraft were hostile. In frustration, he repeated the trooper's blunt answer; "They've got bloody great red spots on 'em"! He barked into the telephone. Any further argument about the bombers became academic as bombs smashed into the unsuspecting city. This was the first time since European settlement that mainland Australia had been attacked by a foreign enemy and was the largest Japanese attack since Pearl Harbor.

Major Pell had sent up a flight of five Kittyhawks to patrol over the harbour while his other aircraft refuelled. A few minutes later the patrolling Kittyhawks were attacked by Zeros. The Japanese gave no warning or quarter. They savaged the five Americans, shooting down four on the first pass. Flight leader Lieutenant Oestreicher only had time to blurt out Zeros! Zeros! into his radio before he was in the middle of the melee. Outwitting the enemy and shooting one down, before he found the safety of cloud cover.

Major Pell 'scrambled' his refuelled group of Kittyhawks, and they were thus in that most vulnerable position of taking-off when they were attacked. Four were shot down and the fifth destroyed before it was airborne; Major Pell baled out below 100 feet,

and might have survived had he not been caught on the ground in a burst of cannon fire from a Japanese fighter. The three other pilots survived.

The first bombs exploded in the crowded harbour where warships, transports and auxiliaries flying the flags of Britain, the United States and Australia lay at anchor. The 9 advance fighters opened the attack at 09 57 hours by strafing the 481 ton boom vessel HMAS *Gunbar,* with armour-piercing, tracer and HE shells. The *Gunbar's* captain, Lieutenant Muzzel, though wounded in both knees, stayed at his post until the all-clear. Armed with only a single Lewis gun that was destroyed in the first attack, the *Gunbar's* only defence was her manoeuvrability and luck.

Within a minute of the Zero attack the high-level bombers at 14 000ft-dropped their bombs. The first explosions blasted columns of water high into the air. Sticks of bombs stitched across the water, destroying the wharf, throwing a railway engine, trucks and 22 civilian labourers into the harbour, and then moved on to smash the city. As the high-level bombing faded, it was replaced by the whine of the olive-green dive bombers as they screamed down, singly and in pairs, to further decimate the harbour.

Expecting action, the commanders of the *Peary* and *Preston* had maintained steam since arrival in Port Darwin, so they managed to get their ships under way; but the *Peary* was holed by a direct hit as she manoeuvred in the harbour, and she slowly sank by the stern, her forward guns still firing as she went down. One of the corvettes, HMAS *Katoomba,* was propped up in dry dock yet managed to put up a strong barrage of anti-aircraft fire.

Dive-bombing caused most of the havoc on the harbour: a 12 000-ton transport, the *Meigs,* and four other merchant ships were sunk and three were beached; the hospital ship, *Manunda,* was damaged; the two Catalinas were destroyed but the Empire flying-boat luckily survived under a screen of smoke from a burning ship.

On the water the destruction was cloaked in flames, smoke, gushing oil and twisted metal. Through grisly chaos threaded those ships able to get underway, HMAS *Swan* and HMAS *Warrego*. HMAS *Kara Kara,* a boom vessel, fired her 12pdr. Most of the ships were equipped with Vickers and Browning MGs. HMAS *Southern Cross* and the seaplane tender *Preston* unleashed fire from their 4inch guns.

Choking clouds of smoke billowed across the harbour from the burning city. The transports *Zealandia, Barossa, British Motorist, Meigs, Mauna Loa* were burning and sinking. The moored 3 476 ton depot ship, *Platypus* fought off continuous attacks. *Manunda, a* 9 115 ton hospital ship was straddled by several near misses. Then a direct hit smashed through her deck, causing severe fires, killing twelve and wounding four, including a nurse.

The 5 952 ton Australian transport *Neptune,* tied to the demolished wharf, was ablaze. In her hold were 200 tons of depth-charges. Inevitably, they exploded, blasting the ship apart and sending a fire-ball high into the sky. *Neptune's* stern and engines sank near the wharf, her bow floated for a few minutes then disappeared. As the harbour was being devastated the city was being systematically demolished. Dead littered the streets and the debris of crumpled buildings. About 15 heavy

bombs caused most of the damage. The hospital was hit, the city administration buildings, police barracks and post office were shattered. The explosions that shattered the post office killed the postmaster, his family and the women manning the switchboards.

By 10 30 hours the attack was over. The Japanese had left desolation behind a scene of destruction. At 10 40 hours the all clear sounded. The raiders departed, and during the respite which now followed troops and civilians fought fires and collected the dead and wounded. Then, 2 hours later, sinister droning heralded the approach of more raiding aircraft. Two formations of Japanese high-level bombers flew in from opposite directions, at a height of 18 000 feet, to drop their bombs in a tight pattern over one concentrated area; the RAAF airfield.

This attack added further to the shock of the earlier attack-shock that was soon to turn into panic. The approaching bombers were expected to drop Japanese paratroopers but exploding bombs sent everyone, including an Australian air marshal and an American general who were visiting the station, to the trenches; further increased the destruction so that in the end the two main hangars, the central store, and the transport section were left in ruins, together with other badly damaged huts and sheds on the station.

On the morning of the attack, Darwin was a city without children. Less than a fortnight earlier nine hundred children had been evacuated. There were only sixty five women and about two thousand men in the place. Though civil defence authorities had been fairly successful in clearing civilians out of the city, they had been less so in convincing those who stayed to dig air raid trenches. Many of those blown to pieces had scoffed at the suggestion of an air attack.

Lieutenant Owen Griffiths, from the bridge of the *Platypus,* watched the attack. “With one big crash they dropped their entire loads on the aerodrome and buildings. This was the first time I had seen a large number of bombs fall together on a target. It was a fearful sight. With a noise like the roll of heavy thunder, a thick cloud of smoke, dust and red and yellow flame shot into the air and left a long line of smoke to join up with the flame clouds already hanging over Darwin. Surely nothing could be left alive in that area”!

As the initial Japanese raiders headed north for the rendezvous with the waiting carriers they found the two Filipino transports, *Florence D* and *Don Isidro.* These were trying to steal through the Japanese blockade to the Philippines. Both ships were struck with deadly accuracy. *Florence D* sank while *Don Isidro* limped to the shore and was beached

After the raid many of Darwin's survivors fled the city in terror. Not all who evacuated Darwin were civilians. Air Chief Marshal Sir Frederick Scherger recalls: “There was an awful panic and a lot of men simply went bush. I thought at one stage they had disappeared to a man. Electricity and water had failed and communications ceased to exist. We were in a horrible mess”. Scherger was then an RAAF group-captain administering the NW Command Area. Military discipline was a joke and Australian commanders had, at times, to force fellow-countrymen to remain in Darwin at gunpoint.

Lieutenant Graham Robertson, in an interview with Australian historian Douglas Lockwood, tells of the looting that followed the bombing and of the inevitable invasion that many felt would follow the air attacks: “The entire Army system had been shot to pieces. We had little food and the anti-aircraft crews doing heavy work in the tropical heat weren't getting fed. We were also short of a few other home comforts and I saw no reason why we shouldn't borrow what we could find in the abandoned Hotel Darwin. I organised a raiding party. We found beds unmade, cigarette butts in the ashtrays, half-consumed drinks on tables, and other evidence that the place had been evacuated in a hurry. The electricity had failed. Refrigerators were not working and the food was beginning to rot, so we helped ourselves to chickens and vegetables and anything else we could use. While we were doing that a provost officer arrived. He wanted to know who we were and what we were doing. I walked him out to the front and talked to him there while the boys got the stuff out the back door. Thereafter we had the best equipped gun sites in cane furniture and inner spring mattresses. We were also very lonely in the next few days while waiting for the invasion we all believed was imminent”.

But in the official histories the 'evacuation' of Darwin is treated lightly. Commodore Pope, who became navy officer- in-charge a week after the attack, reported: “After the raid the morale of a certain proportion of the personnel was regrettably low and a few of them had to be sent south with ‘anxiety neurosis’ in various degrees”.

After the massive 19th February 1942 Japanese raid, the Northern Territory and parts of Western Australia's north were bombed 62 more times between 4th March 1942 and 12th November 1943. One of the heaviest attacks took place on 16th June 1942 when a large Japanese force set fire to the oil fuel tanks around the harbour and inflicted severe damage to the vacant banks, stores and railway yards. The Allied navies largely abandoned the naval base at Darwin after the initial 19th February attack, dispersing most of their forces to Brisbane, Fremantle, and other smaller seaports. Conversely, Allied air commanders launched a major build-up in the Darwin area, building more airfields and deploying many squadrons.

Invasion remained the main fear in the days following the initial attacks. Darwin became a 'Fortress Area' and the Navy took over defence plans from the Army. The Darwin Naval Base War Diary records the plans: 'although little time is available with many harbour commitments, the erection of barbed wire defences and digging of trenches and the training of personnel in land fighting has been intensified, and the Army has taken up battle stations. Field artillery and anti-tank guns have been placed in position and the 'construction of numerous landing strips has commenced’.

The Japanese air crews flying on these raids were the elite of Japan's air forces, and with such a lightly defended target laid out before them as Darwin harbour the destruction was extensive. Over the target area the Japanese bomber pilots had the advantage of a fine, sunny morning to pick their targets and make their bombing runs. Although there was some Allied fighter opposition, the presence of the ubiquitous Zero inspired confidence in the bomber crews and contributed to their accuracy. However, the Japanese losses amounted to 15 aircraft, most of which were accounted for by anti-aircraft fire from the Allied guns on ship and shore.

With two hundred and forty people killed and one hundred and fifty wounded at Darwin, there was a severe drop in the morale, not only of the civilians, but even some of the ground personnel at the RAAF station who decided to move south without orders. Most of the airmen, however, anticipated an invasion and were ready to fight alongside the army units to repel the landings.

The bombing of Darwin caused Australians to realise that the war was on their back doorstep. The 33-minute attack had sunk eight ships in the harbour, damaged 2 near Bathurst Island, 3 ships were beached but later salvaged 10 other ships were damaged. Twenty-four American and RAAF planes were destroyed. The first Japanese POW taken by Australians came from a crashed bomber on Bathurst Island after the pilot had been unable to coax his damaged aircraft back to his base on Kendari.

Many military men saw the attacks as a prelude to invasion. This never happened because the Japanese never planned it. Japan had no intention of launching an invasion of Australia and was more concerned about Australia's role as a port for American vessels. The Japanese attacks highlighted Australia's lack of preparation for a possible invasion and the defence of Australia. Their objectives had been met; to take advantage of opportunity targets in the harbour and to neutralise a base which might cause them trouble as they invaded Timor and Java in their relentless drive to control the whole of South East Asia.

The raid to this day, is sometimes referred to as the 'Pearl Harbor of Australia'. The Japanese raid was dissimilar to the attack on Pearl Harbor in that it was launched against a nation that had already declared war on Japan (on 8th December 1941). It was similar to the attack on Pearl Harbor in that it was a successful aerial surprise attack on a naval target that came as a great shock to the attacked nation. Although Darwin was a less significant military target, more bombs were dropped there than on Pearl Harbor. The Australian government downplayed the damage from the bombing raids on Darwin, believing its publication would represent a significant psychological blow to Australians.

The activities in the Dutch East Indies had brought the harbour and airfield at Broome, Australia, into constant use as a refuelling depot for the air shuttle service between Java and Perth. On the afternoon of 3rd March, a Japanese reconnaissance aircraft flew over the harbour in which three flying boats were moored. These would be target enough, but during the night another 13 flying boats alighted and were still there when on 4th March, the expected Zeros swept in at low level through the harbour entrance. On the airfield there were 2 Flying Fortresses and 2 Liberators as well as 3 other aircraft.

One Liberator had taken off as the raiders arrived and was shot down in flames into the sea. The rest of the aircraft at the airfield and all the Catalina, Dornier, and Empire flying boats in the harbour were destroyed in the attack, which lasted only 15 minutes. The only gun that fired at the Japanese was an aircraft machine-gun held by a Dutch gunner as he fired over one blistering arm; but there were no reports of enemy losses.

On their way back to the Timor base the Zero pilots sighted, some 60 miles from Darwin, a Dutch DC-3-one of the last aircraft to leave Java and carrying a very valuable consignment of diamonds. It was shot it down into the Sea, there were no survivors. On the same day, Wyndham, a small town on the coast between Darwin and Broome, was raided by 8 Zeros which destroyed a light aircraft and a fuel dump at the airfield. A near-miss opened the plates of the SS *Koolama,* which sank where she was tied up at the wharf. Also, on 4th March, Darwin was raided again, this time by 8 Zeros which found a Hudson on the RAAF airfield and quickly gunned it to destruction. Zeros' continued to reconnoitre the coast between Darwin and Broome, and as far inland as Katherine and Daly Waters.

Before the Allies could rush fighters up to meet the intruders, there were 2 more major raids on Darwin, one on the RAAF station, and the other on the naval headquarters and part of the town's residential section. Then, on 17th March, led by Lieutenant Colonel Paul B. Wurtsmith, the first of three American fighter squadrons from No. 49 Fighter Group arrived at Darwin and immediately the position changed. Although the Japanese raids continued they became little more than armed reconnaissance except for more determined efforts on 25th April, and 4 consecutive days, 13-16th, in June. By the end of June the combination of the early warning by the RAAF radar units, and the skill of the American Kittyhawk pilots caused the loss of 24 Japanese aircraft for only 9 Kittyhawks.

The air raids brought the war home to Australia and strengthened resolve to provide a solid contribution to the war effort. Darwin was reinforced as a fortress and base for Allied troops. Military camps were set up along the main roads to Darwin. Airstrips were rebuilt. A railway service stretching from Adelaide to Alice Springs improved the transportation and communication between the cities in case of emergency.

By late March the build-up in the Darwin area was considerable. The Australian Army moved in fourteen thousand men with another ten thousand to arrive soon after. America allocated six thousand troops to the area. Three squadrons of fighters, including an American Kittyhawk squadron, were sent to the northern coast. Although Japanese bombers attacked the port well into 1943, improved radar, AA and fighter defences prevented another Australian Pearl Harbour.

The four IJN aircraft carriers (*Akagi*, *Kaga*, *Hiryū*, and *Sōryū*) that participated in the Bombing of Darwin would only survive a few more months.

CHAPTER TWO

MacARTHUR

General Douglas MacArthur was one of the Second World War's most flamboyant and controversial figures. He was a military commander who had a keen idea of the value of keeping the public informed, and a past-master at image projecting. He

made sure that the photographers were there to take his picture at key moments, such as his return to the Philippines in 1944.

MacArthur graduated top of the class of 1903 at West Point Military Academy and served in the Philippines, Panama and Mexico, before being posted to World War One in 1917, twice being wounded and much decorated. He was promoted to major general in 1925 and became Army Chief of Staff by 1930. In this post, he clashed bitterly with political leaders over cuts in US defence budgets.

MacArthur was constantly in conflict with President Roosevelt since he had taken office in 1933; the politics and personalities of the two men were in total contrast. MacArthur was a thoroughgoing conservative whom some Republicans on the home front regarded as a candidate for the presidency after he retired from the army to take a military post in the Philippines. MacArthur was also in conflict with the new Army Chief of Staff George Marshall and the Army establishment on a number of issues, including the 'Germany first' policy against which MacArthur repeatedly protested. Nevertheless, the Army was glad to have a strong and popular figure like MacArthur to uphold its role in the Pacific and oppose the ambitions of the Navy.

He had been recalled to duty when, in December 1941 Japan attacked the Philippines. MacArthur commanded both the embryonic Filipino Army and US Army Forces. The Japanese quickly overwhelmed the defenders and soon held the three air bases in northern Luzon and on 22nd December gained control of Manila. A further series of Japanese assaults forced the US defensive lines back and MacArthur ordered a general retreat to the Bataan peninsula. On 22nd February, 1942, MacArthur was ordered to leave Bataan and proceed to Australia. General Jonathan Wainright remained behind with 11 000 troops and managed to hold out until the beginning of May.

When MacArthur arrived in Australia on 17th March, he found his new command short of manpower, poorly equipped and quite deficient in air power. He also found Australian morale shattered due to the Allied *debacle* in Asia, particularly by the fall of Singapore, which had been regarded by Australians as the keystone of their security; hence his first task was to infuse the Australians with an offensive spirit and confidence.

MacArthur transformed Australia's morale. He told parliament in Canberra a week after his arrival; “We shall win or we shall die, and to this end, I pledge you the full resources of my country. My faith in our ultimate victory is invincible, and I bring to you tonight the unbreakable spirit of our just cause. The President of the United States ordered me to break through the Japanese lines for the purpose of organizing the Allied offensive against Japan, a primary object of which is the recovery of the Philippines. I came through and I shall return”. By the time he had finished speaking, the audience were on their feet cheering. American reinforcements arrived, and together with Australian troops were sent into the areas of undefended Australia. On Anzac Day (25th April), MacArthur issued orders that wherever the Japanese landed, they were to be resisted and thrown back into the sea.

The Japanese High Command, meanwhile, had indeed been considering an invasion of Australia. The navy, in particular, was keen, but the army protested. To

them, the war in China was all-important, and the generals refused to provide enough men to invade Australia. On 4th March, the High Command reached a compromise: they would capture Port Moresby and push south-east in order to cut Australia's shipping routes across the Pacific to the USA. Then they might consider an invasion of Australia itself. On 31st March, they began their drive but, without knowing it, the Japanese had almost reached the limit of their spectacular expansion. The tide of war was about to turn. Attempts to capture Port Moresby would lead to their first major defeats - in the Coral Sea, then on New Guinea's Kokoda Trail.

At the beginning of American participation in the war, Roosevelt and Churchill had agreed that the Pacific area, including Australia, should be under American command, with the Middle East and India remaining under British control. Europe and the Atlantic would come under joint Anglo-American direction. The command in the Pacific was further divided between MacArthur's Southwest Pacific Command and the Central Pacific Command of Admiral Chester Nimitz. Each was in control of the land, sea and air forces in his zone except that Nimitz retained control of the amphibious operations.
For almost 40 years the American Navy had expected war with Japan and, now that war had finally come, was determined that the Navy was to have the pre-eminent role in the Pacific. Nimitz and the Naval Chiefs of Staff headed by Admiral Ernest King did not want any naval forces under Army command and hence advocated a purely naval campaign, advancing from their big base at Hawaii. The army commander in the Southwest Pacific was to stay on the defensive. MacArthur, however, was too strong a personality for him to accept this role. Having been driven out of the Philippines by force of arms, MacArthur was most firm that the only way for the United States to regain control was by the same means, otherwise she would never be able to reassert her pre-war authority in the Pacific.

MacArthur believed that the Western Allies, having been beaten so decisively and disastrously by the Japanese, must prove their superiority again. He felt it would be folly not to take this into consideration when planning the Pacific strategy. For MacArthur the only road to Tokyo lay through the Philippines. Thus, Nimitz and MacArthur were to compete against each other to see which of them could be more effective. Roosevelt approved the divided command in the hope of using the natural rivalry between the Army and Navy to produce faster results. MacArthur thought it was incredible that the Navy could allow inter-service rivalry to determine the course of the war and later wrote; “Of all the faulty decisions of the war, perhaps the most inexpressible one was the failure to unify the command in the Pacific”. Through the insistence of Admiral King, however, the commands of Nimitz and MacArthur remained separate throughout the war.

MacArthur soon developed a highly efficient team which played a major role in his coming success. An invaluable asset for MacArthur was the discovery of Commander Long of the Australian armed forces. He was the organiser of the superb intelligence network of coast-watchers whose information made the difference in many operations. So, within three months of his arrival, MacArthur was able to start on the road back to the Philippines.

MacArthur began the campaign to clear Papua and New Guinea by increasing the garrison of Port Moresby which ultimately attained the strength of fifty five thousand American and Australian troops. The Japanese advance over the Owen Stanley Range was subsequently halted by the Australian forces, who then began to push the enemy back, but a lengthy contest ensued. The Japanese High Command then decided to down-grade the Papuan campaign and throw all their resources into the struggle for Guadalcanal after the Allies landed there on 7th August. Over the next eight months there were ten major land battles and seven major naval engagements in this area. At the turn of the year General MacArthur, in denying the enemy access to Port Moresby in New Guinea, had now assumed the initiative which he was to keep until the end of hostilities

The reconquest of New Guinea, which was completed in mid-January, cost MacArthur dear and, in view of his losses and the enemy's tenacity, he decided his methods had to be more efficient. As he wrote in his memoirs: "It was the practical application of this system of warfare, to avoid the frontal attack with its terrible loss of life; to by-pass Japanese strongpoints and neutralise them by cutting their lines of supply; to thus isolate their armies and starve them on the battlefield; to as Willie Keeler used to say, 'hit 'em where they ain't', that from this time guided my movements and operations.

Briefly, MacArthur was applying the „indirect approach" method recommended in the months leading up to World War II by the British military writer Basil Liddell Hart and practised also by Vice-Admiral Halsey in his advance from Guadalcanal to Bougainville and in the following autumn by Admiral Nimitz in the Central Pacific Area. When staff members presented their glum forecasts to MacArthur at meetings, stating that strong points could not be taken with our limited resources. MacArthur would reply; “let's just say that we won't take them. In fact, gentlemen, I don't want them, you incapacitate them”.

The results of this method were strikingly described after the end of the war by Colonel Matsuichi Ino, formerly Chief of Intelligence of the Japanese 8th Army: "This was the type of strategy we hated most. The Americans, with minimum losses, attacked and seized a relatively weak area, constructed airfields and then proceeded to cut the supply lines to troops in surrounding areas. Without engaging in large scale operations, our strongpoints were gradually starved out. The Japanese Army preferred direct assault, but the Americans flowed into our weaker points and submerged us, just as water seeks the weakest entry to sink a ship”.

This could not be better expressed; nevertheless, MacArthur's method demanded perfect collaboration of the land, sea, and airborne forces under his command and he handled them like some great orchestral conductor. He was also aided by the appointment in October 1942 of Admiral Halsey as commander of the naval forces in the Southwest Pacific. Like MacArthur, Halsey had a well-deserved reputation for leadership, confidence and aggressiveness. MacArthur now turned his attention to the rest of New Guinea and his main objective of Rabaul, the key Japanese military and air base in the Solomon Islands.

According to the decisions taken at Casablanca, by Churchill and Roosevelt, Nimitz's objective was Hong Kong via the Marshall and Caroline Islands and Formosa. Here

he was to join MacArthur; who would have come from the Philippines, reinforced in the vicinity of the Celebes Sea by the British Pacific Fleet. In Hong Kong the Anglo-American forces were to enter into contact with those of Chiang Kai-shek, whose objective was Canton. However, a few weeks later the American Joint Chiefs-of-Staff defined as follows the missions to be carried out by MacArthur and Halsey. Their Pacific forces to cooperate in a drive on Rabaul, then to press on westward along the north coast of New Guinea. Halsey was reduced to the men and *materiel* allotted to him by the C.in-C. Pacific. This excluded aircraft-carriers, as the new generation of aircraft-carriers only reached Pearl Harbor at the beginning of September. Nimitz, firmly supported by Admiral King did not intend to engage *Enterprise* and *Saratoga,* which were meanwhile filling the gap, in the narrow waters of the region.

In the meantime, whilst at Port Moresby General MacArthur was setting in motion the plan which was to put a pincer round Rabaul and allow him to eliminate this menace to his operations. The Japanese high command had decided to reinforce the Bismarck Sea region. On 28th February a convoy left Rabaul on board eight merchant ships escorted by eight destroyers. But Major General Kenney unleashed on the convoy all he could collect together of his 5th Air Force. The American bombers attacked the enemy at mast-height, using delayed-action bombs so as to allow the planes to get clear before the explosions. On 3rd March the fighting came to an end in the Bismarck Sea with the destruction of the eight troop transports and five destroyers.

The battle of the Bismarck Sea had lasted for three days, with Kenney's bombers moving in upon the convoy whenever there was even a momentary break in the clouds. “We have achieved a victory of such completeness as to assume the proportions of a major disaster to the enemy. Our decisive success cannot fail to have most important results on the enemy's strategic and tactical plans. His campaign, for the time being at least, is completely dislocated”.

Rightly alarmed by this catastrophe, Admiral Yamamoto left the fleet at Truk in the Carolines and went in person to Rabaul. He was followed to New Britain by some 300 fighters and bombers from the 6 aircraft-carriers under his command. Thus strengthened, the Japanese 11th Air Fleet, on which the defence of the sector depended, went over to the attack towards Guadalcanal on 8th April. But since the Japanese airmen as usual greatly exaggerated their successes, and as we now have the list of losses drawn up by the Americans, it might be useful to see what reports were submitted to Admiral Yamamoto who, of course, could only accept them at their face value. Yet it must have been difficult to lead an army or a fleet to victory when, in addition to the usual uncertainties of war, you had boastful accounts claiming 28 ships and 150 planes. The real losses were 5 and 25 respectively.

But this was not all, for during this battle the Japanese lost 40 aircraft and brought down only 25 of their enemy's. The results were therefore 8 to 5 against them. Had they known the true figures, Imperial GHQ might have been brought to the conclusion that the tactical and technical superiority of the famous Zero was now a thing of the past. How could they have known this if they were continually being told that for every 4 Japanese planes shot down the enemy lost fifteen?

With the victories in Papua and Guadalcanal, the offensive in the Southwest Pacific had definitely passed to the Allies. MacArthur was now arguing with his superiors in Washington, and not increasing his popularity in the process, that the best route to Japan lay along the 'New Guinea-Mindanao Axis'. Nimitz and the Navy argued cogently that a route through the Gilbert, Marshall, Caroline and Mariana Islands was not only shorter but necessary to protect the New Guinea-Mindanao Axis from air attacks staged from these islands. Thus the Nimitz-MacArthur race continued, although MacArthur now had greater resources as increased supplies and equipment flowed to his command.

At the Quadrant Conference at Quebec in August 1943, MacArthur and Halsey were directed to bypass Rabaul. This was surely a wise decision as Rabaul contained one hundred thousand defenders under a tough and resourceful general with ample supplies. An assault on Rabaul would have delayed the Allied advance by many months. With the fall of Bougainville to the south, Rabaul was now sealed off and left to 'die on the vine'. Supported by Halsey's Seventh Fleet, MacArthur's forces pushed rapidly forward in a series of amphibious operations. There were still mopping-up operations and many by-passed Japanese troops to be watched, but now MacArthur could look across the Celebes Sea towards Mindanao.

In the Pacific the year 1943 was marked, as far as Admiral Nimitz and General MacArthur were concerned, by a series of limited offensives which, whilst gradually wearing down the Japanese forces, were to give the Americans and their Australian allies the necessary bases for the decisive offensive of 1944.The objective of this latter offensive was the complete and final destruction of the Japanese military machine. No more than with the Germans, the Allies were not prepared to accept, anything less than Japan's total and unconditional surrender.

Any change of opinion over these radical aims would have aroused the opposition of the American public. The war against Japan was deeply felt by the American people and, in Churchill's entourage, during the conferences which took him across the Atlantic, it was often noticed that the reconquest of some obscure island in the far corner of the Pacific raised as much enthusiasm in New York and Washington as did a whole battle won in Africa or Italy. The White House and the Pentagon had to take these feelings into account.

Along with the concern shown by Roosevelt and Hopkins for the U.S.S.R., a concern which caused them to urge the opening of a second front, there was also the fact that the Americans did not look favourably on their hero MacArthur being kept short of men and *materiel* whilst in Europe U.S. forces stood idle on the wrong side of the Channel. In the Joint Chiefs-of-Staff Committee, that was the sentiment of the rugged Admiral Ernest J. King: instead of giving complete and immediate support to the principle of ‘Germany first’, the centre of gravity of American power should be shifted over to the Pacific. To forestall this reversal of strategy the President and General Marshall were therefore constrained to set in motion Operation ‘Round-up’, which was to become ‘Overlord’.

In the first two years of the war, Washington had allotted more troops and combat ships to the war with Japan than to the war with Germany, and almost as many planes. The real cause of MacArthur's annoyance was a trend he foresaw in the

making. With the invasion of Europe now in the planning stage, an increasing percentage of the United States' men and materiel was being earmarked for the European and Mediterranean theatres. Even worse, from the general's standpoint, was the fact that of the most recent allocations for the Pacific theatre, a smaller share was going to support his advance toward the Philippines from the southwest Pacific than to Admiral Nimitz' advance across the central Pacific.

General MacArthur's mood at the start of 1944 was less than happy. Over the past 16 months, Australian and American troops of his southwest Pacific command had driven the Japanese out of Papua and New Guinea and regained a firm Allied foothold on neighbouring New Britain. But in all they had advanced only about 280 miles closer to MacArthur's cherished goal. By the end of 1943, he was later to recall, "I was still about 1 600 miles from the Philippines and 2 100 miles from Manila". The general made no bones about his dissatisfaction, and unlike other commanders he did not feel he had to limit himself to military channels. An added outlet of expression was available to him in exchanges of letters with his fervent admirers back home.

In linking the Nimitz and MacArthur operations as a 'dual drive', planners in Washington had inadvertently touched off a competitive spirit that made the normal inter-service rivalries seem pale: Part of the problem lay in the sharply divergent ways in which people reacted to MacArthur's lordly personality. With few exceptions, his staff thought he could do no wrong. They treated him with a deference that bordered on idolatry, and they shared his belief that his projected return to the Philippines was in the nature of a sacred mission. Among Navy officers, on the other hand, MacArthur was viewed as a pompous windbag and an incurable ham, always playing to the galleries. They hooted when, in late 1943, he took note of press rumours that his part in the War was to be reduced by issuing a statement asserting that "however subordinate may be my role, I hope to play it manfully". They felt certain that MacArthur's massive ego would never allow him to yield his claim to supreme charge of the war against Japan-or to give the Navy proper credit for its vital contribution to that effort.

Dislike of the general reached to the top of the Navy's hierarchy. The hard-bitten Chief of Naval Operations, Admiral Ernest J. King, voiced such hostility to MacArthur in the privacy of Joint Chiefs of Staff meetings in Washington that he eventually drove presiding General George C. Marshall to an uncharacteristic act. The usually mild-mannered Marshall smashed his fist down on the table, declared "I will not have any meetings carried on with this hatred", and cut King off in mid-tirade.

Apart from their personal rancour, Navy officers found fault with the thinking at MacArthur's headquarters. They felt that his operations planners were locked into an 'Army mentality' unsuited to dealing with an arena of war that was mostly an expanse of ocean. Captain Raymond D. Tarbuck, who served as naval liaison with MacArthur, later remembered his surprise at "how little the Army officers at GHQ knew about water". The Navy concept of a body of water as a pathway was foreign to them; they treated" even the smallest stream as an obstacle". Even their maps, Tarbuck claimed, stopped at the water's edge. Coral reefs and other hazards that seagoing men had to take into account did not figure in their calculations.

Predictably, the Navy took a dim view of MacArthur's repeated attempts to enlist some of its prized carriers to support his operations.

MacArthur's opinion of Navy thinking was no more flattering. Frontal assaults on heavily defended islands, the strategy chosen by the Navy's planners for the drive across the central Pacific, struck him as an utter waste of men and time. The American losses at Tarawa provoked a blistering MacArthur memorandum to Washington. Directed over the heads of the Joint Chiefs of Staff to Secretary of War Henry L. Stimson, the MacArthur memo denounced the Navy's frontal attacks as "tragic and unnecessary massacres of American lives," and clearly implied that the cause of the tragedy was "the Navy's pride of position and ignorance".

There was, in fact, no difference between this strategy and the strategy of leapfrogging and starving out the enemy that Admiral Halsey had introduced and successfully employed in his drive up the Solomons in the closing months of 1943. Halsey was one of the rare Navy men for whom MacArthur had any kind words-he called him "a battle commander of the highest order".

The term Macarthur preferred for bypassing enemy strongholds was throwing "loops of envelopment" around them. But whatever the semantic shadings, the strategy was to work as successfully for MacArthur as it had worked for Halsey. During the first 8 months of 1944, his forces were to advance 1 100 miles to come within 300 miles of the Philippines.

In the War's early months the shock of the fall of the Philippines the Dutch East Indies, Burma and Malaya had temporally diverted Allied attention from Japan's quieter moves into the southwest Pacific. Besides taking Rabaul on New Britain, much of the Solomons chain and a stretch of the east coast of New Guinea, the Japanese had occupied a number of sites along New Guinea's north coast, as well as a number of islands in and around the Bismarck Archipelago. Seizing these places from Australian or British or Dutch control had proved easy enough, and promised the Japanese two vital advantages. In addition to bringing them closer to cutting Australia's lifeline, it gave them a valuable edge in case the fortunes of war shifted. A far-flung perimeter of outposts to guard against Allied attack on the Philippines and the home islands.

By the start of 1944, the perimeter had sizable dents in it. The Solomons were in American hands due to Admiral Halsey's success, along with MacArthur's landings on New Britain. All these developments enhanced the prospects of MacArthur's drive on the Philippines. But ultimately its success hinged on his disposing of key Japanese outposts along his projected route. In line with MacArthur's philosophy of waging war at the least possible cost in lives, he intended to bypass as many of the enemy's bases as he could, seizing every opportunity that arose as his operations proceeded.

On the ways to get to Tokyo and the means to be employed there was, to put it mildly, lively discussion between Admirals King and Nimitz on the one side and General MacArthur on the other. This is not surprising, as each of these leaders was a man of strong character and not given to compromise solutions of which his conscience would not approve. It fell to General Marshall to pronounce judgment on

their arguments and, in the last resort, to impose a solution. We shall see under what circumstances he did this, but let us say at once that it was done with both authority and a sense of opportunity.

The strategy question was still unresolved at this point. The Naval Chief of Staff, Admiral Ernest King, led the Navy school of thought which wanted to by-pass the Philippines, invade Formosa and set up a base on the Chinese mainland for the final assault on Japan. MacArthur's position was based on the liberation of the Philippines and the use of Luzon as a base for the final assault on Japan. Luzon could be sealed off by Allied air and sea power far more successfully than Formosa, which Japan could easily reinforce from the Chinese mainland. He also insisted that the United States had a compelling moral duty to liberate the Philippines which had been nourishing the Filipino resistance movement, and where the troops he had left in 1942 were still imprisoned. At a conference at Pearl Harbor in July, MacArthur converted Nimitz and Roosevelt to his 'Leyte then Luzon' strategy which was then formalised by the Joint Chiefs of Staff. MacArthur and Nimitz were to continue their advances and converge on Leyte in December. The fast carrier forces of Halsey, spearheaded by the new *Essex* class carriers, demonstrated graphically at Saipan Japan's great weakness in air power, so the date of the Leyte assault was moved forward two months to 20th October 1944.

The prior action at Saipan had brought about a massive air battle in which the Japanese lost 300 irreplaceable planes and pilots, the 'great Marianas turkey shoot' as American pilots called it. On 12th-15th October Allied Task Force 38 knocked out a further 500 planes based on Formosa, leaving Japan denuded of her naval air force. A powerful fleet was detached from the Central Pacific Command to assist Halsey in protecting MacArthur's 700 transports and auxiliaries carrying one hundred and seventy four thousand troops. These forces landed on schedule the morning of 20th October in the Gulf of Leyte in the central Philippines.

The Japanese High Command regarded the Leyte operation as a major crisis. If the enemy succeeded in occupying the Philippines, the supply lines of Japan would be fatally obstructed. The High Command, therefore, decided that the issue of the war hung on its ability to defend the Philippines, so it gathered its Navy to turn the American threat into a Japanese victory with one decisive blow. However, now that Japan's naval air force had been virtually eliminated, the attack would have to rely on the battleship fleet led by the awesome *Yamato* whose 18-inch guns made it the most powerful battleship afloat. The Japanese were also well supplied with cruisers and destroyers, but these would go into battle alongside the capital ships without air cover and with no way of striking at the enemy other than with gunfire and torpedoes. The Japanese Chief of Naval Staff, Admiral Toyoda, devised a complex plan to use a decoy force to draw off MacArthur's protective fleet of battleships and carriers under Halsey, after which two strong fleets would move in and attack the American forces while they were unprotected and in the highly vulnerable process of disembarkation. Toyoda counted on his forces making unimpeded contact with the enemy, free from air attack, and destroying the American transports and troops by sheer gun power. Thus Toyoda laid his plans for what was to become the largest sea battle in history, a battle which if successful would have had the impact of a second Pearl Harbor and kept Japan in the war for at least another year.

On 23rd October the battle opened on a successful note for Toyoda as Halsey withdrew his entire force to chase the decoy force, a fact for which he was subsequently heavily criticised. Spearheaded by 5 battleships, the larger Japanese attack force was intercepted by a weak force of American escort carriers and a few destroyers. These delayed the Japanese for hours with a heroic fight while reinforcements were mustered. The Japanese commander withdrew as he was coming under heavy air attack and was uncertain of the strength of his opposition. The decoy force escaped completely. The Battle of Leyte Gulf was the final action of the war for the Japanese Navy, which was so heavily battered that it was reduced to an auxiliary role. The great naval lesson of Leyte Gulf once more proved that battleships without air cover are helpless in a modern sea battle; Toyoda's plan was defeated mainly by Japan's lack of planes and to a lesser extent by bad intelligence and a lack of co-ordination among his commanders. The largest naval engagement in history, resulted in a decisive victory for the Americans. The Japanese Navy lost 4 carriers, 3 battleships and 10 cruisers.

But, had the Japanese decided to press home their attack after Halsey had left MacArthur dangerously exposed, this surely would have resulted in the stunning disaster for the Allies as envisaged by Admiral Toyoda. In the event, however, the assault on Leyte was successful. Standing on the beach, MacArthur made the broadcast to the people of the Philippines for which he had been waiting two and a half years: “People of the Philippines, I have returned. By the grace of Almighty God, our forces stand again on Philippine soil, soil consecrated by the blood of our two peoples”. The broadcast made a tremendous impact on the Philippines, and there on the beach MacArthur scribbled a note to Roosevelt urging him to grant immediate independence to the islands.

Although Japan had suffered a shattering defeat at Leyte Gulf, there were still sixty thousand Japanese troops on Leyte under the tough and determined command of General Yamashita (the tiger of Malaya). Ever since their defeats in Papua and Guadalcanal, the Japanese had followed a policy of making the Americans pay as high a price as possible and Yamashita continued to do so on Leyte. MacArthur was forced to commit a quarter of a million troops to its capture. Progress was slow as American troops, largely conscripts, tended to bog down in the jungle and relied on artillery fire power to clear the way. When the battle for Leyte was over the Japanese had lost an estimated forty eight thousand killed, as against three thousand five hundred for the Allies.

The strategy debate had continued right up to the assault on Leyte. MacArthur wanted to land on Luzon as soon as possible while Nimitz was still arguing for Formosa. Admiral King was all for by-passing Luzon in favour of Japan itself. Most of the others had come around to MacArthur's point of view, except for the adamant Admiral King. MacArthur informed the Joint Chiefs of Staff that he could land on Luzon on 20th December, and finally received a directive to do so. At the same time, orders were issued to attack Iwo Jima in January 1945 and Okinawa in March. So the two-pronged assault leading to Japan was to continue. MacArthur was understandably relieved at the final demise of the Formosa plan. The order to land on Luzon also meant that now he had authority to liberate all of the Philippines instead of only parts of them. It was a job he relished as he intended to eradicate all traces of the Japanese presence.

On 3rd February, American troops entered Manila and after 2 weeks of hard fighting had secured control of the city, though Japanese diehards continued to hold out in the old quarter until 3rd March. Under MacArthur's personal supervision the island fortress of Corregidor, last American position to surrender in 1942, took weeks to capture as it was defended almost to the last man, only twenty six of its five thousand man garrison, being taken prisoner.

These were highly emotional days for MacArthur who had been enthusiastically welcomed by the Filipinos and who was now reconquering territory which he had been unsuccessful in defending in 1942. As the prison camps were liberated, the ragged, half-starved inmates wept at the sight of him and came running to touch him. These were the men for whom he had felt so strong a need to return to. On 27th February, MacArthur reintroduced constitutional government and insisted on the Philippine Commonwealth having the same autonomy as it had before the war.

MacArthur's last amphibious operation was at Okinawa. Lying just 350 miles from the Japanese mainland, it offered excellent harbour and airfield facilities. It was also a perfect base from which to launch a major assault on the Japanese mainland. Consequently it was well-defended, with one hundred and twenty thousand troops under General Ushijima. On 1st April 1945, after a four day bombardment the 1 300 ship invasion forced moved into position off the west coast of Okinawa. The landing force, under the leadership of Lieutenant-General Buckner, initially totalled one hundred and fifty five thousand. However, by the time the battle finished, this had almost doubled.

On 4th May, at sea off Okinawa a 700 plane kamikaze raid on 6th April sunk and damaged 13 US destroyers. The giant Japanese battleship, *Yamato*, lacking sufficient fuel for a return journey, sent out on a suicide mission was sunk on 7th May. On 11th May, the Japanese were finally forced to withdraw. Lieutenant-General Buckner was killed by shell fire on 18th June and three days later his replacement, General Geiger, announced that the island had finally been taken. When it was clear that he had been defeated, Ushijima committed ritual suicide (hari-kiri). The capture of Okinawa cost the Americans fifty thousand in casualties of whom over twelve and a half thousand were killed. More than one hundred and ten thousand Japanese were killed.

While the island was being prepared for the invasion of Japan, a B-29 Superfortress bomber dropped the atom bomb on Hiroshima on 6th August 1945. Japan did not surrender immediately and a second bomb was dropped on Nagasaki 3 days later. On 15th August the Japanese surrendered and the World War Two was over

When Japan capitulated, there were still about fifty thousand Japanese holding out on Luzon. The Japanese defence had been admirably resolute, stalling the American re-occupation for months, and requiring large numbers of troops. Luzon in fact became the largest land campaign of the Pacific theatre, involving 15 American divisions and substantial numbers of Filipino troops as well. This was the most difficult and stubborn jungle fighting that MacArthur’s troops had seen since Papua and Guadalcanal, with the Japanese soldier at his defensive best.

The road from New Guinea to the Philippines had been a long and hard fought trip, usually against superior enemy forces. In New Guinea, MacArthur had had to overcome the arts of the Japanese in defensive warfare in territory favourable to the defenders, yet he had inflicted enormous losses on them. In the Papuan campaign, for example, thirteen thousands of twenty thousand Japanese participants were killed as against three thousand Allied losses. In the Philippines, MacArthur faced a similar situation, except that he had far greater forces at his disposal during that campaign. As he once told Roosevelt; “The days of frontal attack should be over. Modern infantry weapons are too deadly. Good commanders do not turn in heavy losses”.

MacArthur's battles were won by sheer artistry, by bringing his usually inferior force to bear on the enemy in places and at times when his opponent was off balance, so that his attack could succeed with minimum loss. Rather than assaulting the Japanese fortresses directly, MacArthur’s tactic was to envelop them by attacking their lines of communication until they were isolated and MacArthur later wrote that this tactic was the ideal method for success by inferior in number but faster-moving forces. He determined that such a plan of action was the sole chance of fulfilling his mission. By contrast the island-hopping campaign in the Central Pacific by Nimitz relied much more on simply overwhelming the enemy with a superior force, often resulting in appallingly high casualties.

The Japanese surrender took MacArthur by surprise. He and his staff had actually been planning the re-occupation of the Netherlands East Indies and the invasion of the Japanese home islands when the use of the atomic bomb by President Truman removed the latter need. Worried that the US Navy would beat him to it, he flew into an air base near Tokyo on 30th August to take the formal surrender 3 days later on board the battleship USS Missouri. Named after the home state of President Truman.

During 1945-51, when MacArthur was Supreme Commander for the Allied Powers (SCAP) in Japan, his rule was absolute but benevolent, thereby, accelerating Japan's reconstruction. As head of the Allied occupation of Japan, he was given responsibility of organizing the war crimes tribunal in Japan. He was praised for successfully encouraging the creation of democratic institutions, religious freedom, civil liberties, land reform, and emancipation of women and the formation of trade unions.

On the outbreak of the Korean War in 1950, MacArthur was appointed commander of the United Nations forces. On 15th September 1950, MacArthur landed American and South Korean marines at Inchon, 200 miles behind the North Korean lines. The following day he launched a counterattack on the North Koreans. When they retreated, MacArthur's forces carried the war northwards, reaching the frontier between Korea and China on 24th October, 1950. Truman and Dean Acheson, the Secretary of State, told MacArthur to limit the war to Korea. MacArthur disagreed, favouring an attack on Chinese forces. Unwilling to accept the views of Truman and Acheson, MacArthur began to make inflammatory statements indicating his disagreement with the United States government policy. MacArthur gained support from right-wing members of the Senate such as Joe McCarthy who led the attack on Truman's administration.

In April 1951, Truman relieved MacArthur from his command of the United Nations forces in Korea. On his arrival back in the United States MacArthur led a campaign against Truman and his administration. Soon after Dwight Eisenhower was elected president in 1952 he consulted with MacArthur about the Korean War. MacArthur's advice was the atomic bombing of enemy military concentrations and installations in North Korea and an attack on China. This was rejected and MacArthur played no role in Eisenhower's new Republican administration. He was however, given a hero's welcome and made a moving speech to Congress which he concluded by saying: "When I joined the Army even before the turn of the century, it was the fulfilment of all my boyish hopes and dreams. The world has turned over many times since I took the oath on the Plain at West Point, and the hopes and dreams have long since vanished. But I still remember the refrain of one of the most popular barrack ballads of that day which proclaimed most proudly that; "Old soldiers never die, they just fade away. And like the old soldier of that ballad, I now close my military career and just fade away - an old soldier who tried to do his duty as God gave him the light to see that duty. Good-by".

Three weeks later MacArthur was the Sylvanus Thayer Medal, the highest honour of the United States Military Academy. He reviewed the Corps of Cadets on the Plain at West Point and then, speaking without preparation, he responded to the presentation, speaking of Duty, honour and country.

MacArthur accepted a job as chairman of the board of the Remington Rand Corporation. Described by biographer William Manchester as the 'American Caesar', MacArthur saw himself as a man of destiny and became immodest to the point of egomania. Douglas MacArthur died in the Walter Reed Hospital, Washington, on 5th April, 1964.

Chapter Four

'Victory Disease'

After Japan was defeated in World War Two, there was a lot of analysis about why. Of course, one big reason why was that the US out-produced Japan by a huge factor, even taking into account that the majority of American war production was applied against Germany and Italy. But there was another factor which Japanese analysts identified. They called it 'victory disease'. Beginning with Pearl Harbor, and for the next five months or so, it seemed that nothing the Japanese did could possibly go wrong. And they became cocky. Then there was the Battle of Midway, which gutted their naval aviation, and it was virtually all downhill from there on.

'Victory disease' was the term coined by the Japanese themselves to describe the over-confidence which led them to take on too much with too little. Like the Germans in Russia, they found that their initial successes gave them an extended front which was one long salient, and salients are as vulnerable to enemy counter-attacks as they are helpful to expansion. When transplanted into the realities of the Pacific war. However, this meant considerably more problems for the Japanese than they had had at the beginning of the war. Theirs was not a continuous land front but an invisible perimeter: dots of land interspersed with thousands of miles of open sea.

And the outermost islands under Japanese control were uncomfortably close to others under Allied control.

What the Japanese strategists found, after the first intoxicating run of victories, was that there were a lot of loose ends still to be tied up. To the southeast, the Allies were still holding on in southern New Guinea, stalling the effective isolation of Australia. To the East, the Americans were still established on Midway Atoll, the western extremity of the Hawaiian chain. If New Guinea, and with it New Caledonia, Fiji, and Samoa could be added to the list of Japanese conquests, not only Australia but New Zealand could also be cut off. If Midway could be taken, the Hawaiian Islands themselves, and the all-important Pearl Harbour naval base, could later be taken, which would push the Americans right back to the Pacific coast of the United States.

None of these new objectives had formed part of the initial plan, which had centred on the reduction of the 'Southern Area': the Philippines, Malaya, and the East Indies. This was to have been followed by a period of consolidation. But the ease with which the first objectives were gained led the Japanese High Command to formulate new plans which would keep up the pressure while the going was good. Therefore, draft plans were prepared for the New Guinea-Samoa drive.

In purely logical terms, the confidence with which the Japanese turned to these ambitious new projects can be explained easily enough. After all, the entire scope of the 'Southern Area' campaign had been no less ambitious, and the result had been as overwhelmingly successful as it was economical. But the new plans meant expanding from an already expanded perimeter, using forces which were already widely dispersed and must now be dispersed still more. And unless the Allied forces still resisting in the Pacific were totally destroyed this time, even partial failure would give Japan nothing more than thousands more miles of vulnerable flank. It was the refusal to consider even partial failure, which was the worst symptom of 'victory disease'.

The origin of the term in Japanese is associated with the Japanese advance in the Pacific Theater of World War Two , where, after attacking Pearl Harbour in 1941, Japan won a series of nearly uninterrupted victories against the Allies in Southeast Asia and the Pacific. Although the Japanese had planned to establish a perimeter and go on the defensive, victories encouraged them to continue expanding to where it strained logistics and the navy. This culminated in the Battle of Midway in 1942, a catastrophic defeat of the Japanese navy: all four Japanese aircraft carriers involved were sunk, and the hitherto unstoppable Japanese advance was blunted

Initially, the Japanese had considered two separate strategies to gain access to more raw materials; the Northern strategy which would give them access to Siberia and the Southern strategy that would give them access to Southeast Asia. On the Mongolian border, they tested their 'Northern" strategy', and promptly got badly beaten by Zhukov's Soviet troops. It was not really a thorough test of the two armies, but the supporters of the Northern strategy had made their assessments based on the Japanese humiliation of Czarist Russia in 1905 and the recent purge of generals that Stalin had launched. So when their troops were defeated, they lost face and were no longer able to promote that campaign. The Southern strategy was always

the more difficult one, based on the presence of the British and U.S. fleets (along with any support that France and the Netherlands could provide, which was not negligible). That was why the supporters of the Northern strategy were able to make the first attempt.

Once the European war broke out, effectively eliminating France while severely hampering or reducing the effectiveness of the British and Dutch, Japan figured it only faced the isolationist U.S., which had few possessions in the region and had already declared the intention to give independence to the Philippines. In the summer of 1940, with France defeated by Germany, Japan seized Indochina, a rich agricultural source. But they still needed iron ore, the various trace metals that make such steels, molybdenum, vanadium, etc. And above all, oil! The Dutch East Indies was vulnerable, considering Holland was firmly under Hitler's heel. During 1941, President Roosevelt, and his cabinet, who were strongly pro-China and anti-Japanese imperialism, so much so that they effectively imposed an embargo of iron ore, scrap steel, and in particular oil on Japan and told her to get out of China, or face the consequences. Japan, with quite literally, a 40-day supply of oil felt compelled to go to war and seize these resources. But the U.S. and the U.K. warned Japan to refrain from aggression.

Japanese strategy may have been a sound one, from the perspective of their own war aims. What made the U.S. menacing to them was the Pacific Fleet and forces based in the Philippines. And Britain had forces in Hong Kong and Singapore. The Japanese calculated that if U.S. forces at Pearl Harbour and Manila, and Britain's in Hong Kong and Singapore could be knocked out, the threat to Japan would be effectively eliminated, and they would be forced to sue for peace.

What happened, of course, was that the Japanese overextended themselves. Instead of expanding to a defensible perimeter that protected their much needed raw materials areas, they took everything in their path. In reality, the U.S. carriers were still at sea and the Pearl Harbour attack only served to unite the Americans against them. Churchill commented that Pearl Harbour was, in effect, the best bad news he had ever received, because it meant that the U.S. was coming into the war alongside Great Britain and the Soviet Union. Both countries were just holding on, but it was taking all they had to defend themselves.

The basic intent of the Japanese attack on Pearl Harbor and Singapore was to remove the Allied fleet so that Japan could have its way with all of Southeast Asia, at which point the Japanese (mistakenly) assumed that the U.S. (where the Japanese confused isolationism with pacifism) would come to terms with Japan, thus avoiding a protracted war. It did not quite workout that way.

The resources that the U.S. brought to bear on Japan eventually turned the tide. But it would have taken extraordinary foresight for Japan to see this in the late 1930s. The U.S. was struggling through the second phase of the Great Depression. Industrial production was in recession and unemployment cripplingly high. The U.S. military was in a pathetic state, with a paltry number of troops. The population was strikingly isolationist and more importantly, so was Congress. Nobody anticipated the material production of U.S. factories when they converted to full-time war industries; it was unprecedented.

The majority of Japanese leaders' underestimation of the U.S. was based on a lack of appreciation of U.S. industrial capacity. Key leaders were convinced that the U.S., unlike Japan, lacked a warrior spirit and was a nation of 'merchants' that would recognize that a war with Japan was not worth pursuing. False optimism about quickly achieving military victories and racial pride/arrogance are repeating themes in history that help explain how war proponents get in over their heads. The belief in the possibility of a short decisive war appears to be one of the most ancient and dangerous of human illusions.

One nightmare of pre-war Japanese military strategists had been the possibility of an attack by aircraft from US carriers on Japan's home islands; for this reason they even tried before the war to have aircraft carriers banned by international agreement. Their fears were fulfilled on 18th April 1942, when 16 US Army Air Force B-25 Mitchell medium bombers struck Tokyo, Yokohama, Kobe and Nagoya. They were commanded by Lt Colonel James Doolittle. Though normally land-based, Doolittle's 12 ton bombers took off from the US aircraft carrier *Hornet.*

After the Pearl Harbor shock of 7th December 1941 had subsided, the focus of American military planners turned to retaliation. An avenging blow against the Japanese would help stimulate the morale of the Americans and, indeed, all Allies in the Pacific who had suffered from Japanese aggression. The early months of 1942 were bleak indeed for the Americans as the Japanese spearheads thrust ruthlessly across the Pacific, spreading ever wider the boundaries of their empire. The American public badly needed a morale booster which would check the rampaging Japanese, and demonstrate to the hitherto all-conquering Imperial militarists that their supposed divine invincibility was a myth.

The Doolittle raid had its origins in a desire by President Roosevelt when he expressed to the Joint Chiefs of Staff at the White House on 21st December 1941 that Japan was to be attacked as soon as possible. The concept of the attack came from U.S. Navy Captain Francis Low, Assistant Chief of Staff for Anti-Submarine Warfare. He had recently observed several twin engine army bombers at an airfield in Norfolk, Virginia practicing short takeoffs from a runway and had the distances measured. He reported this information to Fleet Admiral Ernest J. King on 10th January 1942, who duly passed it on through the correct channels.

James (Jimmy) Doolittle, an American aviation pioneer and reputable aeronautical engineer was a foremost Air Force bomber expert and the holder of many aerial records during the 1920's and 1930's. He had left the Army Air Corps to pursue a career in petroleum with Shell, but was recalled to active duty after the attack on Pearl Harbor and promoted to Lt. Colonel. He volunteered for, and was given, approval to lead this top secret retaliatory attack on the Japanese homeland.

He presented his superiors with a daring and unorthodox plan. Because there were no Allied airfields within a 'bomb and return' range of Tokyo, he proposed that land-based B-25 Mitchell bombers be transported by an aircraft carrier to within striking-distance of the Japanese mainland. All were in agreement that touching down a medium bomber on an aircraft carrier was impossible. Therefore after taking off and bombing their targets, the raiders were to fly 1 200 miles across the East China Sea

and land on pre-selected airfields, where they were to remain as a valuable bomber-group supporting Chinese troops. The Japanese would not expect the U.S. Navy to risk carriers close enough to Japan, it was a brilliant plan and only required the right aircraft and special skills from the pilots.

This spectacular raid was to cause little damage but great consternation among both the Japanese and American publics, who could not understand how the attack had been mounted. The raid was supposed to take place at night, but in the early hours of 18th April, *Hornet* and its companion carrier *Enterprise* stumbled into a Japanese picket-boat line, some 700 miles east of Japan. As a result, the attack had to be launched prematurely and in broad daylight in order to minimise the risks to the valuable carriers. Luckily, they reached Tokyo and the other targets just after Japan's first air-raid drill. Japanese fighters let them approach the capital, assuming that these were their own aircraft taking part in the drill.

The twin-engined B-25 Mitchell bomber was selected as the most suitable aircraft. Three auxiliary fuel tanks, ten 5-gallon cans, and a 360-gallon-capacity collapsible rubber bag were added to the normal fuel load to give the B-25 an 'attack-and-escape' range. The bomb load was small, but the three 500-pound bombs and single incendiary cluster could do a lot of damage on the right target. The crew's finalised top-secret intensive training in simulated carrier deck take-offs, and low-altitude bombing. The major problem was to learn how to fly the bomber off a carrier deck. This normally required a minimum of 1 200 feet of runway for take-off. To get airborne on only 450 feet of a carrier deck required exceptional training and skill. After completing the three weeks training programme, the volunteer crews flew to San Francisco.

On 1st April, 16 B-25s were lifted on board the aircraft-carrier USS *Hornet* and lashed to the flight deck. Arriving north of Midway, the carrier and its escort were joined by Vice Admiral Halsey's carrier, USS *Enterprise,* and, accompanied by four cruisers, eight destroyers, and two oil tankers. The task force headed towards Japan, Doolittle hoped to reach a point 450 miles from Japan for the take-off, to allow a successful flight to China, 650 miles would be the absolute limit, but due to the sighting by a Japanese patrol boat, early in the morning of 18th April, this drastically changed the plan.

The air crews had always known it would be a hazardous mission, but on that morning, they were stunned when told that take off was to be immediate. The chances of any bomber reaching China from so far out in the Pacific were slim, but they were determined to go ahead. One by one they raced down the Hornet's pitching deck. Doolittle's own B-25 roared off the Hornet, immediately followed by the other fifteen bombers who manoeuvered their aircraft into position to take advantage of as much length of the flight deck that they could; and begin the shortest operational take off that any of them had ever experienced. Despite this, all 16 aircraft were launched safely between 08 20 and 09 20 hours. This was the only time that United States Army Air Forces bombers were launched from a U.S. Navy aircraft carrier on a combat mission. What was to become known as the famous 'Doolittle Raid' on Tokyo had begun. That day eighty courageous American airmen flew their B-25 Mitchell's into a unique place among the great aerial combats of World War Two.

The bombers flew on towards Japan, mostly in groups of two to four aircraft before changing to single file and dropping to wave top height to avoid detection. The aircraft began arriving over Japan at about noon (Tokyo time), and bombed ten military and industrial targets in Tokyo, two in Yokohama and one each in Yokosuka, Nagoya, Kobe and Osaka. Although some B-25's encountered light anti-aircraft fire and a few enemy fighters over Japan, no bomber was shot down. Surprise had been complete.

Unfortunately, schools and an army hospital were also hit. The Japanese press depicted the attack as a cruel, indiscriminate bombing targeted at civilians, women and children. The Americans were accused of war crimes. 15 of the 16 aircraft then proceeded southwest along the southern Japanese coast and across the East China Sea toward China, where several airfields were supposed to be ready to guide them in, using homing beacons. They were then to be refueled and flown on to friendly territory. It was the longest combat mission ever flown by B-25 Mitchell's, averaging 2 200 miles.

The raiders faced several unforeseen challenges during their flight to China; night was approaching, the aircraft were running low on fuel and the weather was rapidly deteriorating. None would have reached China if not for a tail wind that increased their ground speed by 25 knots for 7 hours. As a result of flying through darkness, rain, and cloud, the crews realized they would probably not be able to reach their intended bases in China, leaving them the option of either bailing out over eastern China or crash landing along the Chinese coast when the fuel tanks emptied.

Of the fifty aircrew who parachuted over China, only one was killed; the remaining forty nine were led to safety by Chinese. From the aircraft that crash-landed along the coast the Chinese rescued ten more, but the Japanese captured eight men, three of whom were executed after a trial at which they were accused of deliberately bombing civilians; the others were imprisoned, one to die a prisoner of war.

All the aircraft involved in the bombing mission were lost. The bomber that flew to the Soviet Union landed forty miles beyond Vladivostok, where their aircraft was confiscated and the crew interned for more than a year. Of the eighty airmen that participated in the raid, sixty nine escaped capture and death. When the Chinese helped the Americans escape, the grateful Americans in turn gave them whatever they had on hand. The people who helped them, however, paid dearly.

The Japanese military pursued the Chinese that had helped the downed American airmen. All airfields in range of the areas where the Raiders had landed were destroyed. The use of germ warfare and other atrocities were committed, and those found with American items were shot. The Japanese killed thousands of Chinese civilians during their search for Doolittle's men.

Compared with the future devastating Boeing B-29 Superfortress attacks against Japan, the Doolittle raid did little material damage, and all of that was quickly repaired. Doolittle felt the raid had been a terrible failure because all the aircraft were lost, and he expected to be court-martialed on his return.

Instead, Doolittle was awarded the Medal of Honor by President Roosevelt, and promoted two grades to brigadier general, skipping the rank of colonel. He went on to command the Twelfth Air Force in North Africa, the Fifteenth Air Force in the Mediterranean, and the Eighth Air Force in England during the next three years.

Despite the minimal damage inflicted, the American public were overwhelmed when news of the raid was released. Still reeling from the attack on Pearl Harbour and Japan's subsequent territorial gains, the American public appreciated knowing that a successful military response had been accomplished. All eighty Raiders received the Distinguished Flying Cross and those who were killed, wounded or injured as a result of the raid also received the Purple Heart. In addition, every Doolittle Raider received a decoration from the Chinese government.

The fact that large land-based bombers carried out the attack confused the Japanese high command. This confusion and the knowledge that Japan was now vulnerable to air attack strengthened Yamamoto's resolve to capture Midway Island. The humiliated Japanese command hastily planned an attack on the American outpost. An attack whose failure proved to be the decisive turning point of the war in the Pacific when the Imperial Japanese Navy was routed by the U.S. Navy.

After the Doolittle Raid, Nagumo’s task force was recalled to Japan from the Indian Ocean Raid to refit and replace its air losses and defend their Home Islands. Thus relieving the pressure on the British in the Indian Ocean and Eastern Africa.

Admiral Yamamoto's plan for a final showdown with the US Pacific Fleet was rapidly accepted by the Imperial Naval General Staff. But Yamamoto did not know that his plans would soon be known to the Americans. For several months an American code-breaking team at Pearl Harbour had been attempting to break the Imperial Navy's main operational code. By early April the US intelligence officers had succeeded and could now interpret Japanese intentions with remarkable accuracy. This gave the Americans an incalculable advantage in the crucial battles about to come in the Pacific.

There were other results from this raid, apart from the heartening news it provided for the Allies and the psychological shock felt in Japan. China suffered the loss of more territory, which the Japanese quickly captured to deny to the Americans future use of the airfields. Additional Japanese troops were sent to China, and four army fighter groups were kept in Japan during 1942-43, when they were badly needed elsewhere.

The United States Navy named one of its aircraft carriers after the fictional location, USS Shangri-La, as a reference to the Doolittle Raid. President Roosevelt had answered a reporter's question by saying that the raid had come from "Shangri-La", which was the name of the mysterious place of perpetual youth in the Himalayas in the popular book and movie of the time, Lost Horizon.

Midway was a direct result of the Doolittle raid. Based on two needs of the Japanese military: to extend the Japanese perimeter out far enough to make an attack across the Pacific a hopeless endeavour, further reducing U.S. desire for war, and to lure the U.S. carriers out into battle where the massive Japanese fleet would destroy

them, effectively leaving the Japanese as the only navy in the Pacific. In the most recent battle, (at Coral Sea), the U.S. had, while turning back the Japanese lost one fleet carrier and sustained enormous damage on another fleet carrier while the Japanese had suffered damage to one fleet carrier and lost a light carrier. The idea that the Japanese entire fleet, including four fleet carriers, could not defeat two U.S. carriers was not really considered likely. It was only the record-breaking repair of the Yorktown that brought the odds up from 4:2 to 4:3 and then a combination of luck and both good and bad decisions that resulted in the loss of all four Japanese carriers to one U.S. carrier, leaving the rest of the Japanese battle fleet with no air cover.

Clearly, breaking the Japanese naval code was extremely important to the U.S. who were now aware of the Midway operation. The Yorktown not only provided more planes over the Japanese fleet, it also provided a more disperse set of targets for the Japanese planes to hunt down. Midway, along with further Japanese defeats, resulted from elaborate Japanese tactical planning. They devised tactics and plans that were too intricate and inflexible during 'the fog of battle'. The Imperial Japanese Army had conquered most of China's Eastern seaboard including almost all the major cities. But by mid-1938 the Japanese offensive had stalled and the puppet Japanese governments were under constant guerrilla attack. Despite Pearl Harbor roughly 80 per cent of the Japanese Army's manpower was inside the borders of China and actively trying to fight the insurgency. The Chinese strategy had been to prolong the war until it had sufficient strength to defeat the Japanese. The Chinese Nationalists and Communists were actively cooperating in military campaigns. Letters from Japanese officers voiced their frustration at the intense guerilla action in China that was causing much more causalities than they had anticipated. While the later conflicts with the U.S. were bloody the tally was nowhere close to even half that in China. The war in China also hamstrung the Japanese army from fully utilizing the resources and industry they gained in the war with China to prosecute the war elsewhere.

If Japan did NOT have the problems that they did in China they could have used their vast garrisons of men to fortify their positions in SE Asia and make use of industry and resources to revitalize their military. As it turned out they were lacking in both men and equipment because of the China campaign. The situation in China was such that neither side was going to win a resounding victory. The Japanese could not conquer China, but neither could the Chinese throw them out. What mattered to the Allies was keeping the stalemate going, and tie down as many Japanese as possible. And the Chinese people paid an unbelievably high price for the 'stalemate,' dying by the million.

Once the Japanese had more or less taken the Burma Road, they thought that colonised nations in the region would enthusiastically throw out their old colonial masters. Particularly India, where they made quite some effort both to enlist Indians, and stir up an uprising. Had their assumption been correct, they might have been able to stop at India and use it as their border. They were rather wrong, and the longest land advance in history was followed by the longest land retreat as the forces under Generals Slim and Stilwell reorganised.Even if the Japanese had more success in the Pacific, it's hard to see how they could have held back this rolling onslaught once it finally got under way.

The tide had turned at Midway, the Japanese had been halted, and although the first counter attacks were not particularly successful it was the start of the Japanese defeat. Eighteen months after Pearl harbor, the Japanese were beginning to lose the land war on Asia.

The Japanese war plan followed in general lines a plan that had been decades in the making. The Japanese would secure the resources they needed, and meanwhile establish a defensive perimeter to the East that would allow them to whittle down an approaching U.S. fleet as it made its way to liberate the Philippines, finally bringing that fleet to battle (a decisive battle, it was believed) somewhere around the Marianas). This was in fact how the war turned out until the Fall of Saipan in June, 1944.

Many of the Japanese leaders had little reason to doubt that their strategy was working. They were trading space for time and American losses, but to their chagrin, the U.S. losses were too small. U.S. forces actually increased in power between Tarawa in November 1943 and Saipan in June 1944; and their decisive battle of the Philippine Sea, was an unmitigated disaster for Japan. The Japanese only planned to win! When you only plan on winning, a big loss pretty much messes up your grand strategy. This is not unusual about people that lead countries into war. Their arrogance, ideology, and non-objective view of situations. If contingencies are not planned for any big operation, then what might go wrong will go wrong.

Certainly the Japanese made tactical and strategic mistakes and spread themselves too thin. However, they did so realistically in their eyes, and in the eyes of most of the world, based on what all considered at the time to be sound extrapolation. As it turned out, they had completely underestimated the Allied resolve. Even if the Japanese had crippled the pacific fleet, pacified China, and secured resources from the southeast, the Allies would never have contemplated suing for peace.

The Japanese assumed that the Dutch East Indies oil could have been gained without anything but protests from the USA. This just isn't reasonable. Japan and the United States did not become enemies at Pearl Harbour; they were openly hostile well before then. Attacking the Dutch East Indies would have been strategically untenable for the USA to allow and would unquestionably have resulted in immediate war. The counter-argument is that it may have been ‘strategically untenable for the USA to allow’, but with the then mood of the US people it may not have resulted in immediate war. Any attempt by the president to get Congress to declare war to protect the Dutch colonies would have been laughed out of Capitol Hill. He couldn't get support for a war to protect the British or the French - nor the Netherlands homeland, never mind colonies.

The mood of the Americans at that point in time was pro-Ally but very isolationist. The Americans felt they had been conned into World War One, and weren't about be conned into ‘another foreign war of aggression’. If Americans weren't going to support a war to save the Dutch homeland (or the Belgians, Polish, Czechoslovakian, French, Luxemburg, Chinese, and so forth) it is argued, would they have supported a war to save some Dutch Colonial oil wells?

If there was not a Pearl Harbour, what would have precipitated US entry? At what point exactly would the American people have thrown off the mantle of isolationism and declared war? Perhaps when the Philippines were completely surrounded and occupied by Japanese garrisons? The Japanese naval strategy was based on land-based airpower. At the start of the war, land-based air was generally superior to carrier air, for several reasons. Carrier aircraft had to have extremely rugged landing gear. So much so that the resulting performance penalty meant carrier fighters never quite matched the finest land-based fighters. Carrier air capacity was limited. Not only do carriers hold fewer planes than an island does, but more planes cannot be added in a crisis, as on an island base. And of course carriers can be sunk.

The planned perimeter of island bases that could operate mutually-supporting air units would in theory prove an amazingly tough nut to crack. Where it fell down was in underestimating three key areas: US fleet building capacity, US pilot training and replacement, and the depredations of US submarines (making resupply of the far-flung islands a nightmare). It was submarines that brought Japan to a standstill, crippled its transportation of oil and immobilizing shipping. With the supply of improved pilots, and improved planes, the US military was able to improve its equipment in a stunningly fast period of time, in some cases, planes increased in capabilities between design revisions. The P-47 Thunderbolt increased massively in size and speed.

US shipbuilding capacity (and the determination to maximize it) became one of the wonders of the world; nobody had seen anything like it, and the US was still coming out of a depression when the shooting started. Japanese pilot training emphasized elite forces formed by a long and arduous process. These pilots were highly skilled, but the replacement rate was totally inadequate for serious battle casualties. The Japanese started out with a large group of pilots, well-trained and with combat experience in China. After Pearl Harbour, they suffered heavy losses in aircraft and pilots, with little capacity to replace them. Coral Sea and Midway would lose them many irreplaceable pilots and aircrew.

The Americans took a less romantic and more practical view; American aces were pulled off the battle line (usually under protest) and sent home to train more pilots, instead of being asked to win the war single-handedly. The US built 24 Essex class aircraft carriers during the war, and had the programs in place needed for those carriers with modern aircraft and trained pilots. Even if Japan had won at Midway, how would they have dealt with the new fleet that was under construction? Yamamoto, in 1941 stated, “anyone who has seen the auto factories of Detroit and the oil fields of Texas knows that Japan lacks the national power for a naval race with America”. Mindful of a Herman Göring quote: “The Americans cannot build aero planes”.

Why did the Japanese send a diversionary force to attack the Aleutian Islands? The battle group (including a carrier) could have saved the day at Midway, instead, it was 2 000 miles away! From the interrogation of staff commanders by Allied forces. The primary objective of the Aleutian Operation was to occupy it as a northern base for patrol planes, which, in conjunction with Midway, could cover the northern approach across the Pacific to Japan. The Aleutian Campaign served as a stop to any American advance down the Aleutian Islands. It was planned in coordination with the

taking of Midway, and, had they a base in the Aleutians and one in Midway, a barrier patrol could have been set up between the two. This was considered a prerequisite to operations against Hawaii. They did not intend to go into Alaska.

The Aleutian campaign also lead to the Americans capturing a nearly-intact A6M Zero. A Japanese fighter pilot had experienced some problems, so he tried to do an emergency landing. The landing gear got stuck in the ground, and the plane flipped forward, killing the pilot but leaving the plane mostly intact. The Americans found it and were able to take it home for extensive study, designing the F6F Hellcat and F4U Corsair to capitalize on the Zero's weaknesses.

US submarines did immense damage and made many Japanese positions untenable. The US had been a major international force urging the restriction and limitation of submarine warfare. Who would have expected them to declare unrestricted submarine warfare immediately upon entry into the war?

The Japanese did not use their excellent long-range submarines to maximum effect. These could have waited outside San Diego, to sink the US carriers. The defeat at Midway must have really rattled the Japanese, and made them forget sound strategic thinking. Japan badly bungled the submarine war. Their doctrine was that the main purpose of submarines was to escort their own battle fleet and strike at the enemy battle fleet. The United States realized that submarines were a lot more effective if they were used independently to strike at the enemy logistic lines - especially in a war fought in the Pacific where both sides had dozens of island bases that were dependent on this shipping. Not only did the Japanese refuse to seriously commit their own submarines to attacking American shipping, they also refused to acknowledge how badly their own shipping was being affected by American submarine attacks and dedicate their forces to effective anti-submarine countermeasures. In this regard, the American forces in the Pacific had it easy compared to the simultaneous war in the Atlantic - their supply ships never faced the equivalent of the German U-boat campaign and their own submarines never had to face the ruinous attacks the U-boats received in turn.

Another (lesser known) issue that the Japanese had were the frequent rivalries between the various branches of their military. The generals in charge of each tended not to get along very well and this led to wartime miscommunication and logistical problems. Yamamoto did not direct Japanese naval strategy, though he had considerable influence. Admiral Nagano, Chief of the Naval General Staff, directed Japanese naval strategy, and was frequently at loggerheads with Yamamoto, about Pearl Harbor among other things. It was Yamamoto's prestige that often got him his way, but he had to compromise, and often did so badly. He let the carriers Zuikaku and Shokaku go to the Coral Sea to get his way with the Midway plan, a fatal error.

Yamamoto was a realistic naval strategist. But as far as ‘grand’ strategy, he was not in charge of the army, and there were constraints on his planning. He planned the attack on Pearl (along with Genda) but he opposed attacking the United States at all and was quite explicit in telling his superiors it would be a mistake. Statin, “Should hostilities once break out between Japan and the United States, it is not enough that

we take Guam and the Philippines, nor even Hawaii and San Francisco. We would have to march into Washington and occupy the White House.

The idea of invading Australia was promoted by the Japanese Navy but it was never a realistic possibility given the multitude of Japanese commitments elsewhere, the massive land area involved and the extremely long and vulnerable supply lines that would have resulted. The concept was rejected out of hand by the Japanese Army High Command who would have been responsible for carrying it out. The Army High Command estimated they would need a minimum of twelve divisions to carry out such an invasion, and they did not have the forces available even if there was shipping available to move and supply them, which there wasn't. Since the main reason for advancing beyond the original perimeter was to delay an Allied counteroffensive from the sou

Apparently carried away by its own boldness the Navy went even further, and proposed that India, too, be taken as a means of forestalling Allied recovery and reorganization. Clearly the naval staff, as one of the Japanese admirals put it, had succumbed to 'Victory Disease'. No decision was reached on the invasion of Australia or India at this time. The Army planners said, as well as supplies and shipping in such magnitude as to make the operation "a reckless undertaking far in excess of Japan capabilities". Meanwhile in Tokyo the question of an invasion of Australia had come up again. The Navy pushed more vigorously for its plan this time, arguing that the U. S. Fleet would be unable to take offensive action in the western Pacific until the end of 1942. In the meantime, the naval planners warned, the Allies were pouring airplanes, men, and supplies into Australia and converting it into a base for offensive operations. The Army's desire was to consolidate along the original perimeter and concentrate on the war in China. The naval planners argument, constituted a defensive and negative policy. Such a policy, asserted Yamamoto's chief of staff, "would in effect render futile all our military successes and put Japan in the position of waiting for her enemies to attack without any special advantage to herself.

The wisest course, therefore, was to continue on the offensive". The Army remained adamant in its opposition to this plan. Its original conception of operations in the Southwest Pacific had been defensive and the Navy's proposal for an aggressive policy in that area was alarming. Army forces, already widely scattered throughout the Pacific, would have to be spread dangerously thin if Japan embarked on new and costly adventures. Moreover, the fear of Russia had not abated and the Army was anxious to adhere to the original plan. All these considerations, plus the size of the force required and the difficulties of supplying and maintaining this force, convinced the Army that the invasion of Australia was a 'ridiculous operation'.

This is an important distinction to keep in mind when thinking about the lead-up to war and the eventual prosecution of it. The Japanese high command was highly decentralized in a fashion, with the Imperial Army and Navy General Staffs and the respective formations under them, the Combined Fleet and the Armies (such as the infamous Kwantung Army) hardly ever agreeing, rarely cooperating, and occasionally simply ignoring each other. This was seen in its most pitiable form when it came to coordinating merchant shipping. Army ships would leave Japan on a supply run to (say) Java, but return empty because moving raw goods (such as oil)

was not an Army responsibility. Their merchant fleet was barely up to the task to begin with: this just further crippled their ability to move troops and material around, and exacerbated once the Americans started to sink tankers, a high-priority vessel.

During the thirties, Japanese policy was the outcome of what amounted to gang warfare between various factions, with ministers being assassinated when they tried to rein in the more extreme militarists. The Kwantung Army was totally out of control in China, the established order in colonial Asia had been turned upside down by events in Europe. The US had imposed an economic embargo that included metal and crude oil to try to force the government to rein in the army (which they were essentially powerless to do), central policymaking was a farce.

It is misleading to think there was any 'Grand Plan' in Japan any more than there was in Nazi Germany, they simply blundered their way into the apocalypse.

Chapter Five

Coral Sea

In the spring of 1942, following their rapid successes during the early months after their entry into the war, the Japanese were ready to extend their control over the Coral Sea by capturing Port Moresby in New Guinea; thus isolating Australia from Allied help and opening the way for further advances in the south-west. The battle which ensued was the first naval battle to be fought entirely by aircraft; no ship on either side made visual contact with the enemy.

The Japanese had made great gains in the vast Pacific Ocean. The conquest of the Philippines, Burma, Malaya and the Dutch East Indies had cost the Japanese Navy only 23 warships and none had been larger than a destroyer. Sixty seven transport ships had also been lost. The Japanese naval command had expected far greater losses, therefore, encouraged by such success, they looked to expand still further in the Far East. However, the senior officers in the Japanese Navy disagreed on what was the best way forward. The very success which the Japanese had achieved in implementing their initial war plans had raised a fresh series of questions in the minds of those responsible for shaping Japanese naval strategy. And had caused a fierce and prolonged debate among the higher echelons of the Japanese naval command.

The Naval General Staff, headed by Admiral Nagano, advocated either an advance westward against India and Ceylon, or a thrust southward towards Australia. Admiral Yamamoto and the staff of the Combined Fleet, on the other hand, argued that a prolonged struggle would be fatal to Japanese interests, and regarded the first priority as being the destruction of the United States aircraft-carriers in the Pacific, to maintain Japanese security in the area. To this end, they urged early operations against Midway, to the eastward, seeing this as necessary for an attack on Hawaii. With the presence of the Combined Fleet in Hawaiian waters to support an invasion, the United States fleet would certainly be drawn out into a decisive battle, and could be dealt with before the Allies brought their emerging superior resources to bear against Japan.

The Japanese army, with its eyes on the Asian mainland and on Russia, objected to committing the large numbers of troops needed for the Naval General Staff's plans, and forced the latter to work out a more modest scheme. This involved moving from Rabaul and Truk, where Japanese forces were already firmly entrenched, into Eastern New Guinea, and down the Solomons and New Hebrides to New Caledonia, the Fijis, and Samoa.

In theory, the formulation of Japanese strategy was the responsibility of the Army and Navy General Staffs, operating jointly as sections of Imperial General Headquarters. In practice, however, the ability of the Combined Fleet to influence strategy had been demonstrated by Yamamota's insistence on the Pearl Harbour operation, despite the opposition of the General Staff. Subsequent events served to reinforce that influence.

It was the Americans who forced the hand of the Japanese. On the 18th April, the Doolittle raid on Tokyo, launched from the aircraft-carrier *Hornet,* inevitably strengthened Yamamoto's case for the Midway operation, particularly in the failure to keep the capital itself immune from bombing attacks.

The opposition of the General Staff promptly vanished. By 5th May, Admiral Nagano, Chief of the Naval General Staff, and acting in the name of the Emperor, issued Imperial General Headquarters Navy Order 18 which directed Yamamoto to 'carry out the occupation of Midway Island and key points in the Western Aleutians in cooperation with the army'. The operation to take place early in June.

However, the Japanese had decided on a course of action that spilt their forces. The attack on New Guinea had already started and could not be called off as it was too far advanced. Therefore, Yamamoto could not call on all the forces he might have needed for an attack on Midway Island as some Japanese forces were concentrated in the Coral Sea to the south-east of New Guinea. Thereby forcing upon the Japanese two concurrent strategies which were destined to over extend their forces. The plan for the impending Operation 'MO' was based on simple premises, but was over elaborate in the detail by which it was to be carried out. In fact this plan was too complicated, revealing a typical weakness which was evident throughout the war. It demanded a level of tactical competence which the Japanese did not possess. The division of forces in the plan might well be fatal to its prospects of success, should the Japanese meet a determined enemy when they were not in a position to concentrate and coordinate the separate units effectively.

The occupation of Port Moresby had originally been scheduled for March, but the appearance of American carrier forces in the south-west Pacific had caused the Japanese to postpone the operation until early in May, so that the V Carrier Division of the Nagumo force, then returning to Japan after the Indian Ocean operations, could be used to reinforce the IV Fleet at Truk and Rabaul. The V Carrier Division, under Rear-Admiral Hara, contained the powerful aircraft-carriers *Shokaku* and *Zuikaku.* A number of heavy cruisers which had seen service in the Indies were also spared for the invasion, together with the light aircraft-carrier *Shoho* from the Combined Fleet. The remainder would have to be furnished by the IV Fleet, under Vice Admiral Inouye, who was given overall command of the operation.

The next encounter, the Battle of the Coral Sea, came about because Admiral Yamamoto's cherished decisive battle had not yet come about. His strategy had worked well so far, the US Pacific Battle-Fleet had been destroyed and a chain of Island bases had been established to protect the new conquests. But still the American carriers eluded him, as the Doolittle raid on Tokyo showed only too clearly. It was recognised by the Army that Australia was an important base for any counter-offensive aimed at their own base at Rabaul. Yamamoto did not believe that the South-western Pacific would provide the decisive battle (his staff was planning for that in a strike against Midway), but he acquiesced to the Army's plans. It all looked so easy to him after the staggering series of victories and the Japanese were becoming drunk with success.

The operation included an amphibious invasion of Port Moresby and the capture of Tulagi in the Solomons. The Japanese labelled the attack on Port Moresby as 'Operation MO' and the force that was to attack it was 'Task Force MO'. The main part of the Japanese plan was to move through the Jomard Passage, to the south-east of New Guinea, allowing it to attack Port Moresby.

The organisation of Task Force MO, which was to execute the plan, comprised:

• The Port Moresby Invasion Group of 11 transports, carrying both army troops and a naval landing force, which, screened by destroyers, were to come down from Rabaul and around New Guinea through the Jomard Passage;

• A smaller Tulagi Invasion Group for setting up a seaplane base there;

• A Covering Group, under Rear Admiral Goto, consisting of the *Shoho,* four heavy cruisers, and one destroyer, which was to cover the Tulagi landing, then turn back west to protect the Port Moresby Invasion Group;

• The Striking Force, commanded by Vice Admiral Takagi, and containing the *Shokaku* and *Zuikaku,* which was to come down from Truk to deal with any United States forces that might attempt to interfere.

The Carrier Strike Force left Truk on 1st May and by the afternoon of 5th May it was in position. Its opposition was Task Force 17 with the aircraft-carriers *Lexington* and *Yorktown*. The Americans had a slight edge over the Japanese in aircraft. They also had radar, but above all they had the benefit of superior intelligence about the Japanese dispositions. Since Pearl Harbor, the United States had succeeded in completely breaking the Japanese naval code, and therefore possessed accurate and fairly detailed intelligence concerning the Japanese plans. Not only had the Americans broken the code, so that Admiral Nimitz and his staff knew exactly what the Japanese objectives would be, but there was a constant flow of reports from the Australian 'Coastwatcher's', who reported sightings of Japanese ship movements.

Naturally, Inouye expected opposition from the Allied forces in the south-west Pacific. He knew that about 200 land-based aircraft were operating from airfields in northern Australia, and that American air activity made the concealment of ship movements difficult. However, he estimated that Allied naval forces in the area were 'not great', and that only one aircraft-carrier, the *Saratoga,* would be available. He hoped that the prior occupation of Tulagi, due to be taken on 3rd May, and the establishment of a seaplane base there, would make it more difficult for the Allies to follow his movements from their nearest bases at Port Moresby and Noumea. The Support and Covering Groups and the Striking Force would cover the Port Moresby Invasion Group which would leave Rabaul on 4th May, and land a sizeable force on the seventh.

Once the Allied task force entered the Coral Sea, Inouye thought he could destroy it by a pincer movement, with Goto on the west flank and Takagi on the east, while the Invasion Group slipped through the Jomard Passage to its destination. With the Allied force out of the way, he could then proceed with the bombing of bases in Australia

To the Allies, Port Moresby was vital not only for the security of Australia, but also as a springboard for future offensives in the south-west Pacific. Admiral Chester Nimitz, Commander-in-Chief of the United States Pacific Fleet (CINCPAC), and General Douglas MacArthur, Commander-in-Chief South-west Pacific Area, thus gave the threat the attention it merited. Before 17th April, reports had reached CINCPAC headquarters that a group of transports, protected by the light aircraft-carrier *Shoho* and a striking force that included two large aircraft-carriers, would soon enter the

Coral Sea. By the 20th Nimitz had concluded that Port Moresby was the objective, with the attack likely to develop on or after 3rd May.

It was one thing to know the nature of the task, but yet another to be able to summon up the resources to meet the situation. The *Saratoga* was in fact still in Puget Sound undergoing repairs for torpedo damage sustained in January. The aircraft-carriers *Enterprise* and *Hornet* did not return from the Tokyo raid until 25th April, and were unlikely to reach the Coral Sea in time to participate in the coming battle, bearing in mind that they needed a minimum of five days for upkeep, and Pearl Harbor was about 3 500 miles away.

The problem with the American command structure was the rigid demarcation of command between Nimitz and MacArthur, according to the decision of the Combined Chiefs-of-Staff, whereby CINCPAC could exercise control over all naval operations in the Pacific, but could not usurp MacArthur's command of ground forces or land-based aircraft within the latter's area. Thus Nimitz could not readily call upon the 300 odd land-based aircraft of the USAAF and the RAAF for air searches in the area. Inouye, on the contrary, had the XXV Air Flotilla at Rabaul, as well as all seaplanes, under his control.

Knowing, however, that he would have to rely mainly on air strike to frustrate Inouye's plans, Nimitz decided to utilise what' remaining aircraft-carrier strength was available to him. For this task, he called upon the air groups of the *Yorktown* and *Lexington.* The *Yorktown* task force (No. 17) included 3 heavy cruisers, 6 destroyers, and the tanker *Neosho.*

The *Lexington* task force (No. 11) was fresher, having left Pearl Harbor on 16th April, after three weeks' maintenance. With the *'Lady Lex',* as she was affectionately known, were 2 heavy cruisers and 5 destroyers. Commanded by Captain Sherman, the *Lexington* could truly be called a happy ship; many of her crew had served with her since she was commissioned in 1927, while her air group included such notable naval aviators as 'Butch' O'Hare and John Thach. Rear-Admiral Aubrey Fitch, a distinguished carrier-tactician, had been on the flag bridge since 3rd April. Task Force 17, with the *Yorktown,* was commanded by Rear-Admiral Frank Fletcher, and had already been in the area for two months.

Task Force 1, operating out of San Francisco, consisted mainly of pre-war battleships; these were simply not fast enough to keep up with the aircraft-carriers, nor could the oilers be spared to attend to their fuel requirements. All that remained were the ships of task Force 44; commanded by Rear Admiral Grace, RN. Of these, the Australian heavy cruisers *Australia* and *Hobart,* then in Sydney, were ordered to rendezvous with Fletcher in the Coral Sea on 4th May. The heavy cruiser USS *Chicago* and a destroyer were ordered to join the same commander three days earlier, on 1st May.

On 29th April, Nimitz completed his plans. These simply detailed Fletcher to exercise tactical command of the whole force, designated Task Force 17, and ordered him to operate in the Coral Sea commencing 1st May. The manner in which Inouye's threat was to be met was left almost entirely to Fletcher.

Fitch's *Lexington* force joined Fletcher as planned at 06 30 hours on 1st May, and immediately came under Fletcher's tactical command. At 07 00 hours, Fletcher commenced refuelling from the *Neosho,* and directed Fitch to do the same from the *Tippecanoe,* a few miles to the south-west. Fitch had estimated that this task would not be completed until noon on the 4th, whereas Fletcher would finish 'topping up' by 2nd May.

In the light of reports of the enemy's approach, Fletcher decided that he could not wait for Fitch and Grace, and steamed out into the middle of the Coral Sea to search for the Japanese. He headed west on the 2nd, leaving orders for Fitch to rejoin him by daylight on the fourth. By 08 00 hours on 3rd May, Fletcher and Fitch were over 100 miles apart, each ignorant of the enemy's detailed movements. In fact, the junior flag officer was to finish fuelling by 13 10 hours, but could not break radio silence to tell Fletcher of this fact, and instead headed towards the planned rendezvous. At 19 00 hours the *Yorktown* force, now out on a limb, received the report which Fletcher had been waiting two months to hear: the Japanese were landing at Tulagi.

The news brought about an immediate change in Fletcher's plans. Ordering the *Neosho* and *Russell* to peel off and meet Fitch and Grace at the appointed rendezvous, then proceed with them in an easterly direction to rejoin *Yorktown* 300 miles south of Guadalcanal on 5th May. Fletcher headed north at 24 knots, determined to strike Tulagi with the Y*orktown's* available aircraft. Maintaining his course throughout the night, he arrived at a point about 100 miles south-west of Guadalcanal at 07 00 hours on the 4th. By this time Fitch had received his new orders, while Grace, with *Australia* and *Hobart,* was nearing the rendezvous. Both were unable to help Fletcher in case of need, their south easterly course actually increasing the distance between them and the *Yorktown.*

Fortunately for Fletcher, the Japanese had estimated that, once Tulagi was in their hands, it would remain unmolested. Goto's and Marushige's groups, which had supported the operation, had consequently retired at 11 00 hours on 3rd May, after the island had been secured. Hara's carriers were still north of Bougainville, while the Port Moresby Invasion Group was only just leaving Rabaul. Furthermore, as Fletcher approached the launching position for his strike, he ran into the northern edge of an l00 mile cold front, which screened his warships, and afforded a curtain for his planes until they came within 20 miles of Tulagi, where fair weather prevailed.

First blood went to the Americans, when the invasion transports in Tulagi harbour were sighted. At 06 30 hours on 4th May, the first strike was launched from *Yorktown,* consisting of 12 Devastator torpedo-bombers and 28 Dauntless dive-bombers. With only 18 fighters available for patrol over the carrier, they were forced to rely on their own machine guns for protection. According to the practice of the time, each squadron attacked independently. As so often happened during the war, the pilots overestimated what they saw, mistaking a minelayer, for a light cruiser, minesweepers for transports, and landing barges for gunboats. Beginning their attacks at 08 15 hours, aircraft of the two Dauntless squadrons and the Devastator squadron were back on *Yorktown* by 09 31 hours, having irreparably damaged the destroyer *Kikuzuki* and sunk three minesweepers, including the*Tama Maru.* A second strike later destroyed 2 seaplanes and damaged a patrol craft, at the cost of

one torpedo-bomber; while a third attack of 21 Dauntlesses, launched at 14 00 hours, dropped 21 half-ton bombs, but sank only four landing barges.

By 16 32 hours the last returning aircraft were safely landed on the *Yorktown,* and the 'Battle' of Tulagi was over. Only three aircraft had been lost, the other two being Wildcat fighters which had lost their way returning to the aircraft-carrier and had crash-landed on Guadalcanal, the pilots being picked up that night by the *Hammann.* But, in the words of Nimitz: “The Tulagi operation was certainly disappointing in terms of ammunition expended to results obtained”.

Nevertheless, a mood of considerable elation prevailed on the *Yorktown* that evening, the pilots believing that they had sunk two destroyers, two freighters, four gunboats, and damaged a third destroyer, and a seaplane tender. Fletcher headed the whole force south for his rendezvous with Fitch. Once again luck had been with him', for Takagi was by now making his best speed south-eastward from Bougainville, having received calls for help from Tulagi at noon that day. If Fletcher had not achieved complete surprise in his Tulagi strike, and Takagi had moved earlier, the *Yorktown* would have met the Japanese aircraft-carriers on her own, as Fitch was widening the gap between Fletcher and himself all through the daylight hours of the fourth.

The next day, the 5th, was a relatively uneventful one for both sides. Having rejoined Fitch and Grace at the scheduled point at 08 16 hours, Fletcher spent most of the day re-fuelling from *Neosho,* within visual signalling distance of the junior flag commanders on a south-easterly course. The ships were by now well out of the cold front and were to mostly enjoy perfect tropic seas weather for the next two days.

Meanwhile, the various components of the Japanese force were entering the Coral Sea. Admiral Takagi's Striking Force was moving down along the outer coast of the Solomons. By dawn on 6th May, it was well into the Coral Sea. The Port Moresby Invasion Group and Marushige's Support Group were on a southerly course for the Jomard Passage, while Goto's Covering Group began re-fuelling south of Bougainville, completing this task by 08 30 hours the next morning. One four-engined Japanese seaplane, operating from Rabaul, was shot down by a Wildcat from *Yorktown* but, as Inouye did not know where it had been lost, he used most of his aircraft on a bombing attack on Port Moresby.

On the 6th, the tension grew, as both Fletcher and Inouye knew that the clash was bound to come soon. The American commander decided that it was now time to put into effect his operational order of 1st May, and accordingly redeployed his force for battle. An attack group, under Rear-Admiral Kinkaid, was formed from the 4 heavy cruisers, the light cruiser *Astoria,* plus 5 destroyers. The heavy cruisers *Australia, Hobart,* and *Chicago,* with 2 destroyers formed Grace's support group, while the air group, to be placed under the tactical command of Fitch during air operations, comprised the *Yorktown* and *Lexington,* and 4 destroyers. The oiler *Neosho,* escorted by the destroyer *Sims,* was detached from Task Force 17, and ordered to head south for the next fuelling rendezvous, which was reached next morning.

Throughout the 5th and 6th, Fletcher was receiving reports from Intelligence regarding the movements of Japanese ships of nearly every type; by the afternoon of

the 6th, a pattern was becoming evident to him. It was now fairly obvious that the Japanese invasion force would come through the Jomard Passage on the 7th or 8th, and Fletcher accordingly cut short fuelling operations, heading north-westward to be within striking distance by daylight on the 7th. Owing to the inadequacies of land-based air searches, he did not as yet have any clear picture of the movements of Takagi's aircraft-carriers, or of the Japanese plan to envelop him. His own air searches had in fact stopped just short of Takagi's force, which was hidden under an overcast, having turned due south that morning, thus dropping down on Fletcher's line of advance. By midnight Task Force 17 was about 310 miles from Deboyne Island, near New Guinea, where the Japanese had established a seaplane base to cover their advance.

If the air searches of either side had been more successful, the main action of the Coral Sea might have taken place on 6th May. Takagi, amazingly, ordered no long-range searches on 6th, thus missing the opportunity of catching Fletcher while the latter was re-fuelling in bright sunlight. A reconnaissance aircraft from Rabaul did report Fletcher's position correctly, but the report did not reach Takagi until the next day. At one point he was only 70 miles away from Task Force 17, but ignorant of its presence. Thus when he turned north in the early evening, to protect the Port Moresby Invasion Group, he once more drew away from the United States aircraft-carriers.

Some elements of the Japanese force had, however, been sighted on 6th May. B-17s from Australia had located and bombed the *Shoho,* of Goto's Covering Group, south of Bougainville. The bombs had fallen wide, but Allied planes spotted Goto again around noon, then turned south to locate the Port Moresby Invasion force near the Jomard Passage. Estimating that Fletcher was about 500 miles to the south-west, and expecting him to attack the next day, Inouye ordered that all operations should continue according to schedule. At midnight the invasion transports were near Misima Island, ready to slip through the Jomard Passage. Goto, protecting the left flank of the Port Moresby Invasion Group, was about 90 miles north-east. The Japanese were in an optimistic mood, for everything was going to plan, and that very day they had heard the news of the fall of the Philippines and the surrender of General Wainwright's forces on Corregidor.

Fortune indeed smiled on Fletcher that day. At 06 45 hours, when a little over 120 miles south of Rossel Island, he ordered Grace's support group to push ahead on a north-westerly course to attack the Port Moresby Invasion Group, while the rest of Task Force 17 turned north. Apparently Fletcher, who expected an air duel with Takagi's aircraft-carriers, wished to prevent the invasion regardless of his own fate but, .by detaching Grace, was in fact weakening his own anti-aircraft screen while depriving part of his force of the protection of carrier air cover.

The consequences of this move might have been fatal, however, instead, the Japanese were to make another vital error by concentrating their land-based air groups on Grace rather than Fletcher's aircraft-carriers. A Japanese seaplane spotted the support group, when the ships of Grace's force were south of Jomard Passage. 11 single-engined bombers launched an unsuccessful attack. Soon afterwards, 12 Sallys (land-based navy bombers) came in low, dropping eight torpedoes. These were avoided by violent manoeuvres, and five of the bombers

were shot down. Then 19 high-flying bombers attacked from 15 000 to 20 000 feet, the ships dodging the bombs as they had the torpedoes.

Gato's Covering Group, had turned south-east into the wind to launch four reconnaissance aircraft and to send up other aircraft to protect the invasion force 30 miles to the south-west. By 08 30 hours Goto knew exactly where Fletcher was, and ordered *Shoho* to .prepare for an attack. Other aircraft had meanwhile spotted Grace's ships to the west. The result of these reports was to make Inouye anxious for the security of the Invasion Group, and at 09 00 hours he ordered it to turn away instead of entering Jomard Passage, thus keeping it out of harm's way until Fletcher and Grace had been dealt with. In fact, this was the nearest the transports got to their goal.

Fletcher had also launched a search mission from *Yorktown.* One of her reconnaissance aircraft reported 'two carriers and four heavy cruisers' about 225 miles to the north-west. Assuming that this was Takagi's Striking Force, Fletcher launched a total of 93 aircraft between 09 26 and 10 30 hours, leaving 47 for combat patrol. By this time Task Force 17 had re-entered the cold front, while Goto's force lay in bright sunlight near the reported position of the 'two carriers'. However, no sooner had *Yorktown's* attack group become airborne than her scouts returned, and it immediately became obvious that the 'two carriers and four heavy cruisers' should have read 'two heavy cruisers and two destroyers' - the error being due to the improper arrangement of the pilot's coding pad. Actually the vessels seen were 2 light cruisers and 2 gunboats of Marushige's Support *Group.* Fletcher, now knowing that he had sent a major strike against a minor target, courageously allowed the strike to proceed, thinking that with the invasion force nearby there must be some profitable targets in the vicinity.

The next day the battle began in earnest. Accepting Hara's recommendation that a thorough search to the south should be made before he moved to provide cover for the Port Moresby Invasion Group, Takagi accordingly launched reconnaissance aircraft at 06 00 hours. As Hara later admitted: “It did not prove to be a fortunate decision”. At 07 36 hours one of the aircraft reported sighting an aircraft-carrier and a cruiser at the eastern edge of the search sector, and Hara, accepting this evaluation, closed distance and ordered an all-out bombing and torpedo attack. In fact, the vessels which had been sighted were the luckless *Neosho* and her escorting destroyer, USS *Sims.*

Fifteen high-level bombers attacked, but failed to hit their targets. However, about noon, a further attack by 36 dive-bombers sealed the fate of the destroyer. Three 500 pound bombs hit the *Sims,* of which two exploded in her engine room. The ship buckled and sank stern first within a few minutes, with the loss of three hundred and seventy nine lives.

Meanwhile, 20 dive-bombers had- turned their attention to *Neosho,* scoring 7 direct hits and causing blazing gasoline to flow along her decks. Although some hands took the order to 'make preparations to abandon ship and stand by' as a signal to jump over the side, the *Neosho* was in fact to drift in a westerly direction until 11th May, when one hundred and twenty three men were taken off by the destroyer *Henley* and the oiler was scuttled. But the sacrifice of these two ships was not vain, for if Hara's

planes had not been drawn off in this way, the Japanese might have found and attacked Fletcher.

Five precious hours were lost in this uncharacteristically inept affair and Takagi lost his chance to locate and engage TF 17. In a belated attempt to save the day, the Japanese launched another strike at the *Yorktown,* but an error in calculating the target's position led the strike astray. On their way back they were hammered by the *Yorktown's* Combat Air Patrol (CAP), which shot down nine aircraft for the loss of two of their own. The survivors then lost their way and four even tried to land on *Yorktown* in error, until the carriers opened fire.

The Japanese had wasted almost 20 percent of their strength, all for an oiler and a destroyer, and still the American carriers had not been located. The Japanese carriers turned northwards, while the *Yorktown* turned southeast to clear a patch of bad weather which was hindering flying, but during the night the Japanese reversed their course so as to be able to engage shortly after dawn. They kept in touch with the *Yorktown's* movements and were able to launch a dawn search next morning, with a strike to follow as soon as the target was located.

Rear-Admiral Fletcher handed over tactical command to Rear-Admiral Fitch in the *Lexington,* who ordered a big search to be flown off at 06 25 hours. At about 08 00 hours a Japanese plane radioed a sighting report which was intercepted by the Americans and passed to Fitch, but almost immediately this disquieting news was followed by a report that the Japanese carriers had been found. A combined strike of 84 aircraft was put up by the *Lexington* and *Saratoga,* but 30 minutes earlier the Japanese had launched their own strike of 69 aircraft. The world's first carrier-versus-carrier battle had started.

The two American carriers' strikes were about 20 minutes apart and so *Yorktown* struck first with 9 torpedo bombers and 24 dive-bombers. The torpedo strike was a failure, but 2 bombs hit *Shokaku,* one forward which started an avgas (aviation fuel) fire, and one aft which wrecked the engine repair workshop. *Lexington's* group made a navigation error and so failed to find the target; after nearly an hour's search only 4 dive-bombers and 11 torpedo-bombers had sufficient fuel left for an attack when they sighted the smoke from the burning *Shokaku.* Only one bomb hit, on the starboard side of the bridge, which caused little damage and 5 aircraft were shot down by the Japanese.

The Japanese attack began at 11 18 hours, with 51 bombers and 18 fighters operating as a single unit. The raid was detected at nearly 70 miles range on *Lexington's* radar, but a series of errors positioned the defending Wildcats at the wrong altitude. To make matters worse they were not stationed at a reasonable distance from the carrier, so that only three fighters made contact before the attack developed. There were also 12 Dauntless dive-bombers stationed at 2 000 feet three miles outside the screen to try to break up the torpedo-bombers' attacks. The Japanese torpedo-bombers were flying much higher than anticipated, and they simply flew over the Dauntlesses to take up their dropping height inside the carriers' destroyer screen, but were largely ineffective.

The attack group from *Lexington,* well ahead of the *Yorktown* aircraft, was nearing the target location shortly after 11 00 hours, when Lieutenant-Commander Hamilton; leading one of *Lexington's* Dauntless squadrons, spotted an aircraft-carrier, two or three cruisers, and some destroyers, about 25 miles to the starboard. This was the *Shoho* with the rest of Goto's Covering Group. As the *Shoho* was only 35 miles south-east of the original target location, it was a simple matter to re-direct the attack groups over the carrier. The first attack, succeeded only in blowing five aircraft over the *Shoho's* side, but was closely followed by Hamilton's ten Dauntlesses and the *Lexington's* torpedo squadron. Under such a concentrated attack, the *Shoho* stood little chance: soon she was on fire and dead in the water and sank soon after. Only 6 American aircraft were lost in the attack. Back on the American aircraft-carriers, listeners in the radio rooms heard the jubilant report from Lieutenant Commander Dixon, leading *Lexington's* other Dauntless squadron: “Dixon to carrier; scratch one flat-top”!

With the air groups safely landed again, Fletcher decided to call-off any further strikes against Goto, as he now knew, from intercepted radio messages, that his own position was known to Takagi - although he had not yet located the other Japanese aircraft-carriers himself. The worsening weather dissuaded him from further searches, he thus set a westerly course during the night in the anticipation that the Japanese invasion force would come through the Jomard Passage the next morning.

The Japanese had committed a serious of blunders on 7th May, but Takagi and Hara were determined to try once more to destroy the American aircraft-carriers before the next day; Selecting the twenty seven pilots best qualified in night operations, Hara launched a strike from the *Shokaku* and *Zuikaku* just before 16 30 hours, with orders to attack Fletcher if they managed to locate him.

In fact, the gamble came near to success. Although the Japanese aircraft passed close to Task Force 17, they failed to locate owing to foul weather and poor visibility. The American combat air-patrol, vectored out by radar, intercepted and shot down nine of Hara's precious aircraft. An hour later, some of the returning Japanese laid a course for home right over the American carriers, which they mistook for their own. Twenty minutes later, three more attempted to join the *Yorktown's* landing circle, and one was shot down. Hara was to lose 11 more aircraft which 'splashed' when attempting night landings on his aircraft-carriers. Only 6 of the original 27 got back safely.

With the day's operations virtually at an end, the commanders on both sides now pondered on a surface night action. At 19 30 hours the *Lexington's* radar showed what appeared to be Japanese activity 30 miles to the east, but Fletcher did not receive the report until 22 00 hours, by which time he knew it might be impossible to locate Takagi's new position (at that moment the Japanese carriers were actually 95 miles to the east of Task Force 17). Fletcher rejected the idea of detaching, a cruiser/destroyer force for a night attack; as the last-quarter moon would not afford much light, and he urgently needed all the anti-aircraft protection he could get for the next day's operations. In his own words: “The best plan seemed to be to keep our force concentrated and prepare for a battle with enemy carriers next morning”.

Inouye, meanwhile, had ordered Goto's cruisers to rendezvous east of Rossel Island and make an attack on the Allied force, though he did not specify whether the target was to be Fletcher or Grace. By midnight he had reconsidered the plan, ordered the invasion to be postponed for two days, and split Goto's cruisers up between the invasion transports and Takagi's force. Takagi, too, on receiving his pilot's reports that the American carriers were 50-60 miles away, considered a night action, but his air crews were exhausted - and he was in any case forestalled by a call for protection from the transports, which it was his basic mission to protect, and which had now lost the cover of the *Shoho.* Thus the main action was delayed yet again, although both sides expected a decision on the 8th. Everything now depended on locating the enemy as early as possible in the morning.

The first sighting of the Japanese carriers had been at 08 15 hours, by one of *Lexington's* scouts, the pilot reporting that Takagi was 175 miles to the north-east of Fletcher's position. Later, at 09 30 hours, Lieutenant-Commander Dixon sighted the Japanese Striking Force steaming due south in a position 25 miles north-east of the original contact, but about 45 miles north of Takagi's expected position at 09 00 hours as predicted on the strength of that contact.

The discrepancy was to cause trouble for *Lexington's* attack group, which by this time was airborne. Fitch had begun launching his strike between 09 00 and 09 25 hours, the *Yorktown* group of 24 bombers with two fighters, and nine torpedo-bombers with four fighters, departing ten minutes before the *Lexington* aircraft. The dive-bombers spotted the Japanese first, at 10 30 hours, and took cloud cover to await the arrival of the Devastators. While *Shokaku* was engaged in launching further combat patrols, *Zuikaku* disappeared into a rain squall. The attack, which began at 10 57 hours, thus fell only on the *Shokaku.* Although the *Yorktown* pilots coordinated their attack well, only moderate success was achieved. The slow American torpedoes were either avoided or failed to explode, and only two bomb hits were scored on the *Shokaku,* one damaging the flight-deck well forward on the starboard bow and setting fire to fuel, while the other destroyed a repair compartment aft. The *Shokaku,* now burning, could still recover aircraft, but could no longer launch any.

Of the *Lexington* group, 10 minutes behind, the 22 dive-bombers failed to locate the target, leaving only 11 Devastators and 4 reconnaissance-bombers for the attack. Once again the torpedoes were ineffective, but the bombers scored a third hit on the Japanese aircraft-carrier. Although one hundred and eight of the vessel's crew had been killed, she had not been holed below the waterline, and her fires were soon brought under control. Most of her aircraft were transferred to the *Zuihahu* before Takagi detached *Shokaku* at 13 00 hours, with orders to proceed to Truk. Although in poor shape, she was not 'settling fast', as the American pilots had reported.

Captain Sherman, in the *Lexington,* had estimated that the Japanese attack on Task Force 17 would begin at about 11 00 hours, basing his deduction on Japanese radio traffic. In fact, the *Yorktown* and *Lexington* were to come under attack in the interval between the strikes of their respective air groups on the Japanese aircraft-carriers. The Japanese had begun launching at about the same time as the Americans, but their attack group of 18 torpedo-bombers, 33 bombers, and 18 fighters was larger, better balanced, and more accurately directed to the target. Although the American

radar picked them up 70 miles away, Fitch had far too few fighters to intercept successfully, and was forced to rely mainly on his anti-aircraft gunners for protection.

At 11 18 hours the battle 'busted out', as one American sailor described it. The *Yorktown,* with a smaller turning circle than the *Lexington,* successfully avoided eight torpedoes launched on her port quarter. Five minutes later she came under dive-bomber attack but, skilfully handled by Captain Buckmaster, escaped unscathed until 11 27 hours, when she received her only hit from an 800 pound bomb which penetrated to the fourth deck, but did not impair flight operations. During this time, the evasive manoeuvres gradually drew the American aircraft carriers apart and, although the screening vessels divided fairly evenly between them, the breaking of their defensive circle contributed to Japanese success.

The *Lexington,* larger than the *Yorktown,* had a turning circle of 1 500 to 2 000 yards in diameter, compared with the 1 000 yard tactical diameter of her consort. Moreover, she had the misfortune to suffer an 'anvil' attack from the Japanese torpedo-bombers, which came in on both bows to launch their missiles at the *'Lady Lex'.* Despite valiant manoeuvres by Sherman, she received one torpedo hit on the port side forward at 11 20 hours, quickly followed by a second opposite the bridge. At the same time a dive-bombing attack commenced from 17 000 feet, the *Lexington* receiving two hits from small bombs. One exploded in a ready-ammunition box on the port side, while the other hit the smokestack structure. To add to the din of battle, the ship's siren jammed as a result of an explosion and shrieked weirdly throughout most of the attack.

Some 19 minutes later, the aircraft-carrier battle was, to all intents and purposes, at an end. At this point, honours were more or less equal, but for the Americans the real tragedy was still to come. At first it appeared that the doughty *Lexington* had survived to 'fight another day. A list of 7 degrees caused by the torpedo hits was corrected by shifting oil ballast, while her engines remained unharmed. To her returning pilots she did not appear to be seriously damaged, and the recovery of the air group went ahead. At about 12 40 hours, Commander 'Pop' Healy, the damage control officer, reported to Captain Sherman: “We've got the torpedo damage temporarily shored up, the fires out, and soon will have the ship back on an even keel. But I would suggest, sir, that if you have to take any more torpedoes, you take 'em on the starboard side”.

Minutes later, a tremendous internal explosion, caused by the ignition of fuel vapours by a motor generator which had been left running, shook the whole ship. Although the *Lexington* continued landing her planes, a series of further violent explosions seriously disrupted internal communications. Yet another major detonation occurred at 14 45 hours, and the fires soon passed beyond control. Despite the fact that the destroyer *Morris* came alongside to help fight the blaze, while *Yorktown* recovered all aircraft still airborne, the need for evacuation became increasingly apparent.

At 16 30 hours the *Lexington* had come to a dead stop, and all hands prepared to abandon ship. At 17 10 hours Fitch called to Sherman to “get the men off”, the *Minneapolis, Hammann, Morris,* and *Anderson* assisting with the rescue operations. Evacuation was orderly even the ship's dog being rescued, and Sherman was the last to leave the aircraft-carrier, sliding down a line over the stern. At 19 56 hours the

destroyer *Phelps* was ordered to deliver the 'coup de grace' with five torpedoes, and the *Lexington* sank at 20 00 hours, a final explosion occurring as she slipped beneath the waves.

The *Yorktown* had been luckier. Her fires were soon brought under control and at no time was her operational efficiency seriously impaired. But the elated Japanese pilots had seen her burning furiously and reported that both she and the *Lexington* had been sunk. The *Shokaku,* badly damaged by fire, was unable to recover her aircraft. She limped back to Japan with so much water on board that she nearly capsized in a gale. Her sister ship *Zuikaku* also needed attention for minor defects and so the two best Japanese carriers were out of action for some time.

The Battle of the Coral Sea was now over. The Japanese pilots had reported sinking both American aircraft-carriers, and Hara's acceptance of this evaluation influenced Takagi's decision to detach the *Shokaku* for repairs, as well as Inouye's order that the Striking Force should be withdrawn. Even though he thought that both American aircraft-carriers had been destroyed, the cautious Inouye still deemed it necessary to postpone the invasion, apparently because he felt unable to protect the landing units against Allied land-based aircraft. Yamamoto did not agree with this decision and, countermanded the order, detailing Takagi to locate and annihilate the remaining American ships. But, by the time Takagi made his search to the south and east, Fletcher was out of reach.

Tactically, the battle had been a victory for the Japanese. Although they had lost 43 aircraft as against 33 lost by the Americans, and Hara had been left with only nine operational aircraft after the *Zuikaku* had proved unable to take on all *Shokaku's* aircraft. Their air strikes had achieved greater results. The sinking of the *Lexington, Neosho,* and *Sims* far outweighed the loss of the *Shoho* and the various minor craft sunk at Tulagi.

Strategically, however, Coral Sea was an American victory: the whole object of the Japanese operation-the capture of Port Moresby-had been thwarted. Despite the occupation of Tulagi, later won back by the US Marines at a heavy price, the Japanese had gained very little of their initial objectives. Moreover, the damage to the *Shokaku,* and the need to re-form the battered air groups of the *Zuikaku,* was to keep both these carriers out of the Midway battle, where their presence might have been decisive.

Nimitz ordered Fletcher to return *Yorktown* to Pearl Harbor as soon as possible after refueling. In the meantime, having heard nothing from Fletcher, Grace deduced that TF 17 had departed the area. On 10th May, hearing no further reports of Japanese ships advancing towards Port Moresby, Grace turned towards Australia and arrived at Townsville on 11th May.

The battle was the first naval engagement in history in which the participating ships never sighted or fired directly at each other. Instead, manned aircraft acted as the offensive artillery for the ships involved. Thus, the respective commanders were participating in a new type of warfare, carrier-versus-carrier, with which neither had any experience. The commanders ‘had to contend with uncertain and poor communications in situations in which the area of battle had grown far beyond that

prescribed by past experience but in which speeds had increased to an even greater extent, thereby compressing decision-making time'. Because of the greater speed with which decisions were required, the Japanese were at a disadvantage as Inoue was too far away at Rabaul to effectively direct his naval forces, in contrast to Fletcher who was on-scene with his carriers. The Japanese admirals involved were often slow to communicate important information to each other.

The experienced Japanese carrier aircrews performed better than those of the U.S., achieving greater results with an equivalent number of aircraft. The Japanese attack on the American carriers was better coordinated than the U.S. attack on the Japanese carriers. The Japanese suffered much higher losses to their carrier aircrews, however, losing ninety aircrew killed in the battle compared with thirty-five for the Americans. Japan's core of highly skilled carrier aircrews with which it began the war were, in effect, irreplaceable because of a limitation in its training programs and the absence of a pool of experienced reserves or advanced training programs for new airmen. Coral Sea started a trend which would result in the irreparable attrition of Japan's veteran carrier aircrews by the end of October 1942.

While the Americans did not perform as expected, they did learn from their mistakes in the battle and made improvements to their carrier tactics and equipment, including fighter tactics, strike coordination, torpedo bombers, and defensive strategies, such as anti-aircraft artillery, which contributed to better results in later battles. Radar gave the Americans a limited advantage in this battle, but its value to the U.S. Navy would increase over time as the technology improved and the Allies learned how to employ it more effectively. Following the loss of *Lexington*, improved methods for containing aviation fuel and better damage control procedures were implemented by the Americans. Coordination between the Allied land-based air forces and the U.S. Navy was poor during this battle, but this too would improve over time.

Japanese and U.S. carriers would face off against each other again in the battles of Midway, the Eastern Solomons, and the Santa Cruz Islands in 1942, and the Philippine Sea in 1944. Each of these battles was strategically significant, to varying degrees, in deciding the course and ultimate outcome of the Pacific War. Both sides publicly claimed victory after the battle. In terms of ships lost, the Japanese won a tactical victory by sinking an American fleet carrier, an oiler, and a destroyer (42 497 tons) – versus a light carrier, a destroyer, and several smaller warships (19 000 tons) – sunk by the Americans. *Lexington* represented, at that time, 25% of U.S. carrier strength in the Pacific. The Japanese public was informed of the victory with overstatement of the American damage and understatement of their own.

In strategic terms, however, the Allies won because the seaborne invasion of Port Moresby was averted, lessening the threat to the supply lines between the U.S. and Australia. The battle marked the first time that a Japanese invasion force was turned back without achieving its objective, which greatly lifted the morale of the Allies after a series of defeats by the Japanese during the initial six months of the Pacific Theater. Port Moresby was vital to Allied strategy and its garrison would most likely have been overwhelmed by the Japanese invasion troops. The Navy, however, also exaggerated the damage it inflicted, which was to cause the press to treat its reports of Midway with more caution.

The Coral Sea marks the high-water mark of Japanese naval aviation, the last in that chain of success which had started just five months before at Pearl Harbour. The results of the battle had a substantial effect on the strategic planning of both sides. For the Japanese, the battle was seen as merely a temporary setback. The results of the battle confirmed the low opinion held by the Japanese of American fighting capability and supported their belief that future carrier operations against the U.S. were assured of success.

One of the most significant effects of the Coral Sea battle was the loss of *Shōkaku* and *Zuikaku* to Yamamoto for his planned showdown with the American carriers at Midway (*Shōhō* was to have been employed at Midway in a tactical role supporting the Japanese invasion ground forces). The Japanese believed that they sank two carriers in the Coral Sea, but this still left at least two more U.S. Navy carriers, *Enterprise* and *Hornet*, which could help defend Midway. The aircraft complement of the American carriers was larger than that of their Japanese counterparts, which, when combined with the land-based aircraft at Midway, meant that the Combined Fleet no longer enjoyed a significant numerical aircraft superiority over the Americans for the impending battle. In fact, the Americans would have three carriers to oppose Yamamoto at Midway, because *Yorktown* remained operational despite the damage from Coral Sea, and the U.S. Navy was able to patch her up sufficiently at Pearl Harbour between 27th and 30th May to allow participation in the battle.

In contrast to the strenuous efforts by the Americans to employ the maximum forces available for Midway, the Japanese apparently did not even consider trying to include *Zuikaku* in the operation. No effort appears to have been made to combine the surviving *Shōkaku* aircrews with *Zuikaku*'s air groups or to quickly provide *Zuikaku* with replacement aircraft so she could participate with the rest of the Combined Fleet at Midway. *Shōkaku* herself was unable to conduct further aircraft operations, with her flight deck heavily damaged, and she required almost three months of repair in Japan.

Historians believe Yamamoto made a significant strategic error in his decision to support *MO* with strategic assets. Since Yamamoto had decided the decisive battle with the Americans was to take place at Midway, he should not have diverted any of his important assets, especially fleet carriers, to a secondary operation like *MO*. If either operation was important enough to commit fleet carriers, then all of the Japanese carriers should have been committed to each in order to ensure success. By committing crucial assets to *MO*, Yamamoto made the more important Midway operation dependent on the secondary operation's success. Moreover, Yamamoto apparently missed the other implications of the Coral Sea battle: the unexpected appearance of American carriers in exactly the right place and time to effectively contest the Japanese, and U.S. Navy carrier aircrews demonstrating sufficient skill and determination to do significant damage to the Japanese carrier forces.

The Australians and U.S. forces in Australia were initially disappointed with the outcome of the Battle of the Coral Sea, fearing the *MO* operation was the precursor to an invasion of the Australian mainland and the setback to Japan was only temporary. In a meeting held in late May, the Australian Advisory War Council described the battle's result as "rather disappointing" given that the Allies had advance notice of Japanese intentions. General MacArthur provided Australian

Prime Minister John Curtin with his assessment of the battle, stating that "all the elements that have produced disaster in the Western Pacific since the beginning of the war" were still present as Japanese forces could strike anywhere if supported by major elements of the IJN.

Though the Coral Sea engagement was full of errors by the commanders on both sides, the Americans did take its lessons to heart. The ratio of fighters to bombers and torpedo-bombers was increased, and improvements were made in the organisation of attacks in the weeks that remained before the next great naval clash. But the really significant feature of the Coral Sea battle was that it opened a new chapter in the annals of naval warfare: the first ever 'carrier-against-carrier' action in which all losses were inflicted by air action.

Because the Japanese were unable to support another attempt to invade Port Moresby from the sea, forcing Japan to try to take Port Moresby by land. Japan began its land offensive towards Port Moresby along the Kokoda Track on 21st July. By then, the Allies reinforced New Guinea with additional troops (primarily Australian). The added forces slowed, then eventually halted the Japanese advance towards Port Moresby in September 1942.

The stage for Midway was now set

Chapter Five

Battle of Midway

On Wednesday 20th May, 1942, Allied listening stations around the Pacific picked up a lengthy coded radio signal from Admiral Yamamoto to his fleet. The message was relayed to Pearl Harbor and deciphered by the US Combat Intelligence Unit ('Hypo'). It revealed that the Imperial Japanese Navy was about to mount a powerful attack on the tiny mid-Pacific atoll of Midway, 1 100 miles north-west of Pearl Harbor. This was to coincide with a diversionary attack on the Aleutians, far to the north. Soon, using other intercepted messages, 'Hypo' intelligence officers were able to add dates and times to the places: Dutch Harbour in the Aleutians would be hit on 3rd June, Midway the next day.

How was it possible for the Americans to pinpoint Midway as the main objective? It was the culmination of a remarkable intelligence exercise. 'Hypo' had warned early in the year that a strike somewhere in the Hawaiian Islands was on the cards. On 12th May, four days after the Battle of the Coral Sea, they discovered the Japanese code name of the target: 'AF'. But where was 'AF'? The evidence pointed to Midway, but it was not conclusive. An officer at 'Hypo', Captain Jasper Holmes, then suggested a way to check. The US air base on Midway was ordered to send an uncoded radio signal that the island was having trouble with its water distillation plant, Soon afterwards the Japanese were signalling that 'AF' had water problems. The Americans now knew for certain where the Japanese blow would fall.

The C-in-C Pacific, Admiral Chester Nimitz, was now aware, from deciphering of enemy signals, that the Japanese fleet was intent on throwing down a challenge, which, in spite of local American inferiority, had to be accepted. The proceeding Battle of Midway ranks among one of the truly decisive battles in history. In one massive five minute action, Japan's overwhelming superiority in naval air strength in the vast Pacific Ocean was wiped out.

More than half the Japanese fleet-carrier strength, together with their irreplaceable, elite, highly trained and experienced aircrews were eliminated; resulting in the Japanese naval air arm being thrown on the defensive from then on. The early run of victories which Yamamoto had predicted had come to a premature end. Now a period of stalemate was to begin, during which American industrial muscle would overpower their Pacific enemy, which Yamamoto had also foreseen.

On 26th May 1942, the aircraft-carriers *Enterprise* and *Hornet* of Task Force (TF) 16 had steamed into Pearl Harbor, to set about, in haste, the various operations of refuelling and replenishing. The next day the *Yorktown* with blackened sides and twisted decks, bearing the scars of her bomb-damage in the Coral Sea battle, berthed in the dry dock. *Yorktown* had been so badly damaged that the Japanese believed it was sunk, and thus, they would face only two American carriers.

One thousand four hundred workmen swarmed aboard to begin repairs. Under normal circumstances, two months of work would have been necessary for maintenance. But, with the knowledge that the Japanese were heading for Midway, Nimitz ordered the Navy Yard to make emergency repairs in the utmost speed. Work was to continue, night and day, without ceasing, until the ship was at least temporarily battle worthy. The men of the dockyards completed this in less than 46 hours.

Therefore, on 28th May, TF 16, consisting of the *Enterprise* flying the flag of Rear Admiral Raymond Spruance with the Hornet, six cruisers, nine destroyers, and two replenishment tankers following, left Pearl Harbour. The next day the *Yorktown,* as TF 17 left harbour under the command of Rear Admiral Fletcher, accompanied by two cruisers and five destroyers headed to rendezvous with TF 16, 350 miles north-east of Midway.

The Americans had been forced to make changes in their command structure. Rear-Admiral Fletcher continued to fly his flag in the *Yorktown* as commander of TF 17, but Halsey had fallen ill and the command of TF 16 passed to Rear-Admiral Spruance. Although not an aviator Spruance had commanded the screen under Halsey and backed up by Halsey's highly competent air staff he was to prove an able task force commander.

The main objective of the Japanese was to extend Japan's newly conquered eastern sea frontier so that sufficient warning might be obtained of any threatened naval air attack on the homeland. Doubts on the wisdom of the Japanese plan had been voiced in various quarters; but Yamamoto, the dynamic C-in-C of the Combined Fleet, had fiercely advocated it. He had always been certain that only by destroying the American fleet could Japan gain the breathing space required to consolidate her conquests. A belief which had inspired the attack on Pearl Harbor. Yamamoto, believed rightly, that an attack on Midway was a challenge that Nimitz could not ignore. It would bring out the US Pacific Carrier Fleet where Yamamoto, with superior strength, would be waiting to bring it to action.

While the Japanese leaders, after a string of dazzling victories, were debating where they should strike next, their minds had been made up for them. Lt. Colonel James Doolittle's raid on Tokyo with B-25 bombers, on 18th April, had put the sacred person of the Emperor in danger. The mortified generals and admirals decided that every gap in Japan's defensive perimeter must be plugged and Midway was such a gap.

Between May 25/27th, the Japanese Northern Force sailed from Honshu for the attack on the Aleutians under the command of Rear Admiral Kakuta. This was expected to induce Nimitz to send at least part of his fleet racing north. But Nimitz, being forewarned, refused to rise to the bait.

Yamamoto believed that the capture of Midway would pose a serious threat to Pearl Harbor. His opposite number, Admiral Nimitz, would then have to try to retake Midway. Waiting for him would be the powerful Japanese fleet. Yamamoto would spring the trap, and achieve what had eluded him at Pearl Harbor; the destruction of American naval power in the Pacific. With the western seaboard of the USA now at the mercy of the Japanese, President Roosevelt would have no alternative but to sue for peace, or so the argument ran. Yamamoto committed almost the entire Japanese fleet to his plan; some 160 warships, including eight aircraft carriers, and more than 400 carrier based aircraft, compared with the three carriers, about 70 other warships and 233 carrier aircraft (plus another 115 planes stationed on Midway) at Nimitz's disposal. But Yamamoto separated his forces into five main groups, all too far apart to support or reinforce each other.

The original plan had called for the inclusion of the *Zuikaku* and *Shokaku* in Nagumo's force. But, both had suffered damage in the Coral Sea battle and could not be repaired in time to take part. Both carriers had also lost many experienced aircrews and few replacements were available.

Leading the attack was the First Carrier Striking Force under Vice Admiral Nagumo, with four carriers; *Akagi, Kaga, Hiryu* and *Soryu* with 225 aircraft on board. They were to deliver a powerful preliminary bombardment of Midway before the 5 000 strong invasion force landed from 12 transport vessels. Apart from its immediate escort, the invasion force was to be protected by two support groups, each 50 to 75 miles away. Over 600 miles astern of Nagumo was the main Japanese battle fleet with seven battleships, led by Yamamoto's colossal new flagship, the 70 000 ton *Yamato.* These, Yamamoto planned, would finish off the US fleet after the carriers had inflicted the decisive damage.

A worse feature of the Japanese organisation, was the fact that they were so loosely co-ordinated and quite unable to support each other within the narrow time limits available. Thus everything was decided on June 4th between Vice Admiral Nagumo's four aircraft-carriers and Rear Admirals Fletcher and Spruance's three. On the decisive day the battleships, cruisers, and destroyers never fired a shot and the 41 planes on board the light aircraft-carriers *Zuiho* and *Hosho* took no part in the action. The Midway strike had all the hallmarks of Japanese planning. It was over complex, made unjustified assumptions about how the enemy would react, and failed to concentrate force. Even so, it might well have worked had American intelligence failed.

This is not to say that Yamamoto's logic was completely at fault; the bombardment of Midway on 4th June and the planned assault on the atoll next day would compel Nimitz to send his carriers out to sea, calculated by the Japanese to take place on June 7th or 8th. This would give Nagumo time to recover his freedom of action and the Japanese C-in-C to draw in his scattered forces. To leave nothing to chance, on 2nd June, two squadrons of submarines were to station themselves along all the routes the Americans might take on their way to assist Midway. Logical this might have been, but the vital defect was that it depended on the enemy doing exactly what is expected. If he is astute enough to do something different, in this case to

have fast carriers on the spot, the operation is thrown into confusion. But Yamamoto had no idea that the enemy was reading his mail.

The Japanese plan was, as their naval strategic plans customarily were, calling for exact timing at the crucial moment; and it involved, also typically, the offering of a decoy or diversion to lure the enemy into dividing his force or expending his strength on a minor objective. Yamamoto, with the Main Body, was to take up a central position from which he could proceed to annihilate whatever enemy force Nimitz sent out. To ensure that the dispatch of any such American force should not go undetected, Pearl Harbour was to be reconnoitred between 31st May and 3rd June by two Japanese flying-boats, refuelled from a submarine. This was a further precaution to the two cordons of submarines already in position by 2nd June, with a third cordon farther north towards the Aleutians.

Yamamoto's plan had two fatal defects. For all his enthusiasm for naval aviation, he had not yet appreciated that the day of the monstrous capital ship as the queen of battles had passed in favour of the aircraft-carrier which could deliver its blows at a range 30 times greater than that of the biggest guns. The role of the battleship was now as an escort to the vulnerable aircraft-carriers, supplying the defensive anti-aircraft gun power the latter lacked. Nagumo's force was supported only by 2 battleships and 3 cruisers. Had Yamamoto's Main Body kept company with it, the events that were to follow might have been very different.

Far more fatal to Yamamoto's plan, however, was his assumption that it was shrouded from the enemy, and that only when news reached the Americans that Midway was being attacked would they order their carriers out of Pearl Harbor. Thus long before the scheduled flying-boat reconnaissance, and before the scouting submarines had reached their stations, Spruance and Fletcher, unknown to the Japanese, were beyond the patrol lines and poised waiting for the Japanese at Midway. As a result the Japanese had no news from that source and, to make matters worse, this was the last chance that the Japanese had of finding out the strength of the Americans and they remained convinced that only 2 carriers were operational in the Pacific. The most important piece of information which eluded the Japanese was the fact that the *Yorktown* was not only afloat but in fighting trim.

Nimitz also had a squadron of battleships under his command, but he had no illusions that, with their insufficient speed to keep up with the aircraft-carriers, their great guns could not play any useful part in the events to follow. They were therefore relegated to defensive duties on the American west coast. For the next few days the Japanese Combined Fleet advanced eastwards according to schedule in its wide-spread, multipronged formation. Everywhere a buoyant feeling of confidence showed itself, generated by the memories of the unbroken succession of Japanese victories since the beginning of the war. In the 1st Carrier Striking Force, so recently returned home after its meteoric career of destruction from Pearl Harbour, through the East Indies, and on to Ceylon without the loss of a ship. The 'Victory Disease' as it was to be called by the Japanese themselves, was particularly prevalent.

Spruance and Fletcher had meanwhile rendezvoused during 2nd June, and Fletcher assumed command of the two task forces, though they continued to manoeuvre as separate units. The sea was calm under a blue sky split up by towering cumulus

clouds. The scouting aircraft, flown off during the following day in perfect visibility, sighted nothing, and Fletcher was able to feel confident that the approaching enemy was unaware of his presence north-east of Midway. Indeed, neither Yamamoto nor Nagumo, pressing forward blindly through rain and fog, gave serious thought to such an apparently remote possibility.

On 3rd June, at 09 00 hours, when the first enemy sighting reports reached them, Fletcher and Spruance were in a good position to act against the enemy when he attacked the atoll. On leaving Pearl Harbor they had received the following warning from Cincpac in anticipation of the enemy's superior strength: "You will be governed by the principle of calculated risk, which you shall interpret to mean the avoidance of exposure of your force to attack by superior enemy forces without good prospect of inflicting, as a result of such exposure, greater damage on the enemy".

That Fletcher and Spruance were able to carry out these orders successfully was 'due primarily to their skilful exploitation of intelligence, which enabled them to turn the element of surprise against the Japanese. Even so, on 1st June, the Japanese admiral's flagship intercepted 180 messages from Hawaii; 72 of which were classified 'urgent'. This sudden intensification of radio traffic, as well as the great increase in aerial reconnaissance, could mean that the enemy forces were now at sea or about to set sail. Should Nagumo, sailing more than 600 miles ahead of the main force, be alerted? This would mean breaking the sacrosanct radio silence and Yamamoto could not bring himself to.do it, although the Americans seemed to be aware that Midway was targeted. In such a situation, it was a case of 'effectiveness comes before camouflage'.

Far to the north on June 3rd, dawn broke grey and misty over the Aleutians, Kikuta's two aircraft-carriers launched the first of two strike waves to wreak destruction among the installations and fuel tanks of Dutch Harbour. A further attack was delivered the following day, and the virtually unprotected Aleutians were occupied by the Japanese. But as Nimitz refused to let any of his forces be drawn into the skirmish, this part of Yamamoto's plan failed to have much impact on the great drama being enacted farther south.

The opening scenes of this enactment took place on 3rd June when a scouting Catalina flying boat some 700 miles west of Midway sighted a large body of ships, steaming in two long lines with a numerous screen in arrowhead formation, which was taken to be the Japanese main fleet. The sighting report brought 9 army B-17 bombers from Midway, which delivered 3 high-level bombing attacks and claimed to have hit 2 battleships or heavy cruisers and 2 transports. But the enemy was in reality the Midway Occupation Force of transports and tankers, and no hits were scored on them un 4 Catalina's from Midway discovered them again in bright moonlight in the early hours of 4th June and succeeded in torpedoing a tanker. Damage was slight, however, and the tanker remained in formation.

More than 800 miles away to the east, Fletcher intercepted the reports of these encounters but from his detailed knowledge of the enemy's plan was able to identify the Occupation Force. Nagumo's carriers he knew, were much closer, some 400 miles to the west of him, approaching their flying-off position from the north-west. During the night, therefore Task Forces 16 and17 steamed south-west to a position

200 miles north of Midway which would place them at dawn within scouting range of the unsuspecting enemy. The scene was now set for what was to be a great decisive battle.

The last hour of darkness before sunrise on 4th June, saw the familiar activity in both the carrier forces of ranging-up aircraft on the flight-deck for dawn operations. Aboard the *Yorktown,* whose turn it was to mount the first scouting flight of the day, there were Dauntless scout dive-bombers, ten of which were launched at 04 30 hours for a search, while waiting for news from the scouting flying boats from Midway. Reconnaissance aircraft were dispatched at the same moment from Nagumo's force. One each from the *Akagi* and *Kaga;* two seaplanes each from the cruisers Tone, and *Chikuma* were to search to a depth 300 miles to the east and south. The main activity in Nagumo's carriers, however, was the preparation of a striking force to attack Midway, 36 'Kate' torpedo-bombers each carrying a 1 770 pound bomb, 36 'Val' dive-bombers each with a single 550 pound bomb, and 36 Zero fighters as escort. Led by Lieutenant Tomonaga, this formidable force also took off at 04 30 hours.

By 04 45 hours all these aircraft were on their way, with one notable exception. In the cruiser *Tone,* one of the catapults had given trouble, and it was not until 05 00 hours that her second seaplane got away. This apparently minor dislocation of the schedule was to have catastrophic consequences. Meanwhile, the carrier lifts were already hoisting up on deck an equally powerful second wave; but under the bellies of the 'Kates' were hung torpedoes, for these aircraft were to be ready to attack any enemy naval force which might be discovered by the scouts.

The major difference was that the Americans knew they were looking for carriers; the Japanese were not even certain that any American carriers could be in the vicinity. Admiral Nagumo launched 108 aircraft for the first softening up of Midway's defences, but he cautiously held back *Kaga's* air group in case any American ships were sighted. Fletcher took much the same precaution by launching only 10 Dauntlesses from the *Yorktown* to search to the north, just to make sure that the Japanese task force had not turned his flank.

The lull in proceedings which followed the dawn fly-off from both carrier forces was broken with dramatic suddenness. At 05 20 hours, aboard Nagumo's flagship *Akagi,* the alarm was sounded. An enemy flying boat on reconnaissance had been sighted. Zeros roared off the deck in pursuit. A deadly game of hide-and-seek among the clouds developed. But the American naval fliers evaded their hunters. At 05 34 hours, Fletcher's radio office received the message 'Enemy carriers in sight', followed by another reporting many enemy aircraft heading for Midway; finally, at 06 03 hours, details were received of the position and composition of Nagumo's force, 200 miles south-west of the *Yorktown.* The time for action had arrived.

The *Yorktown's* scouting aircraft were at once recalled and while she waited to gather them in, Fletcher ordered Spruance to proceed 'south-westerly and attack enemy carriers when definitely located'. *Enterprise* and *Hornet* with their screening cruisers and destroyers turned away, increasing to 25 knots, while hooters blared for 'General Quarters' and aircrews manned their planes to warm-up ready for take-off.

Meanwhile, 240 miles to the south, Midway was preparing to meet the impending attack.

Radar had picked up the approaching aerial swarm at 05 53 hours and seven minutes later every available aircraft on the island had taken off. Bombers and flying-boats were ordered to keep clear, but Marine Corps fighters in two groups clawed their way upwards, and at 06 16 hours swooped in to the attack. But of the 26 planes, all but 6 were obsolescent Brewster Buffaloes, hopelessly outclassed by the highly manoeuvrable Zeros. Though they took their toll of Japanese bombers, they were in turn overwhelmed, 17 being shot down and 7 others damaged beyond repair. The survivors of the Japanese squadrons pressed on to drop their bombs on power plants, seaplane hangars, and oil tanks.

At the same time as the Marine fighters, ten torpedo-bombers had also taken off from Midway, 6 of the new Grumman Avengers and 4 Army Marauders. At 07 10 hours they located and attacked the Japanese carriers; but with no fighter protection against the many Zeros sent up against them, half of them were shot down before they could reach a launching position. Those which broke through, armed with the slow and unreliable torpedoes which had earned Japanese contempt in the Coral Sea battle, failed to score any hits; greeted with a storm of gunfire, only one Avenger and two Marauders escaped to crash-land on Midway.

The Japanese had damaged the US base, but its bombers were safely out of the way and the airfield was still usable. Tomonaga signalled to Nagumo that a second attack was needed to knock it out. This put Nagumo in a quandary. He knew neither where the US fleet was nor how many ships it had. But, as ordered by Yamamoto, he had held back his best aircrews, their planes armed with torpedoes and other anti-ship weapons, in case the US carriers arrived sooner than expected. Yet his search planes had spotted no enemy ships and he needed to finish the job at Midway. Just then Midway-based bombers started attacking his ships. They did no damage, but they made up Nagumo's mind for him, and changed the course of the battle. The Japanese commander ordered his second wave torpedo bombers to be rearmed with bombs for another attack on Midway.

As no inkling of any enemy surface forces in the vicinity had yet come to him, he made the first of a train of fatal decisions. At 07 15 hours he ordered the second wave of aircraft to stand by to attack Midway. The 'Kate' bombers, concentrated in the *Akagi* and *Kaga,* had to be struck down into the hangars to have their torpedoes replaced by bombs. Ground crews swarmed round to move them one by one to the lifts which took them below where mechanics set feverishly to work to make the exchange. It could not be a quick operation, however, and it had not been half completed when, at 07 28 hours, came a message which threw Nagumo into an agony of indecision.

One of Nagumo's search planes spotted ten US warships some 210 miles north-east of the Japanese carriers. This plane had taken off half an hour late that morning, delayed when the launching catapult on the heavy cruiser *Tone* jammed. Had it taken off on time, it might well have spotted the US ships half an hour earlier. Fated to be the one in whose search sector the American fleet was to be found; sent back the signal. 'Have sighted ten ships, apparently enemy, bearing 010 degrees, 240

miles away from Midway: Course 150 degrees,' speed more than 20 knots'. For the next quarter of an hour Nagumo waited with mounting impatience for a further signal giving the composition of the enemy force.

Only if it included carriers was it any immediate menace at its range of 200 miles, but in that case it was vital to get a strike launched against it at once. At 07 45 hours Nagumo ordered the re-arming of the 'Kates' to be suspended and all aircraft to prepare for an attack on ships, and two minutes later he signalled to the search plane: 'Ascertain ship types and maintain contact.' The response was a signal of 07 58 hours reporting only a change of the enemy's course; but 12 minutes later came the report: 'Enemy ships are five cruisers and five destroyers.

This message was received with heartfelt relief by Nagumo and his staff; for at this moment his force came under attack first by 16 Marine Corps dive-bombers from Midway, followed by 15 Flying Fortresses, bombing from 20 000 feet, and finally 11 Marine Corps Vindicator scout-bombers. Every available Zero was sent aloft to deal with them, and not a single hit was scored by the bombers. But now, should Nagumo decide to launch an air strike, it would lack escort fighters until the Zeros had been recovered, refuelled, and re-armed. While the air attacks were in progress, further alarms occupied the attention of the battleship and cruiser screen when the US submarine *Nautilus,* one of 12 covering Midway fired a torpedo at a battleship at 08 25 hours. But neither this nor the massive depth-charge attacks in retaliation were effective; and in the midst of the noise and confusion of the air attacks, at 08 20 hours, Nagumo received the message he dreaded to hear: 'Enemy force accompanied by what appears to be a carrier.'

The luckless Japanese admiral's dilemma, however, had been disastrously resolved for him by the return of the survivors of Tomonaga's Midway strike at 08 30 hours. With some damaged and all short of fuel, their recovery was urgent; and rejecting the advice of his subordinate carrier squadron commander Rear-Admiral Yamaguchi, in the *Hiryu* to launch his strike force, Nagumo issued the order to strike below all aircraft on deck and land the returning aircraft. By the time this was completed, it was 09 18 hours.

Refuelling, re-arming, and ranging-up a striking force on all four carriers began at once, the force consisting of 36 'Val' dive-bombers and 54 'Kates', now again armed with torpedoes, with an escort of as many Zeros as could be spared from defensive patrol over the carriers. Thus it was at a carrier force's most vulnerable moment that, from his screening ships to the south, Nagumo received the report of an approaching swarm of aircraft. The earlier catapult defect in the *Tone;* the inefficient scouting of its aircraft's crew; Nagumo's own vacillation (perhaps induced by the confusion caused by the otherwise ineffective air attacks from Midway); but above all the fatal assumption that the Midway attack would be over long before any enemy aircraft-carriers could arrive in the area, all had combined to plunge Nagumo into a catastrophic situation. The pride and vainglory of the victorious carrier force had just one more hour to run.

When Task Force 16 had turned to the south-west, leaving the *Yorktown* to recover her reconnaissance aircraft, Nagumo's carriers were still too far away for Spruance's aircraft to reach him and return; and if the Japanese continued to steer towards

Midway, it would be nearly 09 00 hours before Spruance could launch his strike. When calculations showed that Nagumo would probably be occupied recovering his aircraft at about that time, however, Spruance had decided to accept the consequences of an earlier launching in order to catch him off balance. Every serviceable aircraft in his 2 carriers, with the exception of the fighters required for defensive patrol, were to be included, involving a double launching, taking a full hour to complete, during which the first aircraft off would have to orbit and wait, eating up precious fuel.

It was just 07 02 hours when the first of the 67 Dauntless dive-bombers, 29 Devastator torpedo-bombers, and 20 Wildcat fighters, which formed Task Force 16's striking force, flew off. The torpedo squadrons had not yet taken the air when the sight of the *Tone's* float plane, circling warily on the horizon, told Spruance that he could not afford to wait for his striking force to form up before dispatching them. The *Enterprise's* dive-bombers led by Lieutenant-Commander McClusky, which had been the first to take off, were ordered to lead on without waiting for the torpedo-bombers or for the fighter escort whose primary task must be to protect the slow, lumbering Devastators. McClusky steered to intercept Nagumo's force which was assumed to be steering south-east towards Midway. The remainder of the air groups followed at intervals, the dive-bombers and fighters up at 19 000 feet, the torpedo-bombers skimming low over the sea.

This distance between them, in which layers of broken cloud made maintenance of contact difficult, had calamitous consequences. The fighters from the *Enterprise,* led by Lieutenant Gray, took station above but did not make contact with Lieutenant Commander Waldron's torpedo squadron from the *Hornet,* leaving the *Enterprise's* torpedo squadron, led by Lieutenant-Commander Lindsey; unescorted. *Hornet's* fighters never achieved contact with Waldron, and flew instead in company with their dive-bombers. Thus Task Force 16's air strike advanced in four separate, independent groups, McClusky's dive-bombers, the *Hornet's* dive-bombers and fighters, and the two torpedo squadrons.

All steered initially for the estimated position of Nagumo, assuming he had maintained his south-easterly course for Midway. In fact, at 09 18 hours, having recovered Tomonaga's Midway striking force, he had altered course to north-east to close the distance between him and the enemy while his projected strike was being ranged up on deck. When the four air groups from TF 16 found nothing at the expected point of interception, they had various courses of action to choose between. The *Hornet's* dive-bombers decided to search south-easterly where, of course, they found nothing. As fuel ran low, some of the bombers returned to the carrier, others made for Midway to refuel. The fighters were not so lucky: one by one they were forced to ditch as their engines spluttered and died.

The two torpedo squadrons, on the other hand, low down over the water, sighted smoke on the northern horizon and, turning towards it, were rewarded with the sight of the Japanese carriers shortly after 09 30 hours. Though bereft of fighter protection, both promptly headed in to the attack. Neither Waldron nor Lindsey had any doubts of the suicidal nature of the task ahead of them. The former, in his last message to his squadron, had written: “My greatest hope is that we encounter a favourable tactical situation, but if we don't, and the worst comes to the worst, I want

each of us to do his utmost to destroy the enemy. If there is only one plane left to make a final run in, I want that man to go in and get a hit. May God be with us all".

His hopes for a favourable tactical situation were doomed. Fifty or more Zeros concentrated on his formation long before they reached a launching position. High overhead, Lieutenant Gray, leading the *Enterprise's* fighter squadron, waited for a call for help as arranged with Lindsey, thinking that Waldron's planes were the torpedo squadron from his own ship, a call which never came. From the cruisers and destroyers of the screen came a withering fire. One by one the torpedo-bombers were shot down. A few managed to get their torpedoes away before crashing, but none hit the enemy. Only one of the pilots, Ensign George Gay, survived the massacre, clinging to a rubber seat cushion which floated away from his smashed aircraft, until dusk when he could inflate his life-raft without attracting strafing Zeros.

Five minutes later it was the turn of Lindsey's 14 Devastators from the *Enterprise.* Purely by chance, as he was making his attack on the starboard side of the *Kaga,* the torpedo squadron from the *Yorktown* came sweeping in from the other side, aiming to attack the *Soryu,* and drawing off some of the fighter opposition.

The *Yorktown's* strike group of 17 dive-bombers led by Lieutenant-Commander Leslie, with 12 torpedo-bombers of Lieutenant-Commander Massey's squadron and an escort of 6 Wildcats, had taken departure from their carrier an hour and a quarter after the strike groups of Task Force 16. A more accurate assessment of probabilities by Leslie, however, had brought the whole of this force simultaneously over the enemy to deliver the co-ordinated, massed attack which alone could hope to swamp and break through the defences. In addition, at this same moment, McClusky's dive-bombers also arrived overhead. McClusky, after reaching the expected point of interception, had continued for a time on his south-westerly course and had then made a cast to the north-west. There he had sighted a destroyer steering north-east at high speed. This was the *Arashi,* which had been left behind to depth charge the *Nautilus.* Turning to follow her, McClusky was led straight to his objective.

The simultaneous attack by the two torpedo squadrons brought no result of itself. Scores of Zeros swarmed about them, brushing aside the puny force of 6 Wildcats. The massacre of the clumsy Devastators was re-enacted. Lindsey and 10 others of his force were shot down. Of Massey's squadron, only 2 survived. The few torpedoes launched were easily evaded. Nevertheless, the sacrifice of the torpedo-bombers had not been in vain. For, while every Japanese fighter plane was milling about low over the water, enjoying the easy prey offered to them there, high overhead there were gathering, all unseen and unmolested, the dive-bombers, McClusky's 18, and Leslie's 17. And now, like hawks swooping to their prey, they came plummeting down out of the sky.

In the four Japanese carriers the refuelling and re-arming of the strike force had been almost completed. The decks were crowded with aircraft ranged for take-off. Nagumo had given the order to launch and ships were turning into wind. Aboard the *Akagi,* all eyes were directed downwards at the flight-deck. The Zero fighters were so busy tracking down Waldron's planes at low level that they were too late to prevent an attack by Douglas SBD Dauntlesses, which dive-bombed the Japanese

aircraft-carriers from a height of nearly 20 000 feet. On the carriers themselves, the Japanese were too busy warding off torpedoes to see the second attack.

Suddenly, over the rumbling roar of engines, the high-pitched rising scream of dive-bombers was heard. Even as faces swivelled upwards at the sound, the black dots which were 1 000-pound bombs were seen leaving three 'Hell-Divers' as they pulled out from their near-vertical dive. Fascinated eyes watched the bombs grow in size as they fell inexorably towards that most vulnerable of targets, a full deck load of armed and fuelled aircraft.

One bomb struck the *Akagi* squarely amidships, opposite the bridge and just behind the aircraft lift, plunged down into the hangar and there exploded, detonating stored torpedoes, tearing up the flight deck, and destroying the lift. A second exploded in the midst of the 'Kates' on the after part of the deck, starting a tremendous conflagration to add to that in the hangar. In a matter of seconds Nagumo's proud flagship had been reduced to a blazing shambles. From time to time she was further shaken by internal explosions as the flames touched off petrol tanks, bombs, and torpedoes. Within a few minutes Captain Aoki knew that the damage and fires were beyond control. He persuaded the reluctant Nagumo that it was necessary to transfer his flag to a ship with radio communication intact. Admiral and staff picked their way through the flames to reach the forecastle whence they lowered themselves down ropes to a boat which took them to the light cruiser *Nagara.*

Many uninjured men leapt .into the sea and swam away from the stricken, ship. Destroyers *Arashi* and *Nowaki* picked up all survivors. When the rescue work was complete, Captain Aoki radioed to Admiral Nagumo at 19 20 hours from one of the destroyers, asking permission to sink the crippled carrier. This inquiry was monitored by the combined fleet flagship, whence Admiral Yamamoto: dispatched an order at 22 25 hours to delay the carrier's disposition. Upon receipt of this instruction, the captain returned to his carrier alone. He reached the anchor deck, which was still free from fire, and there lashed himself to an anchor. When Yamamoto at last fully understood the fullness of the Japanese defeat he gave his approval and the *Akagi* was sent to the bottom by torpedoes from a destroyer.

Only 3 dive-bombers from the *Enterprise* had attacked the flagship. The remainder of the air group, 34 dive-bombers, all concentrated on the *Kaga.* Of 4 bombs which scored direct hits, the first burst just forward of the superstructure, blowing up a petrol truck which stood there, and the sheet of flame which swept the bridge killed everyone on it, including the captain. The other 3 bombs falling among the massed aircraft on the flight deck set the ship ablaze and started the same fatal train of fires and explosions as in the *Akagi.* Within a few minutes, the situation was so beyond control that the senior surviving officer ordered the transfer of the Emperor's portrait to an attendant destroyer, the custom obligatory when a ship was known to be doomed, and conducted with strict naval ceremony. The *Kaga* was to survive for several hours, nevertheless.

Simultaneously, with the *Akagi* and *Kaga,* the *Soryu* had also been reeling under a devastating attack. Leslie of the *Yorktown* was leading veterans of the Coral Sea battle, probably the most battle-experienced aviators in the American navy at that time. With deadly efficiency they dived in three waves in quick succession from the

starboard bow, the starboard quarter, and the port quarter, released their bombs and climbed away without a single casualty. Out of the shower of 1 000 pound bombs, three hit. The first penetrated to the hangar deck and the explosion lifted the steel platform of the lift, folding it back against the bridge. The others landed among the massed aircraft, causing the whole ship to be engulfed in flames. It took Captain Yanaginoto only 20 minutes to decide to order 'Abandon Ship' to save his crew from being burnt alive, though the *Soryu,* like her sisters, was to survive for some hours yet.

When Captain Yanaginoto gave the order 'Abandon Ship', he determined to immolate himself, dying in the flames or going down with her. A party of his men returning on board with the intention of persuading him or, if necessary, of forcing him to save himself, fell back abashed at the heroic, determined figure of their captain, standing sword in hand, facing forward, awaiting his end. They left him to his chosen fate. As they did so they heard him singing the Japanese national anthem. Yanaginoto's resolution held fast till 19 13 hours when at last the *Soryu* and the bodies of seven hundred and eighteen of her crew slid beneath the surface.

Thus, in five brief, searing minutes, half of Japan's entire fleet carrier force; her naval *corps d'elite,* had been shattered. For the time being the *Hiryu,* some miles away, remained untouched. She was to avenge her sisters in some measure before the day was over; but before going on to tell of her part in the battle let us follow the remainder to their deaths in the blue Pacific waters.

Much had taken place in the meantime before Nagumo's 3 aircraft-carriers suffered their death throes. The first survivors of the American strike groups to land back on their ships made it clear that one Japanese carrier had not yet been located. This was the *Hiryu* which, at the time of the attack, had become separated from the remainder. Admiral Fletcher therefore launched a ten-plane search from the *Yorktown,* and sent up a defensive patrol of a dozen Wildcats. It was none too soon. At a few minutes before noon, the *Yorktown's* radar gave the warning of enemy planes coming in from the west.

These were the *Hiryu's* attack group of 18 dive-bombers and 6 fighters, led by Lieutenant Kobayashi, a veteran leader who had taken part in every operation of the Nagumo force. As soon as they had flown-off, a further strike of 10 torpedo-bombers and 6 Zeros, to be led by the redoubtable Tomonago, was ranged-up. Kobayashi's force had followed some of the *Yorktown's* attack planes back and now concentrated on Fletcher's flagship. Wildcats, for once outnumbering the escorting Zeros, broke through to get at the 'Vals', shooting down 10 of them, including the leader. Of the 8 which remained, 2 were knocked down by anti-aircraft fire from the cruiser screen.

The 6 survivors, however, showed that they had lost none of their skill as they screamed down on the carrier. One 'Val' broke up under anti-aircraft fire, but its bomb sped on to burst on the flight-deck, killing many men, and starting a hangar fire below. A second bomb plunged through the side of the funnel and burst inside, starting more fires. With three boiler uptakes smashed and the furnaces of five or six boilers extinguished, the carrier's speed fell away until, 20 minutes later, she came to a stop. A third bomb penetrated to the fourth deck where for a time a fire threatened the forward petrol tanks and magazines.

His flagship immobilised, her radio and radar knocked out, Admiral Fletcher transferred his flag to the cruiser *Astoria,* and ordered the *Portland* to take the aircraft-carrier in tow. The damage-control organization worked wonders. Before the towline had been passed, the *Yorktown* was under way again and working up to 20 knots, and the refuelling of the fighters was in progress. Prospects seemed bright. Then a cruiser's radar picked up Tomonaga's air group, 40 miles away and coming in fast. There was just time to launch 8 of the refuelling Wildcats to join the 4 already in the air, but they were unable to get through the screen of fighters to get at the 'Kates', though they shot down 3 of the 'Zeros'. A tremendous screen of bursting shells spread itself in front of the attackers, while the cruisers raised a barrage of splashes with their main armament, a wall of water columns through which it seemed impossible that the skimming 'Kates' could fly.

Five 'Kates' were shot down, but the remainder, coming in from four different angles, displayed all their deadly skill, boring doggedly in to drop their torpedoes at the point-blank range of 500 yards. It was impossible for the carrier to avoid them all. Two hit on her port side, tearing open the double-bottom fuel tanks and causing flooding which soon had her listing at 26 degrees. All power was lost, so that counter flooding was impossible. It seemed that the *Yorktown* was about to capsize. At 15 00 hours, Captain Buckmaster ordered· 'Abandon Ship'.

Meanwhile, however, the dive-bombers from Spruance's Task Force 16, operating some 60 miles to the north-east of the *Yorktown,* had wreaked vengeance on the *Hiryu.* Twenty-four Dauntlesses, of which 10 had been transferred from the *Yorktown,* arrived overhead undetected soon after the few survivors of *Hiryu's* attack had been recovered. The aircraft-carrier circled and swerved to avoid the bombs from the plummeting dive-bombers, but in vain. Four of them hit, one of which blew the forward lift bodily on to the bridge. The others started the inevitable fires and explosions, and the same prolonged death agonies as the *Hiryu's* sisters were still suffering. By 21 23 hours she had come to a stop. Desperate efforts to subdue the flames went on through the night; but at 02 30 hours the following morning she was abandoned to be torpedoed by her attendant destroyers.

When the night of 4th June closed over the 4 smoking Japanese carriers and over the crippled *Yorktown,* the Battle of Midway was, in the main, over. Neither of the opposing commanders yet knew it, however, and manoeuvres and skirmishes were to continue for two more days. The Japanese commanders, except Nagumo, were slow to realise that the shattering of their four fleet carriers signified defeat and the end of the Midway operation. Admiral Kondo, with his 2 fast battleships, 4 heavy cruisers, and the light carrier *Zuiho* had set off to the help of Nagumo at midday on 4th June, and soon afterwards Yamamoto was signalling to all his scattered forces to concentrate and attack the enemy. He himself, with the main body of his fleet, was coming up fast from the west bringing the 18-inch guns of the giant *Yamato* and the 16-inch ones of the *Nagato* and *Mutsu* to throw in their weight. Still underestimating his opponent, he was dreaming of a night encounter in which his immensely powerful fleet would overwhelm the American task force and avenge the losses of the previous day. The great 'fleet action' with battleships in stately line hurling huge shells at each other was still his hope and aim.

Such a concept had been forcibly removed from American naval strategy by the disaster of Pearl Harbor. Raymond Spruance, one of the greatest admirals to come to the fore during the war, was not to be lured within range of Yamamoto's battleships, above all at night, when his carriers, at this time untrained for night-flying, would be at a tremendous disadvantage. At sunset he turned away eastwards, aiming to take up a position on the following day from which he could either 'follow up retreating enemy forces or break up a landing attack on Midway'.

The Japanese C-in-C refused to credit the completeness of the disaster that had overtaken his fleet and the Midway plan until early on 5th June, when at 02 55 hours, he ordered a general retirement. Thus, when Spruance, after prudently steering eastwards to keep his distance from the still overwhelmingly superior Japanese surface fleet, and reversing course at midnight so as to be within supporting distance of Midway at daylight, sent a strike of 58 dive-bombers from his 2 ships during the afternoon of the 5th to seek out Yamamoto's Main Body, his airmen encountered nothing but a lone destroyer sent to search for the *Hiryu.*

Two final incidents remain to be briefly recounted. When Yamamoto ordered his general retirement, the squadron of 4 heavy cruisers of Admiral Kurita's Support Force, the *Kumano, Suzuya, Mikuma,* and *Mogami,* was to the westward of Midway, steering through the night to deliver a bombardment at dawn. They now swung round to reverse course full in view of the American submarine *Tambor.* As they steadied on their retirement course, the *Tambor* was sighted in the moonlight ahead. The signal for an emergency turn to port was flashed down the line but was not taken in by the rear ship, *Mogami.* Failing to turn with the remainder she collided with the *Mikuma,* suffering serious damage which reduced her speed to 12 knots. Leaving the *Mikuma* and 2 destroyers to escort the cripple.

News of this attractive target soon reached Midway. Twelve army Flying Fortresses took off but were unable to locate it; but 12 Marine Corps dive-bombers sighted the long oil slick being trailed by the *Mikuma,* followed it up, and at 08 05 hours dived to the attack. Their bombs failed to achieve direct hits, but the plane of Captain Richard Fleming crashed on the after turret of the *Mikuma.* Petrol fumes were sucked down into the cruiser's starboard engine-room and exploded, killing the whole engine-room crew. The 2 cruisers nevertheless continued to limp slowly away, until the following day when Spruance, having abandoned hope of delivering another blow on Yamamoto's Main Fleet, was able to direct his dive-bombers on to them. The *Mikuma* was smothered and sunk, but the *Mogami* amazingly survived, heavily damaged, to reach the Japanese base at Truk.

While these events were taking place, far to the east the abandoned *Yorktown* had drifted crewless through the night of 4/5th June. She was still afloat at noon the next day and it became clear she had been prematurely abandoned. A salvage party boarded her and she was taken in tow. Hopes of getting her to port were high until the Japanese submarine 1-168, sent by Yamamoto for the purpose, found her, penetrated her anti-submarine screen, and put 2 torpedoes into her. At 06 00 hours on 7th June, the *Yorktown* sank at last.

It has been said that Rear Admiral Spruance had calculated the time so as to surprise the enemy aircraft-carriers just when their flight-decks would be cluttered up

with planes returning from Midway. With admirable, almost unprecedented modesty he himself has denied the flattering legend in his preface to Commanders Fuchida's and Okumiya's book: "When I read the account of the events of 4th June, 1942, I am struck once more by the part played by chance in warfare. The authors congratulate us on having chosen the moment of our attack on the Japanese aircraft-carriers when they were at their most vulnerable, that is with their flight-decks encumbered with planes ready to take off. We did not choose this moment deliberately. For my part I had only the feeling that we had to achieve surprise and strike the enemy planes with all the strength at our command as soon as we met them". It can only be said that the war leader who puts into, practice the principle enunciated by Napoleon: "Action! Action! Speed!" can never go wrong.

By attacking Midway, the Japanese hoped to lure the US Pacific Fleet into the open sea and destroy it. Instead, thanks to superb US intelligence and Japanese mistakes, the attack marked the end of Tokyo's supremacy in the Pacific Ocean. This was the end of a most decisive battle, the effects of which were felt far beyond the waters of the Pacific. It deprived Japan of her freedom of action and it allowed the two Anglo-Saxon powers to go ahead with their policy of, 'Germany first', as agreed between Churchill and Roosevelt.

As well as the ships mentioned previously, the Americans lost three hundred and seven dead and 147 planes. The Japanese losses of three thousand five hundred dead and 332 planes deprived her of the cream of her naval air forces. The results show that, though they had been dealt a worse hand than the enemy, Nimitz, Fletcher, and Spruance had played their cards better than Yamamoto and Nagumo. Chance had played her part too, though. What would have happened if Tone's seaplane had not been half an hour late in taking off, we shall never know.

Midway was the first defeat ever suffered by the Japanese Navy, and news of the debacle was completely suppressed in Japan. All papers concerning the event were classified top secret and destroyed in 1945, so that the Japanese public only learned of the events at Midway in the 1950s when published accounts began to appear.

Though Yamamoto blamed the disaster on the failure of his advance screen of submarines to locate and harass the Americans, in fact the responsibility for deploying the submarines in the wrong place was his, It was also Yamamoto who divided his huge fleet and then devised for it a rigid, highly complicated battle plan that was entirely based on what he assumed the Americans would do. The Americans did not follow the script, and the Japanese commanders were not trained to adapt rapidly to radically different situations.

But without the complete and accurate intelligence reports gathered by the Americans, the Japanese plan might well have succeeded. These reports, which gave Nimitz the time and the knowledge to correctly dispose his forces, were probably the crucial factor in the American victory.

The Battle of Midway was a significant moment in naval history. For the first time battleships fled before aircraft carriers. It was also a turning point in World War Two. Japan had lost its main naval striking force and the US Pacific Fleet, far from being destroyed, had won a remarkable victory despite the loss of a carrier. By the time

Japan rebuilt its carrier fleet in 1944, American industrial power was fully mobilised in all the unstoppable might that Yamamoto had so feared.

The Battle of Midway marks the end of the transition period between the eras dominated by battleships and by carriers. Even more than Coral Sea, Midway demonstrated the central role of the carrier plane. Despite a fleet that remained largely intact and immeasurably superior firepower, Yamamoto was forced to retire without firing a shot once he lost his air cover.

The obvious questions arise from this Japanese debacle; why were the battleships not used for Midway off-shore bombardment and the carriers kept in readiness in the event of an American surprise attack? Why were 2 of the carriers not used to soften up the target and the remaining 2 kept in readiness for an air attack?

Midway saw the debut of the Zeke, or Zero-3 fighter plane. The original Zero had been far more manoeuvrable and had a rate of climb three times greater than its American counterparts, and the new Zero was an even greater improvement. But the Japanese pilots proved to be inferior to the Americans, an indication of the deterioration of the Japanese air arm and the growing shortage of well-trained pilots since Pearl Harbor. On the American side, the Dauntless dive bomber, which was.to become the most successful carrier plane of the war, performed superbly, while the Devastator torpedo-bomber proved so disappointing that it was replaced with the new Avenger.

The Battle of Midway did not decide the entire course of the Pacific War in a few minutes, nor did it end with the utter destruction of one of the combatants. Its importance lies in the fact that it broke Japan's naval superiority; that eventually allowed America to overwhelm Japan.

Chapter Seven

Guadalcanal

The achievements of the Imperial Japanese Navy between Pearl Harbour and the Battle of Midway rank as one of the classic campaigns of naval history. Following Admiral Yamamoto's meticulous strategic plan, Japanese naval air power knocked out the United States' surface fleet, and then bundled the British, Dutch and Americans out of the East Indies, the Philippines and Malaya in a matter of weeks.

The resulting 'island chain' of forward bases was intended to act as a defensive perimeter to protect the new Japanese conquests from any Allied counter-stroke. That counter-stroke was sure to come, for despite their humiliating losses the Allies had not been totally disabled. The American aircraft carriers were still very much a force to be reckoned with.

The problem for the Japanese was that their impressive victories had not given them the secure perimeter that they needed. They needed bases in New Guinea if they were to pose a serious threat to Australia. To meet this latter threat the US Navy took over responsibility for the Southwest Pacific, and it was in this theatre that the first big battle between the Japanese and American carriers took place. The Battle of the Coral Sea checkmated the Japanese attempting to capture Port Moresby in New Guinea.

In early June 1942, Midway proved to be a disaster for the Japanese. They lost four aircraft carriers and well-trained crews against the US's one carrier. Midway was the end of the Japanese Navy's dominance in the Pacific, for the ships and aircrew could never be fully replaced, whereas the American losses were replaced many times over. Nor was the counterattack long in coming, but the question was, where to strike? Although there were two schools of thought about how to defeat the

Japanese in the Pacific, there was fortunately total agreement that the Solomon Islands in the Southwest Pacific were to be the objective. This was because the area dominated New Guinea and Australia, and once in Allied hands it would make a good springboard for further operations, while removing the threat of a Japanese invasion of Australia. The Japanese, however, with the same advantages to themselves in mind, drew up their own plans to capture the Solomons. As a result they were moving powerful forces into the area at the same time as the Americans.

The Solomons group of islands situated on the north-eastern approaches to Australia were in early 1942 of key strategic importance. The Japanese could use them to sever the supply routes between America and Australia. In Allied hands they could be used as a springboard for pushing the Japanese out of the South Pacific. Amidst the Solomons, lay Guadalcanal, a humid, remote, jungle-covered, hilly tropical island.

The Americans did not attack sooner, simply because in early 1942 there were not enough ships, aircraft, men, and guns required for other theatres in Europe, Africa, the Middle East, Asia, and the Pacific. Consequently, Roosevelt and Churchill laid it down that the war against the Axis in Europe had to take priority, and that no more men and resources were to be allocated to the Pacific than were absolutely essential to prevent further Japanese expansion
.
There was also some hesitation in Tokyo about whether to advance further. The army, deeply committed in China, with one million men deployed against the possibility of a Russian move into Manchuria and Korea, and the occupation of recently conquered vast new territories, considered their resources already severely strained. Many senior staff officers argued that Japan's best course at that stage of the war was to go over to the strategic defensive, consolidate and integrate the newly-won territories into the 'Greater East Asia Co-Prosperity Sphere'. Japan, they maintained, now had enough rice, oil, and rubber to fight a long war. Why take on further commitments. Let the Americans and their allies exhaust themselves in their efforts to eject the Japanese from the territories they had recently conquered.

The Imperial Japanese Navy held a different point of view. Exuberant with confidence after the heavy defeats they had inflicted on the allied navies in a series of successful engagements, and proud of the precision with which they had transported huge armies and their equipment safely to different battle areas across enormous expanses of ocean, the admirals argued that to stand still was an admission of defeatism. By thrusting forward further immediately, Japan was in a position to deprive her enemies of any hope of ever striking back effectively.

Eventually the navy's view prevailed, and Imperial General Headquarters authorised a series of offensive operations in the island’s north and north-east of Australia, including the establishment of air and naval bases in the Solomons. But these plans were soon to be drastically revised and scaled-down by the severe defeat which the navy suffered during the attempt to invade Midway.

Tulagi in the Solomons, an island with a magnificent anchorage, and a few adjacent islands were seized at the beginning of May, and it was not until the end of the month that the Japanese arrived on Guadalcanal. But their every move, no matter

how trivial, was closely observed by members of Commander Eric Feldt's Australian coast-watching organisation, a body of men, traders, colonial officers, and planters. They had volunteered to stay behind in the chain of islands shielding Australia and report back what the Japanese were doing. Each member of this unique intelligence network had been provided with a 'teleradio', a transmitter, receiver, and generator, together with simple but effective codes.

In June, the coast-watchers on Guadalcanal reported from their jungle hide-outs that the Japanese were building an airfield on the north coast of the island on the site of a flat coconut grove, virtually the only piece of suitable ground in the whole of the Solomon Islands group. In the weeks that followed, the tempo of work quickened perceptibly. Coconut trees went down in their hundreds, and the site was protected by a system of slit trenches and machine-gun posts; Japanese strength on Guadalcanal was approximately three thousand men.

With more alarming reports arriving almost daily, an anxious Washington decided that something had to be done about that bit of level ground on the north coast of Guadalcanal, and done quickly, for an airfield, located in this position, would dominate the whole area. One plan was to raid Tulagi and Guadalcanal in strength, destroy the airfield and Japanese installations and then withdraw. Admiral Ernest J. King, recently appointed head of all US naval forces, opposed the idea on the ground that nothing would be gained in the long run by merely irritating and delaying the Japanese. What he wanted was to deny the Japanese the Solomons once and for all. Admiral King, who had not made a secret of his lack of enthusiasm for the Roosevelt-Churchill directive giving the European theatre of war, priority wanted something more ambitious in the Pacific than a mere holding operation. He was eventually given grudging consent, and as a result the United States prepared to launch its first offensive against the Japanese in the Pacific only eight months after Pearl Harbour.

Theoretically, the assault plan looked good: the 1st US Marine Division, reinforced by Marine Raider and parachute units, was to land in the Tulagi/Guadalcanal area on 1st August, and establish a 'permanent lodgement'. Although the division was nominally up to war strength and had a hard core of seasoned Marines, who knew their weapons and their tactics, the majority were merely new recruits with no experience beyond basic training. The division had not taken part in any large-scale exercises, many of its units had no experience of amphibious operations, and when it was dispatched to the Pacific from its training base in North Carolina in May 1942, its commander, Major-General Alexander Archer Vandegrift, had been assured that he and his division would have plenty of time for training and acclimatisation in the Pacific on the assumption they were not likely to see combat until 1943. Indeed, the first that General Vandegrift learned of the task assigned him, in New Zealand on 25th June by the Joint Chiefs-of-Staff was when he called on Admiral Ghormley of the US Navy, the commander of the South Pacific area and overall commander of the expedition. Half of his division had then still not arrived, and the invasion was only five weeks away.

Nor did the naval side of the operation look more promising. The aircraft-carriers, cruisers, and destroyers allocated to escorting General Vandegrift's division had not

operated together before; they had little or no experience of amphibious operations and had had no time to make good their deficiencies.

Worst of all, the whole undertaking proceeded in what was virtually an intelligence vacuum. Even elementary information about terrain, sea conditions, and weather was lacking. Available maps and charts were outdated. Tide tables showed a rise and fall occurring with unpredictable irregularity, and there were no charts of reefs and other underwater hazards so that it was impossible to calculate how far inshore a ship could safely venture.

Given time, all these shortcomings would of course be rectified, as they were in scores of subsequent amphibious operations both in the Pacific and in Europe. But in this instance there was no time. Washington reluctantly agreed to two postponements; to 4th August and then 7th August, but made it quite clear that 7th August had to be the final date.

It was therefore with an acute awareness of what could go wrong that the admirals and generals commanding the various elements of the expedition rendezvoused with their forces in the Fijis on 26th July. The rehearsals of the next four days procedures did nothing to lift their gloomiest forebodings. The rehearsals, in one observer's words, were a fiasco. Many boats broke down from mechanical failure, aerial dive-bombing was wild, and ships' gunfire inaccurate. General Vandegrift consoled himself with the thought that a poor dress rehearsal presaged a good performance and tried to put right the most glaring mistakes as best he could in the circumstances. Further exercises were out of the question; the fleet was now on its way.

In the early hours of 7thAugust, the dull reverberations of distant gunfire was heard. The most powerful amphibious attack force until then ever assembled, went into action. The grey transport ships of the South Pacific Amphibious Force, commanded by Rear-Admiral Turner, carrying the landing force moved deliberately to plot positions off Guadalcanal and neighbouring islands, whilst the British Rear-Admiral Crutchley had disposed the Australian *cruisers, Australia, Hobart,* and *Canberra* and the US cruisers *Chicago* and *San Juan* plus nine destroyers north-east and north-west of Savo Island on the most likely Japanese approach route. In the meantime, out of Clemens' view, the American Vice-Admiral Fletcher's three carriers, *Saratoga, Wasp,* and *Enterprise,* manoeuvring 100 miles south of Guadalcanal and screened by the battleship *North Carolina,* six cruisers, and 16 destroyers, provided air cover for the Marines.

The American landing on Guadalcanal, one of the largest of the southern group of the Solomons, and a simultaneous landing on the lesser island of Tulagi, were bitterly opposed by their Japanese garrisons. After a day of fierce fighting, however, all the major objectives were taken and by 8th August 1942 everything seemed to be going according to plan.

The attackers had achieved complete tactical surprise. The Japanese on Guadalcanal and the neighbouring islands did not know that the enemy was upon them until the first shells and bombs burst on the positions.

At 06 41 hours, thousands of tense Marines, grouped in 36-man 'boat teams', streamed down the cargo nets suspended from the decks of the transports; then came the order in the transports off Red Beach on Guadalcanal; “Land the landing force”. The sea was calm; disembarkation fast and orderly. Loaded boats pulled away from the transports to assembly areas, formed there into 'boat groups' and moved toward the beach. As the hulls of the boats in the first wave jarred to a stop on the white sand, ships' gunfire and aerial bombardment lifted to targets further inland. The ramps of the boats splashed into the warm greenish-blue water, and the Marines, their weapons held high, waded ashore. This was the moment everyone dreaded, expecting to be met with withering fire from the shattered coconut groves that fringed the beach. But there was none, indeed there was no sign of the Japanese either then or later in the day.

If there had been, the landing operation might well have run into disaster. For by early afternoon, the disembarkation of men and supplies which had started so smoothly was little short of chaotic. As artillery, tanks, jeeps, trucks, and amphibious tractors moved inland, crated equipment, boxed supplies, and drums of fuel piled up alarmingly on the beach. Medical supplies were unceremoniously dumped with ammunition; Marines wandered around the beach waiting for someone to tell them what to do; and scores of boats hovered in confusion off shore, their crews looking for a spot to dump their supplies.

Nor could the progress of the units that rushed inland towards the airfield be called encouraging. Many of the officers as well as the men lacked training and experience. After more than two weeks in the cramped conditions of a combat troop-transport, and now weighed down with heavy equipment in a hot, humid, jungle to which they were completely unaccustomed, they were soon near the point of total exhaustion. When night fell, many nervous sentries, unused to the sounds of the jungle, fired hundreds of rounds at imaginary targets. The Japanese, who had made no attempt anywhere on Guadalcanal to engage the Americans, were greatly puzzled by the uproar.

Colonel Merritt Edson, of 1st Marine Raiders, who was to seize Tulagi, ordered his men to strip down to minimum combat equipment. Although their swift landing tactics got them established on the island before noon, stiff Japanese resistance made it impossible to capture the whole island before nightfall, and during the night the Japanese, liberally equipped with light mortars, grenade throwers, and heavy and light machine-guns, counterattacked. Four times they threw themselves against the Raiders and four times they were thrown back. Although most of the Japanese garrison died in these night attacks, it took the Raiders most of 8thAugust to eliminate the survivors.

On Guadalcanal the Americans had still encountered no Japanese but progress towards the airfield continued to be slow. Only as a result of General Vandegrift's unrelenting drive did the first American patrols eventually reach the airfield late in the afternoon of 8thAugust. The Japanese construction teams had fled into the jungle after the bombardment in the early hours and left signs of panic everywhere. Uniforms, shirts, caps, chopsticks, helmets, mosquito netting, rifles, teacups, and rice bowls, their contents half consumed, littered the ground.

The airfield on Guadalcanal and the islands in the immediate vicinity of Guadalcanal, were in American hands. Despite delays, deficiencies and mistakes the operation had achieved its objective of denying the Japanese a base from which to cut allied supply lines and isolate Australia. There was immense relief in Australia, Washington, and London. But the feeling was not to last long. For, on the night of August 8/9, a Japanese cruiser force shattered the Allied naval forces under Admiral Crutchley, and the transports were forced to withdraw. By the late afternoon of 9th August, the last of Admiral Turner's ships had disappeared. The Marines were on their own.

The position facing General Vandegrift after Admiral Turner's departure was, unenviable. He and his 1st Marine Division held an enclave consisting of a partially completed airfield surrounded by a few acres, on an island covered with dense, inhospitable jungle, in which lurked the remnants of the original Japanese construction and occupation forces. The waters around Guadalcanal were dominated by the Japanese navy. Indeed, in the days that followed, Japanese warships usually patrolled just off his enclave outside the range of his guns. On one occasion a Japanese submarine surfaced and in a leisurely fashion shelled the Marines' position on the beach and on another a Japanese cruiser landed a two hundred strong advance echelon and supplies along the coast in broad daylight. Moreover, consistent Japanese bombing attacks on 'Henderson' (as the airfield came to be known) and the American-held area around it, never allowed General Vandegrift and his men to forget for long who was in control of the skies above Guadalcanal. Above all, the general knew that the Japanese were bound to try and annihilate his division sooner or later.

His main concern, therefore, was to build up his defences against assault both from the sea and from inland, and to complete the airfield so that it could be used by American aircraft to give him protection air cover. His difficulties in pursuing both these aims were immense, largely because so much essential equipment had sailed away in the holds of Admiral Turner's transports. Fortunately the equipment left behind by the Japanese-which included four heavy-duty tractors, six road-rollers, 12 trucks, and two petrol locomotives with hopper cars, made good these deficiencies to some extent and within days the airfield was completed and work was begun on two subsidiary strips. On 20th August, the first American aircraft, 19 Wildcat fighters and12 Dauntless dive-bombers launched from an aircraft-carrier well to the south of Guadalcanal, landed on Henderson Field. A few hours later, shortly after midnight, before the aircraft could go into action, the Japanese attacked from the east.

Radio Tokyo had made no secret of its answer to the question of what fate had in store for the Marines on Guadalcanal. Admiral Mikawa (the area commander), it announced in triumph, had routed the remnants of Anglo-American naval strength in the Pacific and isolated Australia.

Such exaggerated claims may be excusable in propagandists intent on bolstering the morale of their own side and striking fear into the heart of the enemy. But what was astonishing in this instance was that these claims reflected the attitude of many senior Japanese staff officers. Men trained to assess every given situation coolly and without passion and then to lay their plans with care and attention to detail, refused to take the Marines on Guadalcanal seriously. It could, in their view, be no more than

a reconnaissance in force, a manoeuvre to distract and annoy, and as such it was an insolent affront to the honour of Japanese arms which had to be washed away in blood without delay. No attempt was made to obtain an accurate picture of American strength and dispositions. The commander of the Japanese XVII Army in the South Pacific area, was ordered to eliminate the Americans, and he allocated an Infantry brigade for the purpose but since the brigade had still to be assembled, it was decided to send in at once, in two echelons, the only units immediately available.

A special naval landing force landed with the first echelon on 18th August. They had fought in China in the 1930s, with years of experience. Japanese Intelligence had told their commander that the Marines were no more than two thousand strong and that their morale was low. In any case, he was one of many Japanese officers who believed firmly that man for man the Japanese were infinitely superior to the Americans who were only effective when they had superior equipment. He therefore decided that he had no cause to wait even for his reinforcements; he could wipe out this pitiful American force at one stroke.

In the early hours of 21st August, after a brief preparatory mortar bombardment of the American, the Japanese threw themselves at the Marines in a bayonet charge. They were met and stopped by a deadly wall of fire from carefully sited positions, but somehow managed to rally and launched a second bayonet charge, only to be stopped again. This time they decided to withdraw.

Only a crack formation could have survived such a mauling without disintegrating, but the accurate and often telling fire to which the Marines were subjected on the following morning, told them that they were still facing a fighting unit that had to be reckoned with. General Vandegrift, who had had reports that further Japanese reinforcements were on the way, decided that these men constituted too great a danger to be left where they were. He ordered one of his reserve battalions to swing north in an enveloping movement.

By early afternoon the Japanese were encircled, and the final phase began. Bombed and strafed by the American aircraft that had landed at Henderson Field on the previous day, and bombarded at short range by artillery, the Japanese were pushed back slowly towards the sea from three sides. Finally, the few light tanks which had been landed with Vandegrift's division moved in, their steel treads mangling and crushing the living, the dying, and the dead. But still the Japanese refused to surrender. The rear of the tanks, General Vandegrift wrote in his report, “looked like meat grinders”. Even after organised fighting had ceased, the Japanese survivors did not allow themselves to be taken prisoner. The wounded waited until marines came up to examine them, then blow themselves and the others close to pieces with a hand grenade. The Marines learned what the Japanese meant by total resistance; resistance to the last breath of the last man.

The victory lives on in the history of the US Marine Corps, but General Vandegrift knew that it did not answer the question of whether the Marines could hold out. It was merely the prelude to other stronger attempts by the Japanese. In fact, in the last ten days of August, a far more menacing force.

The arrival of the aircraft on Henderson Field had drastically altered the situation: the Japanese, could only use the waters around Guadalcanal safely between dusk and dawn, and therefore planned to move the Japanese army to Guadalcanal in a series of what were aptly named 'Rat runs', using fast destroyers as transports at night and by the end of August, the 'Rat runs' were dashing back and forth with the precision of express trains, while the Marine positions were regularly bombarded from the sea.

General Vandegrift was aware of the gradual Japanese build-up to the east and west of his position. He brought Colonel Edson's crack Marine Raiders and the paratroops over from Tulagi and after dark on 7th September sent the Raiders by sea on a reconnaissance in force to one of the main Japanese bases. Their foray was a complete success: they found only communications and headquarters personnel at the base who promptly fled into the jungle. They also found valuable stores and provisions which they brought back with them. But the most valuable thing they brought back was information about the strength of the forces they would soon have to face. The second Japanese attack could not be long delayed, and General Vandegrift calculated that the main assault would be launched against the ridge to the south of Henderson Field. It was to this ridge that Vandegrift moved the Raiders and the paratroops, with his reserve, a Marine battalion, immediately behind them. He had no other uncommitted troops.

At noon on 12th September, when Japanese bombers heavily bombed not Henderson Field, but the ridge south of the airfield, Vandegrift knew that his calculations about Japanese intentions had been correct. Shortly after darkness a Japanese cruiser and three destroyers started shelling the ridge, and when their gunfire ceased, Japanese troops began their probing. They cut off one Raider platoon but it fought back into the American lines.

When daylight came the Americans assumed that the Japanese had only been testing. They would have been heartened if they had known that they had intended the attack of the previous night to be decisive. The plan had been to attack the ridge with three battalions while other units pinned down the Americans on the western and eastern flanks of his perimeter. But a long and arduous march had exhausted their troops, cut communications with other units, and deprived them of effective control. Despite these handicaps, however, they plunged ahead as recklessly as had done before and rigidly stuck to the order to attack on 12th September.

At 21 00 hours on 13th September, the assault was renewed. As two battalions, almost two thousand men rushed up the slopes of the ridge. Marine's sited mortars, poured shells into the assault waves as fast as loaders could slide them down the hot tubes. Marine artillery just to the rear of the Raiders pumped round after, deadly round into the attackers while seven Japanese destroyers shelled Henderson Field, which was illuminated by Japanese flares. On the ridge the Raiders' defences were bent but not broken, and eventually the Japanese fell back. Before long they returned in an assault as fierce as the first. Again the defences were dented but not broken; and again the Japanese fell back.

Two hours later, after a preparatory mortar bombardment which cut the Raiders' communications with Vandegrift and supporting artillery, the Japanese swept forward to within 1 000 yards of Henderson Field, only to be beaten back after some of the

most ferocious fighting on Guadalcanal. They launched two more attacks before daybreak noticeably weaker than the first three, and when cannon-firing fighter aircraft from Henderson Field strafed the fringes of the jungle below the ridge, the Japanese decided to withdraw. Over one thousand two hundred officers and men killed, missing, and wounded. Hungry and plagued by disease the disorganised remnants of the brigade, carrying only their rifles, clawed their way through the jungle for eight grim days to Point Cruz, west of Henderson Field. The Raiders and the paratroops, too, had suffered heavily. Of slightly over seven hundred and fifty men who had landed on 7th August, the Raiders had lost two hundred and thirty four casualties, and of three hundred and seventy seven paratroops, two hundred and twelve had been killed or wounded. But as far as the Marines were concerned, the question whether they could hold Guadalcanal, had been answered in the affirmative.

Imperial General Headquarters in Tokyo did not share the Marines' view. More troops, many battle hardened veterans, were ordered to Guadalcanal. Operations on New Guinea against Port Moresby were to be suspended so that all naval, air, and military resources could be concentrated on recapturing Guadalcanal. A total force of some twenty thousand men, including a regiment and three batteries of heavy artillery, a mortar battalion, and a tank company. In the next six weeks, the 'Tokyo Night Express' was busier than ever, and the Marines were bombarded every night from the sea. Fortunately General Vandegrift, too, received reinforcements: the 7th Marines, an artillery battalion, motor transport companies, communications personnel, and later 164th Infantry Regiment, US Army. More than six thousand men altogether, bringing his total strength to over twenty three thousand. And equally vital the air force on Henderson Field was strengthened considerably. On paper Vandegrift's force looked impressive; in practice, it was less so. Although battle casualties had not yet reached one thousand, large numbers of Marines suffered from malnutrition, dysentery, virulent fungus infections, exposure, and plain exhaustion. In other less exposed battle areas more than a third of the men would have been declared unfit for combat.

On 23rd October, eight Japanese battalions, totalling five thousand six hundred troops, attacked the eastern perimeter in force with tanks. Concentrated artillery fire brought their advance to a bloody halt. Then, 24 hours later, they attacked with the main force of more than seven thousand men from the south. For two days the Japanese flung themselves against the ridges to the south of Henderson Field. At one stage they penetrated the perimeter, then, as previously they sank back into the jungle, decimated and exhausted, having lost three thousand five hundred men.

What had happened was that Japanese communications had broken down once again. The approach march through the jungle, which had begun on 16th October, had been slower and more arduous than had been expected, and the artillery and mortars had had to be abandoned. Twice they had to postpone the offensive, and the second time, news of the postponement did not reach the Japanese commander Instead of being simultaneous, the two assaults took place 24 hours apart and General Vandegrift, operating on interior lines, was able to defeat each in turn.

General Vandegrift had now defeated three attempts by the Japanese to dislodge him, and both the Americans and the Japanese had to face the problem of what to

do next. For Vandegrift and Admiral Halsey, who had recently replaced Admiral Ghormley as Area Commander, there was no doubt about the answer: it was time to go over to the offensive and drive what remained of the Japanese Army out of Guadalcanal. It was equally obvious to both officers that the 1st Marine Division, after all it had been through, was not the ideal instrument for a long, harsh, and bitter offensive. Fresher and bigger units were required. And so after spending November in extending the perimeter and reducing threatening Japanese outposts around it in preparation for future offensive action, General Vandegrift and the 1st Marine Division were relieved at the beginning of December, and their place taken by the 25th Infantry Division, US Army, the 2nd Marine Division, and the America Division, all combined as 14th Corps under General Patch.

For the Japanese, the problem was whether to go on trying to wrest Henderson Field and the shattered coconut groves around it from the Americans. Imperial General Headquarters refused to accept defeat; fresh divisions and brigades from distant parts of the Empire were ordered to Guadalcanal, in preparation for a fourth determined attempt to drive out the Americans. This was to be launched in mid-January. 1943. But in mid-November 1942 a US naval squadron, despite crippling losses, stopped a Japanese squadron from bombarding Henderson Field, and neutralising its air force. The Henderson Field aircraft, saved by this gallant action, pounced on the convoy of 11 transports in which the bulk of the Japanese were being taken to Guadalcanal. Six transports were sunk, one was crippled, and four had to be beached. Only two thousand men, most of them without equipment, reached Guadalcanal. Imperial General Headquarters decided reluctantly and after much argument that the drain in men and resources, was too great to sustain any longer and ordered the withdrawal from Guadalcanal. Since 7th August, the Japanese had lost 65 combat ships and more than 800 aircraft.

At sea the naval battles were equally ferocious. The Japanese naval commander at Rabaul, Admiral Mikawa had been reinforced to launch a rapid counter-attack. A cruiser squadron under Admiral Mikawa was sent to destroy the landing forces, and this group of five heavy and two light cruisers inflicted a severe defeat on the Allied naval forces in the Battle of Savo Island. In a disastrous night action the Australian *Canberra* and the American *Quincy, Vincennes* and *Astoria* were sunk without being able to reply. Mikawa does not seem to have grasped how close he had come to destroying the entire expedition, and just when he should have pressed on to attack the transports he retired rapidly.

Between August and December 1942 the battle raged, both on land and sea. The US Marines were locked in a struggle to the death with an enemy better trained and equipped to cope with the intense heat and jungle conditions, who fought with fanatical courage for every yard of ground. At sea the fighting was less intense on a personal scale, but still distinguished by a ferocity unequalled anywhere else during the war. By day American air and sea power gave them control of the vital ‘Slot', as the waters between the north eastern and south-western islands were known ; at night the Japanese had virtually a free hand to run in supplies, land men, or bombard shore positions.

Fortunately the Allies had radar, and this gave them a chance in the night actions, but even so their forces were roughly handled during this period. After the Battle of

Santa Cruz on 26th October the US Navy was left with only one damaged carrier, the *Enterprise,* although luckily she was able to fight on. In an action on the night of 14th November the battleship *South Dakota* was badly knocked about, but the Japanese battleship *Kirishima* was sunk. This must be accounted the first Allied victory of the campaign, but just over a fortnight later a force of five cruisers was defeated by only eight Japanese destroyers, which sank the USS *Northampton* and damaged three others. Eventually, however, the Allies were able to clear the 'Slot'.

The US Marine Corps had learned how tough and resourceful even starving and ill-equipped Japanese troops could be in defensive jungle warfare. At no time during January and early February were the Americans able to upset the pace and timing of the withdrawal. The destroyers of the 'Tokyo Night Express' evacuated what remained of the XVII Army, eleven thousand men, only a fraction of those who had arrived to drive the Americans into the sea.

For the Americans and their allies the successful seizure and defence of Guadalcanal brought immense advantages. Australia and New Zealand were safe, and Allied forces now stood on the flank of the Palau/Truk/Marshalls line, the outer cordon of the Japanese empire.

As the remaining Japanese forces in the eastern part of New Guinea had been driven out by the end of December 1942, the way was now clear for the prosecution of Admiral Nimitz's drive across the Pacific. As we know, the Army under General MacArthur wanted to recapture the Philippines whereas the Navy wanted to strike with its far-ranging aircraft-carrier task forces straight across the Pacific to the heart of Japan. In the event, both strategic plans were followed to some extent, but the logic of the naval plan seems to have been both simpler and more economical. No matter how many Japanese garrisons were scattered across the Pacific, the Japanese mercantile marine was nowhere near adequate to keep them supplied.

On 29th March 1943 new directives were issued by the US Chiefs of Staff to the Army and Navy to clear the Solomons of Japanese forces and to attack New Britain. In February a small force of nine thousand men had captured the small Russell Islands, just north of Guadalcanal, and had shown how successful surprise attacks could be..

By the middle of 1943 the Allied losses of the Guadalcanal campaign had been made good, and the new forces were better trained and equipped than those of a year before. The strategic aim was to break through the so-called Bismarck Barrier of island bases in the Bismarck Archipelago. To distract and bluff the Japanese about the main direction of the thrust, Admiral Nimitz was ordered to launch an offensive against the Marshall and Caroline Islands well to the north. The main Japanese fleet base was at Truk in the Carolines, and it was here that the weight of American carrier air-strikes would fall.

Against such an array of strength the Japanese could do little. Like the Germans all over Europe, they were trying to hold an impossibly large number of strongpoints. A new Combined Fleet under Admiral Koga at Truk was hoping to defend a perimeter stretching from the Aleutians down to the Andaman Islands in the Indian Ocean, but even that plan collapsed. Late in June 1943 nearly the whole of the Combined Fleet

was withdrawn to protect the homeland against a possible threat from Russia. The underlying reason for this was a chronic shortage of trained aircrew; carrier pilots who had been lost in the Coral Sea and Midway battles, or frittered away in attacks on heavily defended bases in the Solomons.

Although the Combined Fleet was allowed to return to Truk in July, some of its carriers still lacked crews for their aircraft. When the combined thrust from Nimitz at Pearl Harbour, and Halsey and MacArthur from the Solomons, began at the end of June 1943 they were ill equipped to cope. First came a successful move against the north-western coast of New Guinea, then came the landings in New Britain. The New Guinea landings were timed to coincide with Halsey's landing in New Georgia, so that the Allies now had six airfields around the southern Solomons to enable them to give air cover to all their ground forces.

As the Japanese were now reduced to relying on sending their striking forces a distance of 400 miles from Rabaul, there was little they could do. But their ships still showed outstanding ability in fighting night actions, and once again the night battles raged in the 'Slot'. In two costly actions in July and August they showed that their night-fighting skill was only just matched by radar, and even then the slightest error by their opponents was punished heavily. Only after a year of fighting around the Solomons was there any sign of the Japanese weakening.

The first true example of 'island-hopping' came in August 1943, when Admiral Halsey switched from an attack planned against Kolombangara Island to one against Vella Lavella. This latter island was not only closer to Rabaul, but its possession also made the capture of Kolombangara redundant. Accordingly, a combined Allied amphibious force took Vella Lavella, and although the garrison took six weeks to capitulate, it proved an easier target than the original objective.

From Vella Lavella Halsey moved on to Bougainville, and although this large island north of New Guinea was strongly defended, the central part around Empress Augusta Bay promised an easier landing. It caught the Japanese on the wrong foot, with their Combined Fleet watching for a thrust by Nimitz against the Marshall Islands. For the whole of October 1943, therefore, Halsey's forces had no attacks from enemy carrier aircraft. Even when land-based aircraft attacked in November, the American carriers proved that they could stand up to them better than anyone had believed possible. Indeed, until then the risk had been thought unacceptable.

Nimitz was preparing to strike at the Marshalls, but he was aiming first at the Gilbert Islands. To gauge what this means in the context of the vast areas of the Pacific, it must be remembered that Pearl Harbour was over 2 000 miles from the west coast of the United States, and the same distance from the Gilbert and Marshall Islands; the Solomons were 3 000 miles from the Australian bases, and over 9 000 miles from the United States, and yet forces were fed, supplied with munitions, and maintained.

The islands attacked by Admiral Nimitz were Tarawa and Makin, as the Chiefs of Staff had decided that their garrisons dominated the Marshalls. At his disposal he had a fleet of battleships and aircraft carriers almost equal to the pre-war strength of the US Navy and, despite the presence at Truk of the giant battleships *Yamato* and

Musashi, Admiral Koga was heavily outclassed. Therefore there was almost no Japanese naval activity when Makin and Tarawa were attacked, but the five thousand defenders of Tarawa inflicted three thousand casualties on the Americans before they could be subdued; only one hundred and fifty prisoners surrendered.

To the soldiers and marines who fought their way from Guadalcanal to Tarawa the whole campaign must have seemed a futile sacrifice of lives to wrest a string of useless coral atolls from the Japanese, but this was not the case. What was unfolding was a planned advance across the Pacific towards the Japanese homeland. The way was now clear for an even greater offensive in 1944.

The Japanese had decided late in 1943 to do what they should have done a year earlier; they drew up a more modest defensive perimeter, running from the Mariana Islands through Truk and Rabaul down to northern New Guinea and Timor. Behind this line they planned to deliver counterattacks on the Allies, but they nevertheless allowed garrisons to remain outside the perimeter with a view to tying down and harassing the enemy.

The American assault on the Marshalls showed great boldness. On 31st January 1944, forty thousand troops landed on Kwajalein and Majuro, right in the heart of the islands. With small losses they took their objectives, and bases for heavy bombers were immediately set up. The larger islands were left alone and although they remained in Japanese hands until the end of the war, their garrisons were' almost annihilated by disease and starvation. Not all garrisons could be bypassed like this, but from now on the rule was to outflank and starve out isolated islands and bypass obstinate garrisons.

Following a highly successful carrier strike against the Marianas in February, the decision was made to leap-frog Truk and go straight on to land in the Marianas. This chain of islands in the central Pacific contains four whose names stand out: Saipan, Tinian, Rota and Guam. In a three-day air battle the carrier pilots of Admiral Mitscher's Fast Carrier Task Force destroyed the defending air forces in the famous 'Marianas turkey shoot'. This time the landings prodded the Japanese fleet into action, and the Battle of the Philippine Sea was the result. Again Japanese losses were heavy, particularly among their dwindling reserve of carrier pilots, and three more carriers had been sunk.

This highly mobile campaign was yielding ever better results, not only in terms of Japanese losses, but also in growing American skill in the techniques of shore bombardment and inter-service co-operation.

The invasion of the Philippines reflected the skill developed in two years' constant campaigning. There was also the bonus of the great Battle of Leyte Gulf in October 1944, in which the Imperial Japanese Navy made its last attempt to defeat the Americans in open battle, and was destroyed as an effective fighting force.

Chapter Eight
Iwo Jima

Was it really necessary to take Iwo Jima by force? Could it not, like certain other Japanese held strongholds in the Pacific, have been bypassed, cut off, and left 'to wither on the vine'? The answer is an emphatic no, and for several good reasons, mainly dictated by Allied air strategy. The heavy B-29 bomber losses over Japan emphasised the need for fighter escorts, and since the 2 800 mile round trip from US air bases in the Marianas to Japan and back was beyond the range of the fighters, a nearer staging point had to be captured. By capturing Iwo Jima, the Americans would be one step nearer Japan's home islands and would remove a menace to US bombers attacking Japanese cities.

Iwo Jima first appeared as an island in the Pacific when, over 100 years ago, an underwater volcano spewed out ash and mud. The eight square miles of barren ash and soft, freshly-formed rock might have remained in obscurity but for the strategic significance of this speck of land in the battle for the Pacific in World War Two. It proved vital to the Americans in their campaign of rolling back the Japanese

recently-conquered Pacific empire, and a staging post to attack the enemy homeland. The grim battle for the tiny island lasted over a month and at the end human losses were horrific.

With its proximity to Tokyo (660 nautical miles) Iwo Jima would make an excellent base for Allied bombers. And, since the island was Japanese territory, its conquest would deliver a severe psychological blow, as well as depriving them of a significant strategic outpost.

The military importance of the island to both the Japanese and the Americans lay in the two airfields that had been built by the Japanese and the third under Japanese construction. From these air bases Japanese aircraft could intercept the B-29's bombing Japan, and operate against the bomber bases on the Marianas. The island would provide the US with a fighter base and emergency landing strips for returning crippled bombers. So, by-passing and isolating Iwo Jima would not be enough: it would have to be taken. Preliminary planning for the invasion of Iwo Jima began as early as September 1943, and was finalised after the Marianas had been secured.

The US Marines had played a decisive part in the drive across the Pacific, particularly the advance in the central Pacific. In their first attack, in November 1943, the Corps suffered heavy losses in the confused and bloody assault on Tarawa. Yet, they learned a lot from the assault and in later and larger operations in the Marshalls and Marianas the benefits of earlier experience were clearly revealed. Now, at the beginning of 1945, with Japan pushed back almost to her national boundaries, the Marines were preparing for their toughest assignment yet; the assault on Iwo Jima.

The Japanese were only too aware of Iwo Jima's importance and began speedy reinforcements towards the end of 1944. A garrison of twenty three thousand men under the command of Lieutenant General Kuribayashi, a courageous and dedicated soldier, described by Tokyo Radio as “one of strong fighting spirit” was sent to the island with orders to hold out as long as possible. American air and naval superiority, by this stage had ruled out further reinforcing.

Iwo Jima is dominated in the south by the 550 foot high Mount Suribachi, an extinct volcano. In the north there is a plateau of ridges and gorges. Kuribayashi issued a series of commands to the defenders. One of these was; "Above all, we shall dedicate ourselves and our entire strength to the defence of the island”. Kuribayashi's men worked hard, and by the summer of 1944 had driven tunnels through the plateau, laid minefields, and built gun and machine-gun emplacements.

Kuribayashi had elected to fight a static battle inshore from the beaches. The Japanese tanks were no match for the American Sherman’s, and so were positioned hull down in gullies. The artillery gun sites were dug so that the weapon slits were just visible at ground level, and the positions were linked with tunnels. The building of pillboxes began in October 1944 and five months later 360 were complete. A superb network of deep, interconnected caves, which were almost impervious to naval bombardment, was built. All this on an island of eight square miles.

Admiral Nimitz entrusted overall control of the Iwo Jima operation to Admiral Spruance's Fifth Fleet which, with its fast carrier and battleship units supported by a

mobile fleet train, was the most powerful naval body in the world. Its role was to give distant cover against enemy air or naval attack and to participate in the bombardment of the island. Rear Admiral Turner, probably the most experienced leader of amphibious operations in World War Two, was given command of the landings. The assault troops, eighty four thousand in all, were to come mainly from 4th and 5th Marine Divisions, with 3rd Marine Division in floating reserve.

Major General Erskine's 3rd Division had fought at Guam and Bougainville and the 4th Division, under Major General Cates had seen action at Saipan and Tinian. Major General Hockey's 5th Division did not have combat experience but they were well trained and strengthened by many veterans. Lieutenant General 'Howlin' Mad' Smith, the vigorous leader of the 1st Marine Division at Guadalcanal and now commander of the Fleet Marine Force, Pacific, was placed in an intermediate position between Spruance and Schmidt. With such a well-tried team of commanders and good calibre soldiers they were confident about the eventual outcome of the operation. The question was, how easy or difficult, would the Marines find the assault?

Air reconnaissance had given them some idea of the strength of the defences, then the initial naval bombardment had blown away some of the camouflage and exposed further emplacements. But what they did not know was that their adversaries had built what was probably the most complex underground defence system in the Pacific, with a 3 mile labyrinth of tunnels. Guns were carefully sited to cover the beaches and a series of inland defence lines, consisting of over thirteen thousand men plus some seven thousand Navy troops. There were 361 guns of over 75-mm calibre (with 100 000 rounds of ammunition), 300 A.A. guns (150 000 rounds), 20 000 light guns and machine guns (22 million rounds), 130 howitzers (11 700 rounds), 12 heavy mortars (800 rounds), 70 rocket launchers (3 500 rounds), 60 antitank guns (600 rounds), and 22 tanks.

The Marines began a rigorous training programme for the invasion: practice landings were made on beaches as similar to Iwo Jima's as possible, and a hill shaped much like Mount Suribachi, was attacked time and time again in mock assault. Meanwhile, as preparations continued, the air force had begun, on 8th December, 1944, the longest and heaviest aerial bombardment of the whole Pacific war, a 72-day 'softening-up' by B-24s and B-25s. The US navy, too, laid down its bombardments, which began in November 1944 and continued with intervals until 16th February, 1945, when it began its pre-assault barrage. For three days US warships pounded the island from the sea in an attempt to pulverise, or at least neutralise, the Japanese guns capable of hitting the landing beaches.

In addition to shellfire, the Navy had also used aircraft from carriers to drop bombs and napalm, and fire a multitude of rockets. But although some of their weapons were destroyed, the Japanese garrison cosily sat it out in their deep underground shelters. The final three-day naval bombardment was carried out by six battleships and their support elements. Like their counterparts in the air force, the navy too believed they had succeeded. Again, the verdict of the Marines would be the one that counted. A few optimists thought that the island had been neutralised. Only the Marines who had to hit the beaches would be able to verify this.

On 17th February, two days before the actual invasion was scheduled to begin, gunboats and rocket boats came close inshore to cover the frogmen clearing the beach approaches and checking beach and surf conditions. Suddenly, at 11 00 hours, the Japanese, who felt certain that this was the invasion they had so long awaited, opened fire with their heaviest artillery. Some one hundred and seventy casualties were suffered in this action. But the frogmen did return with a full report of beach and surf conditions. Moreover, by revealing their carefully concealed positions the massive coastal guns had marked themselves for certain destruction before being able to cause havoc on the day of invasion.

With a broad rocky plateau in the north and Mount Suribachi at the southern tip of the porkchop shaped island of Iwo Jima, the only place a full-scale invasion could be mounted was on the black cinder beaches along the south-east coast. From this point it was only a short distance to airfield No. 1; but a landing here also meant that the open beaches would be subjected to an intense fire from higher ground to the north and the south.

The naval bombardment had driven the Japanese into their bunkers, even so, it is hard to imagine that any of the defenders could have survived the bombardment. The finale included 2 000 rounds of 16-inch shells, 1 500 of 14-inch, 400 of 12-inch, 2 000 of 8-inch, 2 000 of 6-inch, and 30 000 of 5-inch. It was the heaviest pre-landing bombardment of the war at that time.

The morning of invasion, 19th February 1945, found 450 vessels of the US 5th Fleet gathered offshore the tiny island – the largest collection of ships yet for a Pacific operation. And around and among these vessels swarmed the 482 landing craft, packed with troops that would carry the 8 marine battalions into action. The bombarding warships closed in to 1 000 yards and began firing. Then the air strikes began and the navy laid down a creeping barrage, the first time it was used in the Pacific. The first wave of 68 LVT's, aligned itself for battle. Every few minutes one of these waves would begin the 4 000 yard dash to the shore and certain violence. If all went according to schedule, the first seven battalions of fighting Marines would be ashore within 45 minutes.

Blasted by shells ranging from 5 to 16 inches, the beaches seemed to be torn apart. Shortly afterwards, rocket-firing gunboats attacked the Motoyama plateau while other gunboats lobbed mortar rounds at Mount Suribachi. Then, as the firing was temporarily checked and the various ships moved into their final positions, carrier aircraft and heavy bombers from the Marianas showered the areas surrounding the beaches with rockets, napalm and bombs. After a further ten minutes the naval shelling recommenced, joined by ten destroyers and over 50 gunboats which steamed as close inshore as possible in an effort to screen the approaching invasion armada. The whole co-ordinated action was immensely impressive.

As the naval creeping barrage, reached its crescendo, the landing-ships lowered their ramps and the first of the five assault waves emerged. Each wave consisted of 69 amphtracs, (armoured amphibian tractors) which could take twenty troops each right onto the beach and scramble over coral reefs if necessary. The first wave, the 4th Marine Division on the right, the 5th on the left, moved virtually undisturbed towards the shore. Could the defences have been over-rated? Had the preliminary

bombardment really worked after all? It seemed too good to be true. At 09 02 hours, the amphtracs hit the beach, spewing out their men and the armoured mortar and rocket-firing vehicles.

They were immediately up against two unexpected physical obstacles; black volcanic ash into which men sank up to a foot or more, and a steep terrace 15 feet high in some places, which only a few amphtracs managed to climb. Most stayed on the beach, getting in the way of oncoming waves, while the troops jumped out and struggled through the ash. One Marine described how he "tried to sprint up the terrace wall but my feet only bogged in the sand and, instead of running, I crawled, trying to keep my rifle clean". Fresh waves of assault troops arrived every five minutes and soon ten thousand men and 400 vehicles were on the beach. Despite inevitable confusion the first combat patrols pushed 150 yards inland, then 300. At this point, the enemy opened up with deadly fire from all the Japanese weapons. Artillery and mortars so carefully sited beforehand opened up in a vicious barrage. Simultaneously, mortars firing from pits only a few feet wide began to drop bombs on the men and vessels along the shore. Suddenly, the Marines were pinned down.

From rabbit-holes, bunkers and pillboxes, small arms and machine-gun fire crashed into the Marines. Heavy artillery and mortars, from deep emplacements and caves on Suribachi and the Motoyama plateau, trained exactly on the beaches well in advance, thundered out, destroying men and machines. The Japanese garrison, true to their orders, had withheld fire during the landings; only 5 amphtracs were lost from the early Waves. As the momentum of the assault and the creeping barrage outdistanced the Marines, the defenders nearest the beach were able to recover and man their weapons. The ash on the beach cushioned all but direct blasts from the mortars and artillery. One war correspondent stated that "nowhere have I seen such badly mangled bodies". It soon became clear that to stay on the beach was near-suicide, but to move off it meant moving into fire from the well-developed defence system.

At this point, and probably only here, the outcome of the battle was in doubt. If the Japanese had mounted a counterattack, they might have routed the disorganized Marines. But the lessons of Tarawa, Saipan and Guam were that furious counter-assaults upon the invaders simply exposed the defenders to the overwhelming American fire-power. Kuribayashi's task was to deny Iwo Jima to the enemy for as long as possible and his troops were ordered to stay strictly on the defensive. Many of the guns were firing only sporadically to conserve their ammunition, although no one at the beach-head would have believed this. The initiative still lay with the Marines; they and their equipment were successfully ashore. Now they could, and *must,* go forward.

Slowly, desperately slowly, the Marines pushed inland, a confused collection of small groups rather than a united force. Each bunker, each rabbit-hole meant a fight to the death. Each enemy position was supported by many others the Japanese would disappear down one hole and pop up at another, often behind rather than in front of the advancing Marines. The Marines struggled on, pouring bullets, grenades and flame into enemy positions. Flail tanks rumbled forward with the Marines, detonating land mines, tankdozers carved channels through the terrace and ordinary tanks relieved the pressure on the Marines by knocking out machine-gun nests and

pillboxes. But it was no pushover, even with the armour. Facing 4th Division's lines, for example, were 10 reinforced concrete blockhouses, 7 covered artillery positions and 80 pillboxes. A battalion commander asserted that “whenever a man showed himself in the lines it was almost certain death”. By mid-afternoon the reserve battalions of four regimental combat teams and two tank battalions had been committed to the battle to relieve the pressure on the leading units.

Kuribayashi had systematically turned the plateau region into an armed camp. Rockets, artillery and mortars, one a 320mm weapon that lobbed 700lb shells, were in good supply and blockhouses and pillboxes were numerous. Caves were elaborate and well-fortified, one could even hold two thousand troops, had 12 exits, and the defenders were well-trained and in high morale. They were prepared to hold a position to the death, infiltrate Marine lines, or throw themselves under an enemy tank with a bomb strapped to their backs. It was all deadly, frighteningly inhuman. Admiral Turner stated it “was as well defended as any fixed position that exists in the world today”.

Fortunately this kind of operation was exactly what the Marines were trained for. During the Pacific War, from one atoll to the next, the Marines endured a much more savage, personal and individual form of combat than that seen in the actions in Western Europe or North Africa, and against a fanatical enemy who would not surrender. There was no room for manoeuvre, or indirect approach; on this battlefield, it was one of total assault.

To reduce the casualties of the attacking forces, all the weapons of modern military technology were brought to bear. The Japanese positions were bombarded by warships, ranging from destroyers’ 5inch guns to battleships' 16inch guns, they were battered by heavy bombers, strafed by the rockets and machine-guns of fighters, assaulted by dive-bombers. Tanks, artillery, mortar and rocket firers hammered the positions, flame-throwers scorched them, and dynamite blasted them. But the Marines knew, as they pressed ahead over the next ridge, along the next gulley, that the capture of virtually every position also involved brutal close-in fighting with machine-gun, pistol, grenade, knife, digging-tool, even hands, before the defenders were fully overcome. This was how the hell on earth of Iwo Jima had to be taken.

The battle for the second airfield, sited almost in the dead centre of the island, was typical of this form of fighting. There, the Japanese had constructed hundreds of pillboxes, rabbit-holes and concealed ernplacements, which defied the concentrated American fire-power for *two* days. On 24th February, the two battalions of the 21st Marine Regiment rushed forward to take the enemy lines with bayonet and grenade, the terrain being too difficult for tanks. Not only did the Japanese fire upon them from all their entrenched positions, but many rushed into the open and engaged in a struggle reminiscent of some medieval carnage, with the bayonet as the key weapon. Casualties rose steeply on both sides. The Marines, thrown back by this fierce counterattack, re-formed and charged again. By nightfall of the next day, they had captured the airfield and were pressing towards Motoyama village, with only the prospect of another bitter struggle ahead: to the right of them lay the formidable Hill 382, a position which became so difficult to secure that the Marines referred to it ominously as 'the Meat Grinder'.

The fighting in the days following was the same. The Americans had to take the higher, central part of the enemy's lines first, for whenever the 4th and 5th Divisions pushed ahead on their respective flanks they were heavily punished by the Japanese who overlooked them. The problem was that it was this middle zone where it was hardest to deploy tanks and artillery, or to direct the naval support fire with accuracy. Although the elements on the flanks helped, the Marines had the main job, the slow and deadly job, of clearing the area. By the tenth day of the fighting though, the supporting fire for the 3rd Division had been substantially increased and the forward battalions found a weak spot in the Japanese line, and poured through. By evening Motoyarna, now a heap of stones and rubble, was taken and the Marines could look down upon the third airfield. Once again though, further momentum was broken by Kuribayashi's second major defence line, and there remained many areas to mop-up. Hill 382 was fiercely held by its defenders for two more days, and Hill 362 in the west was equally difficult. The whole operation was taking much longer than the 10 days Schmidt had estimated for it, and the Marines were tired and depleted in their ranks: some units were down to 30 per cent of their original strength.

On Sunday 5th March, the three divisions regrouped and rested as best they could in the face of Japanese shelling and occasional infiltration. On that day, too, the Marines had the satisfaction of seeing a B29 with a faulty fuel valve, returning to Tinian from a raid on Tokyo, make an emergency landing on airstrip No. 1. Iwo Jima was already fulfilling its function.

For the Japanese, the situation was serious. Most of Kuribayashi's tanks and guns and over two-thirds of his officers had been lost. His troops were in a precarious position, reduced to such desperate measures as strapping explosives to their backs and throwing themselves under American tanks. The Marines were moving relentlessly forward, however slowly, and this forced a gradual breakdown in Kuribayashi's communications system. This meant that, left to their own devices, individual Japanese officers tended to revert to the offensive. This may have been more appealing to the Samurai but it exposed the greatly depleted Japanese forces to the weight of American firepower. One attack, by one thousand naval troops on the night of 8-9th March, was easily repulsed by 4th Marine Division resulting in Japanese losses of over eight hundred men. The pressure on the defending forces was starting to tell; they were losing their cohesion.

Not until 9th March was a final breakthrough to the north-east shore of the island made by patrols of 3rd Division. But elsewhere on the island the 4th Division was forced to deal with a Japanese counter-blow which, if not a formal Banzai, charge, was definitely suicidal in nature: six hundred and fifty Japanese were found dead in one area alone, and reports from other sectors brought the total to nearly eight hundred. In no way had the Marine advance been blocked. From now on it was 'simply' a case of mopping up. It was during this phase that the Marines discovered what the Japanese had been doing since they first occupied the island. Complex mazes of interwoven caves; networks of underground bunkers; ridges, gorges, ledges: the island was one' vast lattice of defensive positions. In one area, 1 000 yards wide by 200 deep, 800 separate fortifications, pillboxes, and blockhouses were counted. Entire hills had been hollowed out and rebuilt to house hundreds of

defenders, all of whom had sworn to kill ten Marines before dying. It was like nothing the Marines had ever encountered before.

An Intelligence officer of 4th Division described the action like this: "The enemy remains below ground in his maze of tunnels throughout our preliminary artillery fire. When the fire ceases he pushes Ops out of the entrances not demolished by our fire. Then, choosing a suitable exit, he moves as many men and weapons to the surface as he can, often as close as 75 yards from our front. As our 'troops advance toward this point-he delivers all the fire at his disposal, rifle, machine-gun, and mortar. When he has inflicted sufficient casualties to pin down our advance he then withdraws through his underground tunnels most of his forces, possibly leaving a few machine-gunners and mortars. Meanwhile we have delivered a concentration of rockets, mortars, and artillery. Our tanks then push in, supported by infantry. When the hot spot is over-run we find a handful of dead Japs and few if any enemy weapons. While this is happening, the enemy has repeated the process and another sector of our advance is engaged in a. vicious fire fight. And so the cycle continues".

A patrol from the 3rd Marine Division reached the north-eastern coast of Iwo Jima and sent back a sample of salt water to prove that the enemy's line had been cut in two. There was no stopping the American advance but even now there was no sign of Japanese surrender, the only indication of their desperate condition was the increasing number of 'banzai' charges. Kuribayashi sent back reports describing the deteriorating situation: 10th March, American bombardment "so fierce I cannot express nor write of it here"; 11th March, "Surviving strength of northern districts (army and navy) is one thousand five hundred men", 14th March. "Attack on northern district this morning. Much more severe than before. Around noon one part of the enemy with about 10 tanks broke through our left front line and approached to 220 yards of divisional HQ", 15th March, "Situation very serious. Present strength of northern district about nine hundred men".

On 14th March the Americans, believing all organized resistance to be at an end, declared Iwo Jima occupied and raised the Stars and Stripes. Yet underground, in their warren of caves and tunnels, the Japanese lived on. Kuribayashi told the survivors on 17th March, "Battle situation come to last moment. I want surviving officers and men to go out and attack enemy until the last. You have devoted yourself to the Emperor. Do not think of yourselves. I am always at the head of you all".

Clearing out pockets of organized resistance with tanks, demolition teams, rifle fire and flamethrowers took until 26th March. On this day the Japanese staged their last desperate fling when three hundred and fifty troops rushed an Air Force and Seabee (Civil Engineers of the US Navy) construction camp. They were destroyed by a Marine pioneer battalion after a day of wild fighting. Kuribayashi committed suicide in the northern corner of Iwo Jima in the last few days of the battle.

The last pocket to be destroyed was that at Kitano Point, which was declared officially secure on 25th March. But that night over two hundred Japanese emerged from the flame-blackened and shell-scarred rocks. Led in person by Kuribayashi some say, they tore into the bivouac area occupied by the sleeping men of the 5th

Pioneer Battalion. A defensive line was set up, and by dawn at least two hundred and twenty Japanese including their leader; lay dead.

The conquest of Iwo Jima had cost the Marines almost six thousand dead and almost eighteen thousand wounded. Of the twenty one thousand Japanese defending the island, less than 1% were taken prisoner. It was not until 25th March that the Marines dared declare organised resistance on Iwo to have ceased, but even so, the actual mopping up lasted a further 9 days.

Iwo Jima soon justified the strategic value which the Joint Chiefs of Staff and, in particular, the Air Force had attached to it. Before the end of the war against Japan, more than twenty thousand crewmen in crippled planes had landed upon the island's airstrips; and from 7th April onwards, thanks to the efforts of the Seabee construction units, Mustang fighters were able to escort the daylight raids of the Superfortresses against Tokyo and other Japanese cities.

General Smith called the battle “the toughest we've run across in 168 years”, but also insisted that; “When the capture of an enemy position is necessary to winning a war it is not within our province to evaluate the cost in money, time, equipment, or most of all, in human life. We are told what our objective is to be and we prepare to do the job”. Admiral Nimitz summed up the achievement of the assault troops: “Among the Americans who served on Iwo Jima, uncommon valour was a common virtue”.

The battle for Iwo Jima was the bloodiest prize in the Pacific, and the most heroic operation in the history of the Marine Corps, but its value had not been exaggerated. On 4th March, 12 days before the island was declared secure, the first B-29 landed there. On 7th April, 108 P-51 Mustangs left from Iwo for the first time to escort a daylight B-29 attack on Tokyo, and within three months of the island's fall more than 850 B-29’s had made emergency landings there; without Iwo Jima most of them would have been lost.

Yet the price of Iwo Jima had been extraordinarily high, and whether the dead were Japanese or Americans they had died with the utmost violence. 24 Medals of Honour were won; 12 600 pints of blood were transfused: It had been a fight with a fury unprecedented in the Pacific, and must have left America's military leaders with one haunting thought at least: if to conquer tiny Iwo it took a 72-day air bombardment, a three-day naval hammering, and. 36 days of the best the Marines could offer, how long would it take to overwhelm Japan herself? And at what cost?

In Japan’s home islands, meanwhile, the people were preparing to resist the now inevitable invasion. Air and naval kamikazes prepared to batter the invasion fleet, while a fanatical citizenry-in-arms would back the army. All were ready to die in the defence of the ‘sacred soil’ of Japan and the ‘sacred person’ of the emperor.

But before that eventuality, there was Okinawa.

Chapter Nine
Okinawa

April fool's day 1945, Easter Sunday, as it happened, dawned brilliant and clear in the East China Sea as a gigantic armada of warships and troop carriers assembled off the mountainous, scimitar-shaped island of Okinawa, 330 miles south-west of Japan for 'Operation Iceberg'. An American invasion force of one hundred and seventy two thousand soldiers and marines, led by the tough 'do it by the book' Lieutenant General Buckner, was poised to storm the last obstacle before mainland Japan.

Even before Iwo Jima fell, the plans were in place for the invasion of Okinawa. It promised to be no easy task, for the island was defended by one hundred thousand men of the formidable 32nd Army, under one of Japan's ablest commanders, Lieutenant General Ushijima. The Japanese also had what they believed would be a trump card; nearly two thousand *kamikaze* pilots that had vowed to give their lives in the attempt to blow the invasion fleet out of the water.

All during the previous week, air and naval bombardments had pounded Okinawa to soften up the defences. Carrier-based planes had already hit the *kamikaze* bases on the southernmost Japanese home island of Kyushu. Then, on 26th March, the 77th Infantry Division had gone ashore on the Kerama islands, off Okinawa's south-west coast, to secure a supply and repair base for the 1 500 ships that were to take part in 'Operation Iceberg'.

The American aim was to achieve the penultimate victory of the Pacific war: the seizure of a firm base on the very doorstep of Japan as a prelude to the final

conquest of the Japanese home islands. The ensuing battle was fought on a scale as yet unknown in the course of the Pacific war: a bloody protracted fight to the finish which forced the Americans to exert every ounce of their strength. The agonising first-hand experience gained in the long road from Guadalcanal to Iwo Jima was to reveal once more at Okinawa that the Japanese will to resist defied all possible estimates when tested on the battlefield. However, the American forces earmarked for the conquest of Okinawa constituted an awesome assembly of battle-wise fighting units.

The Okinawa outline plan was given its official blessing by the Joint Chiefs-of-Staff on 3rd October, 1944. It was envisaged as one of three major offensives intended to stretch Japanese resources to their limits. The other two being the conquest of Luzon and the reduction of Iwo Jima. Luzon would be invaded in December 1944, Iwo Jima in January 1945, and Okinawa in March.

In view of the vital nature of Okinawa, a major bastion of Japan's inner island defences; it was essential that as much Intelligence as possible should be amassed. Aerial photography was an obvious source, but the difficulties were considerable. Okinawa was 1 200 miles from the nearest American air bases when it was selected as the objective of 'Iceberg'; B-29's flying at their high altitude only obtained small-scale photographs; carrier aircraft could only be assigned to Okinawa for photographic reconnaissance when the programme of carrier operations permitted. Other problems included the prevalence of local cloud cover and the large size of Okinawa itself: 60 miles long and from 2 to 18 miles wide, making it extremely difficult to obtain photographs covering the whole island. However, reconnaissance did collect sufficient information to suggest that the main strength of the Japanese defences would be encountered in the southern half of the island around Naha and Yontan, the best two of the four operational airfields on Okinawa. The final estimate of the strength of the garrison was sixty five thousand men. Far less than the actual.

Photo reconnaissance had failed to reveal that Ushijima's 32nd Army was in fact over one hundred thousand strong. Regular troops (infantrymen, gunners, and special services) totalled almost eighty thousand, and there were twenty thousand auxiliary troops known as *Boeitai.* These were drafted into the Japanese Army to serve in labour and supply duties, relieving the fighting troops of ammunition worries, and thus playing an important part in the battle. In addition to the *Boeitai* there was a large contingent of Okinawan conscripts assimilated by the regular units on the island. Precise figures for these conscripts are not available but have been set as high as one-third of the total garrison strength.

Japanese hopes for the defence of Okinawa were strikingly similar to those for the defence of Luzon, with the high command ordering that the island must be held at all cost and to the last man. Wildly exaggerated estimates were pinned on the hitting power of the air and sea *kamikaze* forces. It was expected that *kamikaze* attacks on the American invasion fleet would cut off the marines occupying the beach-head, thereby making it possible for the Japanese to attack the stranded American troops and then fling them back into the sea. However, Ushijima knew how heavily the odds were stacked against him. He had no illusions about what was coming and accepted his fate. He was not deceived by Tokyo's assurances that *kamikaze* attacks would

smash the US fleet. Then, short of supplies and denied reinforcements, the Americans could be annihilated.

Ushijima therefore, planned to hold the strategically vital southern half of the island with the bulk of his troops dug in. Thus forcing the Americans to batter away at Japanese positions at as high a cost as could be exacted. Naha and Shuri were central to the defence. No landing on the north-west coast or on the south-east coast would be opposed. The Americans were expected to overrun the northern region of the island. But until they had destroyed every last stronghold held in the south they could not force a decisive victory, let alone claim the conquest of Okinawa

Responsibility for taking American troops to their target, shielding and supporting them once they came ashore rested with Admiral Spruance's 5th Fleet. Its Joint Expeditionary Force, commanded by Admiral Turner, was designated Task Force 51 which comprised half a million servicemen, over 300 warships, and over 1 130 auxiliary vessels and landing craft. It was shielded by Vice-Admiral Mitscher's Task Force 58, which would also carry out the initial bombardment and neutralisation of the Japanese defences. Task Force 58 consisted of four fast carrier groups, together with the British carrier force commanded by Vice-Admiral Rawlings, designated Task Force 57, although it was only the equivalent of a single American carrier group.

The seven divisions which would land on Okinawa were made up of officers and men steeped in the overall experiences and lessons of the Pacific war since August 1942. They would make the initial landings along the eight-mile stretch of the Hagushi beaches on the west coast between Sunabe and Zampa Point. The date of the invasion of Okinawa was now set for the morning of 1st April, 1945.

Mitscher's big carriers began the first phase of the softening-up process on 18th March, launching heavy strikes against Japanese airfields on Kyushti. On the 19th the Americans switched to the naval bases at Kobe, Kure, and Hiroshima and to Japanese naval vessels in the Inland Sea. Kamikaze's and bombers hit back fiercely, damaging the new carriers Yorktown, Wasp, and Enterprise and setting Franklin ablaze. A Japanese bomber dived out of the 2 000 foot clouds and dropped two bombs on the Franklin, hitting the deck which was packed with aircraft armed with the new 12-inch rockets called 'Tiny Tim'. This set off a shipboard inferno which was probably unequalled in any other American ship in the Pacific. For nearly 4 hours the giant ship lay dead in the water, burning, exploding, and listing heavily. Heroic rescue work saved the ship, but seven hundred and seventy two of her crew were killed. The Wasp, was hit by a bomb and suffered three hundred and two casualties. The bombardment force (which had delivered 13 000 tons of shells against Okinawa before the invasion) was hit by many kamikazes, also a battleship, a cruiser, 4 destroyers, and 6 other United States ships were all struck by Kamikazes before a single American fighting man even set foot on Okinawa.

Task Force 58 began to withdraw on the afternoon of the 19th March, 1945 and during the next 48 hours was harried by repeated Japanese air attacks. These, however, were fought off by the American fighter pilots, who ran up impressive scores. The tally of Japanese aircraft destroyed between19th-22nd March was 528, and 16 Japanese surface ships were also damaged during the same period, including the super-battleship *Yamato.* Mitscher's force had amply fulfilled its role.

When the main landings took place on Okinawa, the Japanese were unable to throw in a serious air counter-attack for a week.

Next on the schedule was the seizure of the islands of the Kerama Retto group, a number of small islands 20 miles west of southern Okinawa, which would be used as an advanced base. Diversionary landings would be made on the far side of Okinawa; and, if necessary the landings could be reinforced to confront the Japanese with a double beach-head. The task was entrusted to the 77th Division under Major-General Bruce. A preliminary reconnaissance and bombardment preceded the actual assault when it was launched. The Japanese reacted in familiar fashion, pulling back into the interior after conceding the fight for the beaches. The Keramas were declared secure on the 29th, and facilitated the emplacement of two batteries of 155-mm guns, a mere 11 miles from the invasion beaches. These guns would add to the fire-power of the pre-invasion bombardment.

While the Keramas were still being cleared, the intricate work of preliminary bombardment and minesweeping in the approaches to Okinawa had already been started by Vice-Admiral Blandy's Task Force 52. The job of clearing the dense minefield which the Japanese had laid was not completed until the evening of the 29th. Blandy himself called it "probably the largest assault sweep operation ever executed". In the week before the assault the American warships pounded the Japanese defences with over 13 000 shells of calibres ranging from 6 to l6-inch, while the carrier planes flew 3 000 sorties, over targets requested by the assault commanders. In the last three days, as the offshore obstacles were cleared, the warships steadily shortened the range and intensified their fire. With the method born of experience and the most detailed planning, 1 300 ships were manoeuvred into position for the assault on the morning of 1st April.

William Manchester, later to become an author and historian, but then a sergeant in the Marines, summed up the feelings of the men: “This Easter happened to be my twenty-third birthday. My chances of becoming twenty-four were, I reflected, very slight”. He was later to write: “None of us could have known that the battle would last nearly 3 months, becoming the bloodiest island fight of the Pacific war. We were all psychotic, inmates of the greatest madhouse in history, but staying on the line was a matter of pride”.

As the first wave of assault boats began to churn their way ashore on Okinawa's west coast, the covering bombardment reached a crescendo as bombs, rockets and napalm rained down from US strike aircraft.

As the long ranks of landing-craft jockeyed into position for the approach, the terrain behind the beaches shuddered and smoked like a volcano under the shellfire of the bombardment force. The boats, in perfect weather conditions, proceeded as easily as a peace-time manoeuvre. The creeping barrage shifted inland as the first boats hit the beaches, almost exactly on schedule at 08 30 hours. To the troops the actual landing came as an almost ludicrous anti-climax. "Where are the Japs?” was the question every man was asking as the cautious advance into the interior began. Meanwhile the landings continued without a hitch. By the evening of 1st April over sixty thousand troops had landed on Okinawa and had pegged out a beach-head over eight miles wide and over two miles deep in places.

"An enemy landing attempt on the eastern coast of Okinawa on Sunday morning was completely foiled, with heavy losses to the enemy". That was how the Japanese boasted of the feint attack made by 2nd Marine Division (Major-General Watson) on the far side of the island. The Marines had made it look like a genuine attempt, with eight waves of boats in line and covered by bombardment. They moved in simultaneously with the approach to the beaches, reversed course precisely at 08 30 hours, and headed back to their parent vessels. The same performance was made on the morning of the 2nd and the force was then withdrawn.

By midday, on the first day, tanks and artillery were rumbling ashore, as the infantry pushed inland. Their main objectives were Okinawa's two major airfields, Yontan and Kadena. Within two hours, the infantry had secured Kadena and an hour later the marines overran Yontan, both meeting little resistance. The first stages of the assault were deceptively easy. Ushijima's forces made little attempt to defend the beaches or airfields. The well-armed and firmly entrenched Japanese waited for the Americans to come to them.

Ushijima placed his main defences around the 13th century castle town of Shuri in the south. They were arranged in a series of concentric lines based around rugged escarpments running east-west across the southern part of the island. He had also built a formidable honeycomb of interconnecting natural and man-made caves and tunnels in the encircling southern ridges. The largest served as command posts and field hospitals.

On the second and third days the Marines and infantry pushed right across the island and cut it in two, with 96th and 7th Divisions wheeling to the south on the right flank and feeling out the first serious Japanese resistance. By the evening of 3rd April, interrogated Japanese civilians and liberated P.O.W.'s. had informed the advancing troops that the main Japanese forces had pulled back to the south. The puzzle of the non-existent enemy had been solved: the battle for Okinawa had still to begin.

Meanwhile Buckner had reversed the original plan of tackling southern Okinawa before clearing the north of the island, and had unleashed Geiger's Marines (6th Marine Division) on 3rd April. Driving north-eastwards along the narrow 'neck' of Okinawa, the 6th Marines had reached the sea and cut off the Motobu Peninsula by 8th April. But it took them another 12 days to clear the peninsula and they had to exert every effort to crush the main Japanese positions with direct attacks. Not until the 20th was Japanese resistance in the peninsula broken, but enough Japanese had escaped to the hills to begin organised guerrilla warfare.

After changing his plan and clearing northern Okinawa, Buckner also decided to press ahead with the capture of le shima, the 5-mile long island 3 miles off the Motobu Peninsula. The Japanese had built three airstrips on le shima and that was Buckner's main objective: to seize the island and use it as a natural aircraft-carrier to intensify the air umbrella over the Okinawa battlefield. Le shima was a formidable nut to crack. The two thousand troops on the island had, by exploiting civilian labour, made it a miniature Iwo Jima as far as prepared defence positions were concerned.

Major-General Bruce's 77th Division was earmarked for the capture of le shima, and the landings went in on 16th April. Despite vigorous resistance, the 77th Division had overrun the western half of the island with its airstrips by the end of the 16th. But the Japanese still held out. Five more gruelling days were needed before the north of the island was declared secure, and even then the fighting continued until the 24th. The fight for le shima epitomised the ferocity of the Okinawa campaign; commenting on it, General Bruce said that "the last three days of this fighting were the bitterest I ever witnessed".

Pushing further south with cautious probing of Ushijima's defence outposts, 5th April marked the first day when ferocious resistance was encountered on Okinawa, and continued during the next three days. But by 9th April, the Americans had not attained any of their prescribed objectives, and were forced to withdraw after a bloody fight. A 'powerhouse attack' on 10th April, was also repulsed, and the Japanese were still very much in possession of their strongpoints on the 12th. The first round had undoubtedly gone to the Japanese in precisely the sort of battle that Ushijima had planned. American morale was also depressed by the news of President Roosevelt's death, which the Japanese promptly exploited for propaganda purposes

In the south of Okinawa, Ushijima had concentrated his forces on Kakazu Ridge, overlooking a deep gorge, and Nishibaru and Tanabaru ridges farther inland. To capture Kakazu, the Americans had to cross the gorge under a terrific barrage of machine-gun, artillery and mortar fire. The battle for the three ridges raged back and forth from 9th-14th April. On the lower slopes and in the gorge, the infantry were subjected to repeated suicidal attacks in which Japanese carrying packs of explosives flung themselves at the tanks. Once they had fought their way around the first line of ridges, the battle-worn troops pushed south to the next east-west fortress escarpment, Urasoe Mura. To its east, where the cliffs grow steeper, it is known as Maeda Ridge and ends in a high, prominent rock, which the US troops, by now joined by the 77th Division, called 'Needle Rock'.

This was the scene of vicious, hand-to-hand fighting, and it was on the ridge that an unarmed medical orderly, Private Doss, earned the Congressional Medal of Honour. Doss, a Seventh-day Adventist, refused to carry a weapon. During a fierce Japanese counter-attack, they killed or wounded most of the US soldiers on top of Maeda. Doss stayed behind to tend the injured while his surviving comrades pulled back down the steep cliffs. Under heavy fire, Doss managed to carry fifty wounded men to the edge of the 35 ft. cliff and lower them on ropes.

On Okinawa the Japanese might win some local successes, but much more important was the nature of the battle itself, with the Japanese having to accept the consequences of their defensive strategy. The cost of halting the Americans by 12th April, had been grievous: over five thousand for the Japanese and four hundred and fifty for the Americans. Despite this twelve-fold imbalance, the Japanese now went over to the offensive to try to exploit the discomfiture of the Americans by pushing them back to the north.

In two days of intense fighting the Japanese counter-attack, was repelled at all points. It was as costly as the deviation from the basic strategy of staying in

strongpoints and letting the Americans suffer the losses. By dawn on the 14th stalemate had settled once again over the front line.

Buckner now prepared to proceed with stealth. It had become obvious that open attacks had failed. A surprise attack on the Shuri defences, pushing deep into the Japanese lines and bypassing strongpoints such as the Kakazu Ridge was planned to be launched with a surprise penetration by General Hodge's 27th Division on the 18th. Hodge summed it all up when he said: "It is going to be really tough. There are about seventy thousand fighting Japs holed up in the south end of the island, and I see no way to get them out except to blast them out yard by yard". However, the attack was a complete failure and cost the Americans seven hundred and twenty casualties. The Japanese fought like furies and held off all the American attempts to slip round their strongpoints. The zones of fire of their artillery and mortars had been carefully drawn and covered all sectors of the front. One regimental commander in the 96th Division commented bitterly after the battle: "You cannot bypass a Jap because a Jap does not know when he is bypassed".

Despite their failure, the Americans had no choice but to keep up the pressure on the Shuri defences. When the fighting died down with the coming of darkness on the 19th a gap of nearly a mile yawned between 27th and 96th Divisions, whose commanders knew that it must be plugged. But the attack of 20th April, went the same way as that of the 19th. This time the problem was a Japanese strongpoint which squarely blocked the line of advance west of the Machinato airfield a strongpoint which had got the very best out of the terrain, was heavily manned, and which had to be cleared out, not bypassed. The Americans called it 'Item Pocket' and it took them another exhausting week before it fell. Impromptu names for the key landmarks, 'Charlie Ridge', 'Brewer's Hill', 'Dead Horse Gulch', became feared and hated names during the incessant fighting between 20th and 27th April. The Pocket was eventually declared secure. Weeks later, however, Japanese were still emerging from the deep bolt-holes and caves which had given the position its strength.

In the meantime the 7th, 27th, and 96th Divisions battered away at the outer Shuri defences on the centre and left of the front. On the latter sector the Japanese had based their defence on 'Skyline Ridge', blocking the approach to Unaha and Yonabaru airfield. In the centre, Kakazu Ridge was still in Japanese hands. While the fight for 'Item Pocket' raged on the right flank, the Americans struggled painfully forward until at last, by 24th April, they had taken both Kakazu and 'Skyline Ridges'. After three weeks ordeal the outer shell of the Shuri defences had finally been cracked.

At the end of April, Buckner reshuffled his front-line divisions, many units of which were badly in need of a rest. The 27th Division was relieved by the 1st Marine Division on 30th April. The fall of 'Item Pocket' on 27th April, was followed by an exact replica of the preceding seven days, and then, on 4th May, the Japanese unleashed a counter-offensive aimed at smashing the centre of 10th Army and driving its fragments into the sea, It was an ambitious plan, envisaging amphibious landings deep in the rear of the American positions, but it suffered the same fate as the earlier Japanese attack. The amphibious operation was a total fiasco. Despite a temporary breakthrough in the centre and the recapture of Tanabaru Ridge, the Japanese 24th Division had shot its bolt by the 7th May, and Ushijima had no choice but to fall back

on the defensive, having achieved little but to delay the American advance for just under a week. During the fighting for the Tanabaru Ridge the news of the German surrender reached Okinawa.

Once Ushijima's counter-attack had been safely held, Buckner saw in it as a chance for a, breakthrough. The attack had drawn the last fresh Japanese reserves into the line, and a prompt resumption of the initiative could well prove decisive. Despite pressure from his Marine generals to make an amphibious landing behind the Japanese lines, to relieve pressure on the fighting front, Buckner chose to continue the bitter, bloody attritional forward push, at great cost in dead and wounded.

The result was the renewal of the attack on 10th May, and its culmination on the 21st with the clearing of a 'funnel' on the left flank which enabled the 7th Division to edge forwards into the inner ring of the Shuri defences. In this phase the decisive actions were the clearing of the eastern sides of 'Conical' and 'Sugar' Hills, which bent back the extreme right wing of the Japanese line. Plotted on a map, it seemed that the way was open for the rolling-up of the front from the east but the Japanese remained in firm control of their positions and no breakthrough came. And now, in the fourth week of May, the elements sided with the Japanese. The rain poured down and the battlefield of Okinawa dissolved into a quagmire. The 3 month Okinawa campaign had started in fine weather, but torrential rain blew in from the East China Sea, turning the ground into mud. Guns, jeeps and even bulldozers became bogged down; only amphibious DUKWs managed to struggle on. Soldiers and marines found themselves permanently sodden, while the Japanese emerged dry from their hideouts.

Transport was paralysed and it was impossible to move heavy .equipment, but there was no slackening of pressure. With the Japanese centre north of Shuri still rock steady, Buckner ordered the flanking divisions to intensify operations and bend back the Japanese wings as far as possible. It was an exhausting and undramatic process. With every day's new advances the 'bulge' being formed round Shuri seemed to herald the total envelopment of Ushijima's men, but still the Japanese refused to break and the casualties continued to soar. With the rain and the mud and the pattern of attrition in men's lives (one dead American for every ten dead Japanese by the end of May) the battle of Okinawa was taking on the nature of the most hideous trench-warfare pounding match of World War One, and with as few obvious results.

Manchester wrote: "You could smell the front long before you saw it; it was one vast cesspool. It was hideous, and it was also strangely familiar, resembling, I then realised, photographs of 1914-1918. The two great armies, squatting opposite one another in mud and smoke, were locked together in unimaginable agony".

Enemy tactics followed a pattern. Each defence line was stubbornly held until almost over-whelmed, then the Japanese would withdraw to new pre-prepared positions, leaving snipers to pick off the advancing Americans. In dealing with the holed-up pockets of Japanese, the US troops found what Buckner called the 'blowtorch and corkscrew' method most effective. A cave or dugout entrance would be blasted by a flamethrower, hand-held or tank-mounted, and then sealed with a grenade or a satchel charge.

Yet now at last the persistence of the Americans was rewarded. Even before the ominous constriction of the flanks of the Japanese defence line in the last weeks of May. After a conference with his staff on 21st May, Ushijima made the decision to yield the Shuri Line and withdraw to the south. The consensus of opinion had been that to hold on at Shuri would only mean that the 32nd Army would be destroyed, without having inflicted sufficient losses on the Americans. The 32nd Army would make its last stand at the southern tip of Okinawa. Supplies and wounded began moving south on the night of 22nd-23rd May, heading for the positions previously constructed.

In nine days of fighting against the line of defence at Dakeshi, Wana and Ishimmi ridges, in front of Shuri Castle Hill, the 7th Marines suffered one thousand two hundred and fifty casualties. The western hills of this line, used by the Japanese as mutually supportive bastions, were named 'Sugar Loaf', 'Half Moon' and 'Horseshoe' by the US forces. Major Courtney, executive officer of the 2nd Battalion, 22nd Marines, said of the hollowed-out 'Sugar Loaf': "The only way we can take the top is to make a *banzai* charge ourselves".

Marines of 6th Division remembered the day of the assault, 14th May, as the bitterest of all the fighting. Tanks came under fire around the west slope, marines on the opposite side were unable to climb the slope because of fire from the nearby hills, and the marines fighting for those hills were in turn held up by 'Sugar Loafs' own defences. A total of two thousand two hundred and sixty marines were killed or wounded in the grim fight for 'Sugar Loaf'. Around the same time, the 77th and 96th Infantry Divisions had been assaulting hills to the east.

On 26th May, all roads heading south from the old capital of Shuri were plugged with retreating Japanese soldiers and civilians: in an exceptionally heavy downpour, Ushijima had decided to pull the 32nd Army out of his last defence line. On the 29th, the Americans occupied the rubble-strewn remains of Shuri Castle. Pursuit troops followed the retreating enemy southwards, to a sheer ridge line rising to a 170 foot pinnacle which the 96th Division called 'The Big Apple', some 3 miles from the southern tip of the island.

To take the final escarpments of 'Big Apple', the Americans had to approach in the open, with no protection. Soldiers and marines who entered the valley were cut down easily from the Japanese defence positions, while tanks too were easy prey.

With the rear-guard holding on, the Japanese pulled out with skill and discipline, and their move was largely completed by the end of May. The Japanese move was helped by the sluicing rains and the lowering overcast, which seriously impeded American aerial reconnaissance. From 26th May, however, the long Japanese columns were kept under general surveillance from the air: A US 10th Army staff meeting on 30th May reached the conclusion that although the Japanese were still holding, their line had no depth. It was widely believed that Ushijima had made his decision too late and that the campaign was all over bar the mopping-up. Once again it was a serious under-estimation of the actual ·situation. But Buckner's divisions did not, as expected, trap the 32nd Army in a pocket and wipe it out. Nor were they able to prevent it from pulling back and forming yet another solid last line of defence.

Thus the scene was set for the final round of the battle for Okinawa. The southern end of the island is best described as a downward-pointing arrowhead. The Shuri Line had crossed the shank of the arrowhead above the barbs; and now the 32nd Army had pulled right down into the very tip of the arrow. An amphibious operation coped with the western barb of the arrowhead, trapping the remnants of Rear-Admiral Minoru Ota's naval troops and wiping them out by 15th June after a ten-day battle. Meanwhile the first attacks on the main Japanese positions had begun.

It took five murderous days, 12th to 17th June, to crack the line: five days in which the fighting was as intense as ever. The Japanese still had to be blasted and burned from their foxholes, and a new American flame-throwing tactic was to bring up a 200-foot fuel supply hose from which to spray napalm on Japanese positions. By 17th June, the survivors of the 32nd Army had been blasted out of their front-line position and compressed into an area eight miles square. On 18th June, Buckner visited the 8th Marine Regiment on the southern battlefield at an observation post near Mezado Ridge. Peering towards enemy positions from between two rocks, he was hit in the chest and killed by flying shrapnel when six anti-tank shells exploded in the rocks.

Ushijima had about eleven thousand infantrymen and twenty two thousand other troops. The Americans attacked in great strength in the middle of June, and by the 17th Ushijima's army began to collapse. Weakened by 80 days of defeat, it disintegrated into an undisciplined mob. On the 18th he issued the army's last order: appointing an officer to lead the 'Blood and Iron Youth Organisation' to conduct guerrilla warfare after regular combat had ceased.

Japanese soldiers, crowded to the water's edge at the southern end of the island, began surrendering in large numbers for the first time. On 19th June, over three hundred and forty gave up voluntarily, and next day almost a thousand surrendered. Many took their own lives.

After more than two and a half months of superb endurance, the men of the 32nd Army had reached the end of their tether. Between the 18th and the 21st they were split into three independent pockets and it was obvious that the end was near. Ushijima radioed his last message to Tokyo on the evening of the 21st, and he and his chief-of-staff, General Isamu Ota, committed ritual *hara-kiri* the same night. The last organised resistance, on Hill 85, between Medeera and Makabe, was broken on the 21st. Although ‘Old Glory’ was formally raised over Okinawa at the 10th Army headquarters on the morning of the 2nd, mopping-up operations lasted until the end of the month; and the campaign was officially declared ended on 2nd July.

As the struggle for Okinawa was ending, certain armchair strategists began criticising the conduct of the campaign, saying that General Buckner should not have committed the Marines on the same front as 24th Corps, but should have landed them on the enemy's flank. The campaign was called a fiasco, and 'a worse example of military incompetence than Pearl Harbour'. But military authorities defended the army's tactics.

It was ranked as one of the bloodiest and most sustained fighting of the Pacific war. Japan's casualties totalled one hundred and thirty one thousand dead, including

some forty two thousand civilians. In addition, about eleven thousand Japanese were taken prisoner. American land forces suffered fifteen thousand five hundred killed and fifty one thousand wounded.

Admiral Leahy estimated that, at this rate, the US could expect some quarter of a million dead in an invasion of Japan. These thoughts offered the Japanese some hope that Washington would seek peace instead of invading. But they had not bargained for Washington's ultimate blows; the world's first and only atomic bomb attacks.

Offshore, men of the kamikaze-spotting picket lines of radar-equipped destroyers and destroyer escorts had not had an easy time. They themselves had become prime targets for waves of *kamikazes.* On 7th April, the 'Special Sea Attack Force' (kamikaze) sortied out on a one-way mission to Okinawa. It was a suicide run in every sense, aimed at sending the super-battleship Yamato and what remained of the Imperial Japanese Navy into the midst of the American invasion fleet and dealing out as much destruction as possible before meeting their inevitable end. But the Yamato was sunk by carrier planes before she had even sighted Okinawa. Why this great ship was sent out in daylight and not under the cover of darkness remains questionable. The fate of the other Japanese naval vessels met the same end in this exercise in futility.

As *kamikaze* attacks intensified, the strain on the men of the Fifth Fleet took its toll through constant radar alerts, lack of sleep and the prospect of a sudden, flaming death. The Japanese also sent in speedboats packed with high explosives, which damaged two destroyers and a few merchant ships. Some *kamikaze* pilots *flew Ohka* (Cherry Blossom) rocket-powered missiles that carried a 2 650 lb. warhead and struck home at more than 580 mph. Their first success came on 12th April, when an *Ohka* sank the destroyer USS *Mannert L. Abele.*

The *kamikazes,* packed with as much as 2 tons of explosives, would swarm in like hornets out of the misty haze to the north, then scream down on the American ships. The only way to stop them was for the Combat Air Patrol (CAP) of Marine Corsair fighters to shoot them down before their final dive, or for shipboard guns to blow them apart with a large calibre shell.

Of the 1 900 suicide sorties during the Okinawa battle, 14.7% were effective, a smaller percentage than in the Philippines, but since many more aircraft were involved, many more ships were hit. Some 25 Allied ships were sunk (none larger than a destroyer), 157 were damaged by hits, and 97 others were damaged by near misses. Worst hit were the small picket ships which were stationed about 50 miles north of Okinawa to give radar warning of approaching planes. These destroyers, destroyer escorts, and gunboats bravely stood by their posts, though they suffered terribly. There was a time in the middle of April when some American naval officers began to believe that the kamikazes might successfully interrupt the invasion.

At the end of the war Japan had 10 700 effective aircraft left, about half of them ready for suicide use. The major airfields were ineffective, but it was planned to fly the suicide planes from small grass fields against ships which stood off Kyushu for the invasion. If they had been as successful as at Okinawa, 900 Allied ships would

have been hit, and 90 would have been sunk, although Allied countermeasures would probably have been improved by then.

Total United States naval casualties on board ships in the Okinawa campaign were almost ten thousand, of whom almost five thousand were killed, most of them by kamikazes. As the war drew to its close, Okinawa became a vast air and naval base, for which a heavy price had been paid. United States naval losses were the heaviest of any naval campaign in the war. The 10th Army also suffered heavy casualties: almost eight thousand killed or missing in action, thirty two thousand wounded, and more than twenty six thousand non-battle casualties. These heavy losses were the dear price paid for Okinawa but, like Iwo Jima, the land was an invaluable asset in pressing the war against the Japanese homeland. These victories also helped to make it clear to the Japanese, the inevitability of their defeat.

The Americans had conquered Okinawa and were now only 330 miles from mainland Japan. The objective of 'Iceberg' had been achieved, but at a terrifying cost. The Americans had lost 763 aircraft and 36 ships sunk; another 368 of their ships had been damaged. Only seven thousand four hundred Japanese prisoners were taken on Okinawa, most of them in the last days when the 32nd Army was disintegrating. Ten major *kamikaze* attacks had been thrown against Okinawa, using up some 1 465 aircraft. The Japanese losses in aircraft were a staggering: 7 800. The Imperial Navy lost 16 ships sunk and 4 damaged.

What did the Okinawa campaign prove? First and foremost, it gave a bitter foretaste of what the Allies could expect if they ever tried to land on Japanese soil. It was the bloodiest fight of the Pacific war. But above all it proved that nothing could stop the Allies in the Pacific from moving where they wanted, even if it did mean killing every Japanese in their way. And Ushijima himself paid tribute to this in his last message to Tokyo. "Our strategy, tactics, and techniques all were used to the utmost and we fought valiantly. But it was as nothing before the material strength of the enemy".

However, what if Ushijima had chosen to defend the beaches, rather than withdrawing most of his troops to the southernmost 10 miles of the 60 mile-long island, behind Shuri Castle? He decided to let the invaders land with hardly a shot fired, and before dark of that first day sixty thousand United States soldiers and Marines were firmly ashore, somewhat bewildered at the free entry to Okinawa's beaches. Yontan and Kadena airfields were acquired at no cost. The engineers and Seabees set to work, and within six days two groups of US Marine fighter aircraft (some 200) were defending American positions from these airfields.

In retrospect it appears that Ushijima erred badly in not sacrificing a battalion or so at the beach-head. He could have caused great confusion among the landing forces. The Okinawa burial tombs, which Japanese soldiers used effectively later on, would have made excellent defensive positions against those invasion beaches. Ushijima's artillery, several hundred guns, which were to cause many American casualties later; could have shelled the beaches and possibly caused disaster among the invaders. But none of this was done.

The importance of this struggle has not been better measured or conveyed than in the words of Winston Churchill, in his 22nd June, 1945 message to President

Truman: “I wish to offer my sincere congratulations upon the splendid victory gained by the United States Army, Fleet, and Air Force in Okinawa. The strength of will-power, devotion, and technical resources applied by the United States to this task, joined with the death-struggle of the enemy, places this battle among the most intense and famous in military history. It is in profound admiration of American valour and resolve to conquer at whatever cost might be necessary that I send you this tribute from your faithful Ally and all your British comrades-in-arms, who watch these memorable victories from this Island and all its camps abroad. We make our salute to all your troops and their commanders engaged”.

Chapter Ten
The Destruction of Japan's Navy

As a result of the Battle of Leyte Gulf in October 1944, the Japanese Combined Fleet could no longer be recognised as the proud and efficient fighting force which had gone to war with the USA and Allies in December 1941. It was by this stage, largely immobilised by lack of fuel and almost a mere shadow of its former self. The Americans went ahead with the last major offensives of the Pacific war, Luzon, Iwo Jima, and Okinawa, secure in the knowledge that the Japanese Navy would never pose a serious threat to them again. After Leyte the Japanese Combined Fleet was incapable of concentrating significant strength to fight the carrier task forces of the Allied Pacific fleets. But the surviving Japanese warships still had a part to play, and they remained high priority targets until the end of the war.

The Midway disaster of 1942 had caused the Japanese to adopt an accelerated and expanded carrier-building programme, but, they were never able to replenish the losses of Coral Sea and Midway. The programme was a dual affair, including the construction of brand-new carriers from the keel up and the conversion of merchantmen and suitable warship hulls. Typical of the former category was the Taiho, lost in her first battle in the Philippine Sea on 19th June, 1944 during the Marianas campaign. Taiho had actually been laid down before Pearl Harbour, but for months work on her had proceeded at a crawl. She displaced 29 300 tons, compared with the 25 675 tons of Shokaku and Zuikaku carriers. She could achieve 33 knots and carried 74 aircraft (53 of them operational and 21 spare). The manner of her fate reveals the very great changes, which had affected the Japanese carrier force since Pearl Harbour, when the American submarine Albacore put a single torpedo into Taiho on the morning of 19th June.

At first there seemed very little to worry about; two fuel tanks had been ruptured and the flight-deck elevator jammed shut, but Taiho could still maintain full speed. The immediate hazard was the spreading fumes from the spillage of oil and aviation spirit. By 1944 the Japanese fleet was forced to use crude oil, due to overall shortages. Taiho's ventilators were put on full blast in an attempt to dispel the fumes; a fatal decision. The fumes were spread throughout the vessel and continued to accumulate. The inevitable end came when a spark on the hangar deck detonated them. The effects were cataclysmic. A tremendous explosion shook Taiho from stem to stern, blowing out the hangar walls, ripping the flight deck, and perforating the ship's bottom. She sank within minutes, the victim of an elementary hazard of carrier life which had been obvious for years.

As for the second category of the 'last generation' of Japanese carriers, a typical example may be cited with Shinyo. She started life as the German luxury liner Scharnhorst, which had been at Kobe since the outbreak of war in 1939. Scharnhorst was purchased by the Japanese Government in the months after Midway; she was renamed Shinyo, and her conversion was begun at the Kure Naval Yard in November 1942. Parts were cannibalised from the uncompleted skeleton hull of the fourth Yamato class super-battleship (significant of the change from Japan's pre-war obsession with the big battleship as the prime naval weapon). Scharnhorst's original electric turbines were retained; they were in fact only the second set to be

used by a ship of the Imperial Navy. In her new guise, Shinyo finally joined the fleet in mid-December 1943. She was not present at the Battle of the Philippine Sea but was given a further eight 50-mm A.A. guns after that action, increasing her total to 50. Shinyo had a best speed of 22 knots and carried a maximum of 33 planes (27 operational and 6 spare), before she fell victim to the far-ranging American submarine arm. Being torpedoed by the Spadefish in the China Sea on 17th November, 1944.

The mightiest battleships in the Imperial Japanese Navy were also Japan's doomed giants. The 64 000 ton Yamato was, along with Musashi, built to be unsinkable. Her 23 500 tons of armour could withstand direct hits which would sink lesser craft. Yet, on 16th December 1941, only days after Pearl Harbour and the sinking of the British capital ships HMS Prince of Wales and HMS Repulse, the first ever capital ships sunk at sea by air attack. Admiral Yamamota C-in-C of Japan's Combined Fleet predicted; "These battleships will be as useful in modern warfare as a samurai sword": When the Imperial Japanese Navy took delivery of the 64 000 ton Yamato, she was already obsolescent.

The first, Yamato-class designs envisaged ships 965ft in overall length with a standard 69 500 ton displacement. By July 1936, the 22ND design since the project's beginning in 1934, plans were for a 64 000 ton ship 860ft long. Two pairs of propellers, one steam-turbine driven, the other diesel powered, would give a 27-knot speed. The heavier diesels were compensated for by lower fuel consumption. However, trouble with experimental diesels led to only steam-turbines being adopted for the new battleships. The 23rd and final design was finished in March 1937, and Yamato's keel laid at Kure Navy Yard on 4th November in that year. Advance preparations included deepening the building dock; providing a crane able to lift 100-ton armour plates; erecting 20ft high fences, protective roofing and rope screens to hide construction. Similar precautions were taken at the Mitsubishi Company's Nagasaki yard where the keel of Musashi was laid on 29th March 1938. Her launching weight of 35 737 tons (surpassed only by the liner Queen Mary) necessitated a 13ft wide slipway, the world's largest. The keel of a third vessel, Shinano, later converted to an aircraft carrier while building, was laid in Yokosuka Navy Yard on 4th May 1940. These were the only ships of the Yamato class to be launched.

A striking feature of these ships was the great width of their beams of 127ft 8in. There was a need for the shallowest possible draught in Japan's coastal waters. Fully loaded, displacing 72 809 tons, they had the relatively shallow mean draught of 35ft 6in. Vital machinery was crammed into a length representing only 53.5 per cent of her total waterline; achieved by arranging the 12 x 13 500hp boilers in four rows of three, each headed by and linked to one of the four turbines. This area was protected by 16inch plates of Vickers armour, the largest weighing 70 tons. Side armour extended all the way from the 7 inch armoured deck down to the bottom hull plates, sloping slightly outwards to minimise shell impact. The ships had two rudders, provision of a second fairly late in building, perhaps influenced by the fate of the German battleship Bismarck in May 1941. The 16 inch plates could withstand an 18 inch shell hit from 13-18 mile ranges. The 7 inch deck was proof against anything under a 2 2001b armour piercing bomb dropped from 10 000ft.The heaviest armour

of all, 22 inch front plates on the main gun turrets, could withstand an 18 inch shell travelling at 550ft per second.

Japan spent a vast amount of money on increasing steel production and developing hardening processes to make the ships supposedly 'unsinkable'. The total 23 500 tons of armour protection on Yamato was about 34 per cent of her total tonnage: they were the most heavily armoured ships ever built. Both ships could certainly take punishment and could most certainly hand it out. Their 18 inch guns threw 3 400lb shells (1 000lb heavier than 16inch shells) 25 miles. The triple turrets each weighed 2 775 tons. They were handsome ships with good handling qualities, a comparatively small turning circle and a freedom from excessive heel. The ships had air-conditioned officers' cabins and ample crew quarters designed for a 2 200 complement, but more often housing a war-time 2 500. In comfort Yamato was reckoned inferior to Musashi which sailors nicknamed 'The Palace'.

Both ships were launched as secretly as they had been built. Men working on Musashi were not allowed to leave Nagasaki Yard before the launch; they worked a final 24-hour shift to ready-her, while troops sealed off the yard from Nagasaki city. The Imperial Navy's officers, like most contemporary naval officers, still saw battleships as the major striking force, with carriers in a secondary role.

On 12th February 1942, Yamamoto hoisted his flag in Yamato, the new flagship of his Combined Fleet. As she lay in Hiroshima Bay, the C-in-C called senior officers aboard to decide Japan's next move. The decision was to capture Midway atoll, a move that Yamamoto hoped would lure the US Pacific Fleet out to battle, and destruction. This attack was considered all the more urgent after Doolittle's raid in April. However, with the cracking of Japan's top-secret naval code, Nimitz was able to establish where and when the attack would come. It would be in early June.

Nirnitz's advance knowledge gave him a clear picture and, from his HQ in Pearl Harbour, he exerted effective overall command, unlike Yamamoto who was keeping radio silence in Yamato some 10 hours behind his carriers: Lacking radar, three carriers were surprised and sunk whilst planes jammed their decks. A fourth was sunk the next day. Yamamoto displayed unwonted emotion on hearing of the mortal damage inflicted. Wary American manoeuvreing, ruled out a night action: leaving the Japanese commander to consider the risk of a daylight attack without air support. The risk was too great. Shadowed by US aircraft, Yamamoto led his force back to Japan, spending the voyage in the seclusion of his cabin. Worse than the loss of four carriers was losing 250 aircraft with most of their highly trained crews.

However, Imperial Headquarters had not lost faith in the battleships. Late in August, Yamamoto's flag flew in Yamato as she headed a strong force bound for Truk atoll, from which the Navy was to support the Army's struggle for Guadalcanal in the Solomon Islands. Musashi, having joined Yamato at Truk replaced her as flagship. A top-secret cable reached Major Mitchell, commanding No 339 Fighter Squadron on Guadalcanal, at 17 00 hours on 17th April, 1943. It came direct from Navy Secretary Frank Knox in Washington, and it told Mitchell that Naval Intelligence had decoded the next day's itinerary for Admiral Yamamoto.

The admiral and his staff would be flying from Rabaul to Bougainville in two 'Betty' bombers escorted by six Zero fighters, and would land at Kahili airfield at 09 45 hours. Knox ordered that Mitchell's P-38 Lightning fighters “must at all costs reach and destroy Yamamoto and his staff”. Bougainville was 500 miles away to the north-west- beyond the P-38s' range. But Knox had already organised fuel drop-tanks to be flown in from New Guinea. These arrived at Henderson Field at 21 00 hours in torrential rain. Mitchell and his pilots spent the night preparing their planes. Haggard and unshaven, 16 pilots took off at 07.20 hours.

They raced just above wave height for 2 hours, sighted the island at 09 35 hours and were busy gaining height to look for Yamamoto's flight when one pilot broke radio silence to announce briefly: ‘Eleven o'clock”. There, sure enough, above and slightly left, was the target. The pilots ditched their drop-tanks and climbed to intercept. Lieutenant Lanphier had just got one 'Betty' in his sights when three Zeros came at him. He turned to meet them, fired a burst, and then saw the 'Betty' below at tree-top level. Diving at 400 mph, he fired a long burst into it. One wing and engine burst into flames and the bomber fell into the trees and exploded.

Lanphier had got Yamamoto, though the Americans could not be sure until Lieutenant Barber downed the second 'Betty' - the admiral had to be in one of them. All but one P-38, shot down by the Zeros, made it back to Henderson for a very quiet celebration. The coup was kept top secret so that the Japanese would not realise that their code had been broken. At the end of April 1943, a small white box was carried aboard Musashi, carrying the ashes of Admiral Yamamoto. On return to Japan on 21st May, headed by the Emperor himself, naval officers trooped aboard to pay their last respects. On Yamato, they found a poem by the Admiral. It began: 'So many are dead, I cannot face the Emperor, soon I shall join the young dead soldiers'.

After a spell in dry-dock at Kure, Yamato and Musashi joined the new C-in-C, Admiral Koga at Truk in the autumn of 1943. Yamato's first 'action' came late in December, as she prepared for Operation Ro, an assault on the central Solornons. As she entered Truk anchorage, a single torpedo from the US submarine Skate struck her aft on the starboard, pushing in the heavy side armour more than 3ft and buckling its brackets. Yamato shipped 3 000 tons of water, and was not operational until April 1944. Meanwhile Musashi joined her on the casualty list. Koga left Truk for the Palau islands with Musashi as his flagship; US carrier planes struck at Palau while 7 submarines ringed the islands to intercept ships flushed out by air attacks. On 29th March, the submarine Tunny torpedoed Musashi’s port bow. Koga ordered her back to Japan and himself boarded an aircraft and disappeared without trace.

Vice-Admiral Ugaki, commanding the 1st Battleship Division (Yamato, Musashi, Nagato), flew his flag in Yamato. His force made its base at Tawi-Tawi, off NE Borneo. In May-June 1944, Ugaki's battleships were ordered to the Philippine Sea. Here, it hoped to destroy the American fleet 'with one blow', but the blow was never struck and battleships played no part in the campaign which crippled Japanese naval airpower. Three carriers went down and almost 500 aircraft and their crews were lost in 'The Great Marianas Turkey Shoot’ of 19th June. Soon, the Philippines were threatened, while Yamato and Musashi, the hashira ('stay-at-home') fleet, as other snips' crews began to call them, were back in Japan.

For Yamato and Musashi, the build-up for the Philippines began in July 1944 when, after at last acquiring radar and radar-directed fire-control for their great guns, they underwent intensive training. The battleships resumed their role as the main striking force; Japan's carriers could no longer spearhead a battle. Therefore, they were sent north of Leyte Island, where the Japanese carriers were to draw off American air cover and give battleships a chance against the vulnerable American landing forces. On 18th October 1944, being informed of the initial landings in Leyte Gulf, Imperial Headquarters ordered Operation Sho-l (Victory) to begin. The 2 leviathans sailed with 3 other battleships, 12 cruisers, and 15 destroyers comprising Kurita's 1st Striking Force.

Early on 23rd October, off Palawan island, US submarines sank two of Kurita's heavy cruisers, one flying Kurita's flag. In the confusion of anti-submarine action, ten hours passed before Kurita could join Ugaki aboard Yamato and resume command; by then three US carrier task groups had regrouped. Determined to rendezvous with two other squadrons in the Sulu Sea, Kurita pressed on without air cover, telling his staff: 'It would be shameful for the fleet to remain intact while our nation perishes, you must remember that miracles do happen". But he would never keep his appointment, the other forces were annihilated in or fled from Surigao Strait on the night of 24/25th October, and no miracle would save Musashi, main target of American aircraft for the next five hours.

At 10 26 hours, 12 Curtiss Helldiver bombers, 12 Grumman Avenger torpedo planes and 21 Grumman Hellcat fighters hit Kurita's force. The Japanese ships threw up a fierce barrage, knocking down 2 Avengers, but the Americans pressed home attacks on Yamato and Musashi. Bombs made little impression on their armoured decks; torpedoes would prove more effective. During the first 20 minutes Musashi took 4 torpedoes on the port side and 1 to starboard. But now the design proved its intrinsic worth: Musashi stayed on course without apparent difficulty. A second strike of 42 aircraft arrived around noon. Again Musashi bore the brunt, taking two bombs and two torpedoes, and began to show signs of slowing down. After a third strike by 68 aircraft at 13 25 hours, Musashi's speed dropped to about 20 knots. She had taken 9 torpedoes: her starboard bow holed into which water poured. Yet counter flooding kept her under way with only a slight list to port, while 7 hits and some 15 near-misses from bombs did little structural damage. Yamato took two more bombs without effect. Many of the attackers were launched as quickly as possible carrying only 500lb bombs.

Musashi kept going, but now her crew knew she was in bad shape. The AA gunners were ineffective, and Rear Admiral Inoguchi at first refused to allow the 18in guns to fire sanshiki-dan ('case-shot, with a 'shotgun' scatter of 20mm incendiary projectiles, supposedly effective over several thousand yards against aircraft) for fear of barrel damage. By early afternoon, as Musashi's bow sank lower and she began to fall behind, it became obvious he must change his mind if she was to survive. By 15 00 hours, after another 30 plane strike was not inhibited by sanshiki-dan, Musashi's speed had dropped to 12 knots. Kurita, about to reverse course hoping to lose the attackers, ordered her to drop out of formation. Only one cruiser remained with the stricken giant when more than 100 aircraft struck in wave after wave from 15 15 hours.

The death blows were dealt by 12 Hellcats, 9 Helldivers with 1 000lb bombs and 8 Avenger torpedo planes from Enterprise. They found Musashi well down by the bows, staggering along at 12 knots and leaving a broad wake of oil. As the Helldivers plunged, Hellcats hammered her decks with 0.5 machine-gun fire and 5inch rockets. Eleven more bombs reduced the already battered upper works to twisted wreckage, and a low-level torpedo attack ripped her apart; all eight pilots claimed hits. At 16 50 hours, when the planes turned away, Musashi was listing 15° to port, her bows under water, and making only 6 knots. Admiral Inoguchi, mortally wounded, wanted to beach her on Sibuyan, but she was now so far over that use of the rudder risked an immediate capsize. Calling his remaining officers together, Inoguchi gave his sword to a young ensign, giving another a letter asking the Emperor's forgiveness. At 17 50 hours, the battle-flag was lowered and given to a strong swimmer, as was the Emperor's portrait. Abandon ship was ordered, but when Musashi rolled over to port and sank at 19 25 hours. Captain Kato, who had lashed himself to the compass binnacle, and 1 023 of her 2 400-strong crew were still aboard. The battleship had taken between 11 and 19 torpedoes and at least 17 direct bomb hits. Kurita's ships had only downed 30 of their tormentors.

Although Musashi's sacrifice had saved all but one of Kurita's 28 other ships from significant damage, his reversal of course lent weight to American pilots' reports that he was retreating with heavy losses. The aircrews cannot fairly be blamed for an over-optimistic verdict, or for concentrating on a single prestige ship. But Admiral ‘Bull’ Halsey would not escape criticism: at 19 50 hours, believing that Kurita was finished, he led 15 fleet carriers and eight modern battleships on a chase after Ozawa. This left San Bernardino Strait unguarded, with only older battleships and light carriers to cover the landings.

At 06 45 hours on 25th October, having reversed course again and cleared San Bernardino Strait at night, Kurita made contact with the 6 escort carriers, 3 destroyers and 4 destroyer-escorts of Rear Admiral Sprague's 'Taffy 3' group. But instead of sending light cruisers and destroyers to make torpedo attacks, while manoeuvreing his big ships into position, Kurita ordered 'General Chase'. At 06 59 hours, Yamato's great guns spoke in anger for the first time, at a range of 20 miles.

In spite of confusion among Kurita's ships, their gunnery was excellent. As Sprague ordered his carriers to make smoke and run, sending out a 'May Day' call in clear language, multi-coloured marker dyes from the Japanese shells blossomed near his vulnerable 'flat-tops'. A rain squall hid them for 10 precious minutes as they worked up speed to launch aircraft, Japanese radar proving inadequate, but at 07 16 hours the rain lifted. Desperate to buy time, Sprague's 7 destroyers raced towards a Japanese battle line that outgunned them by more than 40:1, weaving between shell splashes and closing to under 10 000 yards before launching torpedoes. The Japanese cruiser Kumano took crippling hits, while the American destroyer Heermann sent a torpedo spread at Yamato.

Swinging away, the Japanese giant found herself between torpedo tracks heading for her stern. She was forced to run at full speed out of the action for 10 minutes. By 07 42 hours, when the destroyers launched a second attack, Sprague's planes were up, swarming to the attack. Such determination seemed to confirm to Kurita his mistaken belief that he was engaging the heavy carriers of Halsey’s fleet. At 09 15

hours, when 3 US destroyers were sunk, 1 carrier ablaze, and Japanese cruisers within 10 000 yards of the remainder, Kurita ordered the battle to be broken off. Yamato and her consorts fled back to Brunei, harassed all the way, although 2 more bomb hits did no more significant damage than the 104 rounds of 18inch shells she had expended against Sprague's ships. Heavy air attacks soon forced a withdrawal from Brunei; on 23rd November 1944, Yamato came home to Japan.

In the Battle of Leyte Gulf, Musashi had proved what tremendous punishment the class could take and still stay afloat. Musashi had been singled out as the main target for American air attacks as Kurita's battle fleet struggled through the Sibuyan Sea. Plastered by bombs and ripped by repeated torpedo hits, she had refused to sink, and her expert crew kept her afloat by skilful counter-flooding for hours until the end

But the biggest conversion job in the Japanese carrier programme was that of the giant Shinano, originally the third Yamato-class of the super-battleships. Shinano's whole story was one of monstrous error and wasted effort much like the giant Japanese 1-400 submarines. To start with, argument raged for weeks over what sort of aircraft-carrier she should be: an orthodox carrier or a giant floating depot-ship and mobile base, carrying no aircraft of her own but able to supply and equip and provide an additional flight deck for an entire carrier fleet. The final result was a compromise. Shinano would be a carrier supply-ship, but she would also have a few fighters of her own for self-defence and a hangar for storing them. This caused immense difficulties, because Shinano's hull had been completed up to the main deck by the time of the decision to convert her. The work crawled along as slowly, in fact, as did that on Germany's only aircraft-carrier, Graf Zeppelin in a dreary stop-go rhythm. When the builders were finally galvanised into an all-out effort, after the defeat in the Philippine Sea, it was too late. All the reserves of' trained aircrew had been whittled away to the point of extinction. Nevertheless, the work on the useless giant moved to completion and Shinano was ready for service in November 1944.

She was the biggest aircraft-carrier in the world, and the best protected. Her armoured flight-deck stretched 840 feet by 131 feet. She could steam at 27 knots; she bristled with defensive armament, and she could carry 47 aircraft. At last, the backbone of Japan's new carrier fleet was finished - but the carrier fleet did not exist. There were carriers; there were aircraft; but there was little or no fuel for either, and certainly no trained aircrew. Shinano was, in fact, an awe-inspiring but thoroughly useless white elephant. Shinano had begun and ended a career as inglorious as any in naval history. Shinano mounted a formidable AA battery of 16 x 5inch guns, 145 x 25mm and 336 x 5inch rocket launchers, and with her multiplicity of watertight compartments she was deemed unsinkable. And her end was little short of absurdity. On November 29th 1944, she left Yokosuka for a brief shake-down cruise, escorted by three destroyers. She had not been at sea 24 hours, and still within sight of land, when she was caught by the American submarine Archerfish.

The submarine Archerfish's radar picked up Shinano and her 3 destroyers at 20 48 hours as they moved down the coast. Surfacing, the submarine took up a 20 knot chase in the darkness, able to keep in touch only because the ships zigzagged as an anti-submarine measure! At 03 00 hours on 30th November, a sharp change of course by Shinano made her a perfect target, broadside on to Archerfish at 1 400

yards. Commander Joseph Enright fired a full spread of six 21 inch torpedoes at 03 10 hours. At least four struck the huge carrier. But Musashi's ordeal had shown what punishment this class of ship could take, and although he could easily have made harbour, or at worst beached his ship, Captain Toshio Abe ordered course to be held at 20 knots. For seven hours water poured in, flooding 'watertight' compartments and springing badly welded hull members. Too late, full peril was realized. At 10 55 hours, Shinano rolled over to starboard and sank stern first, taking down the Captain and 500 of his 1 400 strong crew. Her life as an operational warship had lasted only 17 hours

Shinano was not vitally damaged at all by Archerfish's torpedoes and could still make 18 knots. But her inexperienced crew neglected practically every damage control rule in the book. The waters rose and spread from compartment to compartment; she kept on her course at full speed; and her captain would certainly have been court-martialled for gross negligence if he had not gone down with his ship, 7 hours after being torpedoed.

Early in 1945, the Imperial Navy's surviving warships swung at anchor in home waters, lacking fuel or air cover for effective sorties. At Imperial Headquarters, the Army angrily demanded that the Navy, in particular Yamato-"that floating hotel for idle, inept admirals", match the self-sacrifice of kamikaze flyers, submariners and the island garrisons fighting to the last man.

When the Americans cornered the garrison at Okinawa. Admiral Toyoda, could resist no longer. He must throwaway as many ships as could still be fuelled, Yamato among them, in an empty gesture to satisfy national honour and as an inspiration to the civilian millions soon to be called upon to make the final suicidal stand on the beaches of the homeland. On 5th April 1945, he issued orders for Operation Ten-Go. Vice-Admiral Ito's 'Special Sea Attack Force' (Yamato, the light cruiser Yahagi and 8 destroyers) was, in Toyoda's words, to make "the most tragic and heroic attack of the war". In support of a massive Kamikaze effort, the ships were to sail for Okinawa; draw off air cover from the landing areas; smash through the US Navy's screen; run aground and as armoured citadels, hammer enemy-occupied areas until ammunition was exhausted. Then their crews were to go ashore and fight to the death.

With fuel for a one-way trip and magazines crammed with more than 1 000 rounds of 18inch shells, Yamato sailed at 15 00 hours on 6th April 1945. Around 18 00 hours, shortly before clearing Bungo Strait, while the crew answered a patriotic exhortation with banzai for the Emperor, US submarines Hackleback and Threadfin sighted them. The US submarines flashed a warning to the fleet. The Japanese squadron had barely cleared Japanese territorial waters before it was spotted by American submarines. Three carrier task groups moved northeast into position off Okinawa, with orders for a dawn reconnaissance.

At 08 32 hours on 7th April, a scout plane picked up Yamato and her escort heading SW at 22 knots. Ordering battleships to "stand ready for any eventuality north of Okinawa", Admiral Spruance told Vice-Admiral Mitscher: "You take them". Between 10 00 hours and 11 00 hours, a dozen carriers from his Task Force 58 flew off 386 aircraft: 180 Hellcat and Corsair fighters, each carrying three 500lb bombs; 131

Avenger torpedo planes; and 75 Helldivers, each with one 1 000lb bomb and two 250 pounders.

Next morning, 2 Martin Mariner flying boats sighted the Japanese squadron at 10 14 hours, just as it swung south to within 300 miles of Okinawa. The 2 aircraft were screened from Yamato by low cloud and frequent showers, while they guided in the carrier planes. Apart from two seaplanes that remained unlaunched aboard Yamato and Yahagi, no Japanese aircraft were to be seen. At 12 10 hours, the Japanese destroyer Asashlmo, which had dropped back with engine trouble, flashed a brief warning as around 100 aircraft found her. At 12 20 hours, Yamato's radar located the first attack wave 18 miles to port. At 12 32 hours, about 200 planes were in sight at 13 miles range. The Japanese had the weather-squalls and low clouds-on their side, but little else. The Special Attack Force had no fighter cover whatever and the American bombers were able to make almost unimpeded practice runs as repeated waves swept in to the attack. The ring of Japanese destroyers soon broke up under the stress of constant manoeuvre to avoid torpedoes.

The first wave struck at 12 41 hours, as Yamato increased speed to 30 knots. With only 3 000ft cloud ceiling, the planes came down in small groups to make low-level attacks. Yamato's great guns soon fell silent; their blast made it impossible for gunners to operate her massed 25mm batteries, but a heavy barrage still met the Americans, to little avail. By 12 48 hours one destroyer was sunk, Yahagi was crippled and Yamato had taken two bombs amidships as well as a torpedo in the port bow. Two more torpedoes struck there minutes later. While bombs silenced more of the battleship's AA guns. But Yamato, taking water and listing slightly to port, was still full of fight when a strike of 120 planes arrived at 13 00 hours. In less than 15 minutes, five more torpedoes ripped open Yamato's port side, while bombs and machine-gun fire silenced almost every remaining gun. Soon the list to port was too great for the damage-control tanks to correct. To bring his ship back on an even keel, Commander Ariga ordered the flooding of the lowest starboard compartments, the engine and boiler rooms: Several hundred men drowned or were scalded to-death at their posts as the sea rushed in. The cruiser Yahagi now sank after taking seven torpedoes and 12 bombs.

From 14 00 hours onwards, aircraft from Intrepid and Yorktown closed in for the kill. Yamato lay over at 35°, creeping at 7 knots in a circle with rudder jammed hard aport and only one working pair of propellers. Few guns spoke from her shattered deck. All external and internal communications were severed. The sick bay was gutted, doctors: orderlies and patients all dead. Coming in on the starboard side at the head of six Avengers from Yorktown, Lieutenant Thomas Stetson saw that Yamato's hull lay exposed beneath the armoured belt. At least 5 of the Avengers' torpedoes ran straight. The last struck home at 14 17 hours.

Aboard the doomed battleship, Admiral Ito ordered the crew away at around 14 05 hours, shaking hands with his officers before retiring to his cabin to face death alone. Ariga saw to the safety of the Emperor's portrait, before having himself lashed to the compass mounting. The ship now listed so steeply that her battle-flag only just cleared the wave tops. But of more than 2 700 men aboard, only about 300 had left before the sudden end. As the last torpedo struck, the remaining shells, torn lose in Yamato's magazines by the list, set off a chain of internal explosions. At 14 23 hours,

with a massive eruption of orange-brown smoke and flame, the last of the Japanese 'super-ships' rolled briefly upright and then slid quickly beneath the waves. She had taken at least 10 torpedoes, seven direct hits from bombs and innumerable near-misses. According to Yahagi's captain, the survivors in the water, "gave Yamato a last banzai as she disappeared: Then, while American machine-guns ripped the water all around, they began to sing the Japanese anthem".

Yamato's sacrifice was in vain; as wasted as the millions of dollars and years of effort Japan had squandered producing Yamato, and her sisters. The day of the battleship was over before they were launched.

Such was the Battle of the East China Sea on 17th April, 1945. It was the end of the Dreadnought age-the last time that a battleship was sunk by enemy action on the high seas. The wheel had indeed come full circle since Pearl Harbour, when the superb Japanese carrier arm had proved the vulnerability of the battleship once and for all. Yamato's sacrifice was totally useless; she had never even sighted Okinawa, let alone taken any pressure off the gallant Japanese garrison there. On the Japanese side of the ledger there was only one completely insignificant flicker of success: a kamikaze hit on the American carrier Hancock.

Cowering in the Japanese home ports lay the remnants of the Imperial Navy. At Yokosuka there was the battleship Nagato, in her heyday the strongest battleship in the world with her 16-inch main armament. Her last action had been Leyte Gulf, where she had escaped the holocaust of the battleships. Now in the summer of 1945 she was inoperative, inglorious, with her funnel and foremast removed to assist camouflage. The rump of the battle fleet lay at Kure, Japan's great naval base. There were the Ise and Hyuga, absurdly converted to seaplane carriers by the removal of their after turrets. With equal absurdity they had been classified the 4th Carrier Division of the 2nd Fleet in November 1944. In March 1945 they had finally been taken off the active list and now served as A.A. batteries. Also at Kure was the Haruna, the last survivor of the 'Kongo' class battle-cruisers built on the eve of World War I. With the Kongos Japanese designers had shown the world that they had seen through the inherent weaknesses of the battle-cruiser concept by specifying their order for fast battleships; and the Kongos had been extensively reconstructed between the wars. Another genuine museum-piece at Kure in 1945 was the old target-ship Settsu, whose construction had helped place Japan fourth after Britain, the United States, and Germany as a Dreadnought naval power.

Mobility and hitting-power are the prerequisites of a carrier force, and by 1945 the Japanese carrier Force had no fuel and no aircrew. This in turn meant that the surviving units of the Imperial Navy were now finally denuded of their air umbrella and were, from a strategic point of view, little more than floating scrap-iron. To the Japanese high command, however, it was unthinkable that the Emperor's last warships should be bombed to destruction in their home-ports, or hunted down independently at sea. The kamikaze strategy was therefore applied to the Japanese Navy, but, as with the Army and Navy air forces, the problem remained one of materiel, not men. There were thousands of eager volunteers willing to show their veneration for their Emperor by immolating themselves on an enemy carrier and taking as many Americans with them as possible. The difficulty was in getting them there. The Navy, developed two main kamikaze weapons of its own: kaiten and

explosive speedboats. However, the best suicide weapon remained the aircraft, plummeting down on its target from the skies.

The ambitious "SHO" plan which had thrown the massed strength of the Combined Fleet against the Americans at Leyte had been motivated by the kamikaze mentality: to do as much damage as possible with inferior resources. And the same held true of one of the most bizarre episodes in naval history: the suicide sortie of the Yamato.

Japan's defensive strategy was based on the idea of 'Dunkirking' the spearhead troops, once they had got ashore, and disrupting the Allied offensive plan by raising as much havoc as possible. And it was to this end that the 'Special Sea Attack Force' was formed

Seven Japanese aircraft-carriers were also in home waters. First among them was the little Hosho , the first carrier in the world to be designed as such from the keel up, which had been launched after World War I. When she served as fleet carrier training ship, most of the Japanese Navy's crack aircrews learned their trade aboard her. She had survived Midway as Yamamoto's last serviceable carrier and was still in service in 1945. The other six carriers, Ibuki, Amagi, Katsuragi, Kaiyo, Ryuho, and Junyo; represented the losing struggle to restore carrier protection and hitting-power to the Combined Fleet. Apart from destroyers and submarines still in service, the only other major units of the Combined Fleet in Japanese ports in 1945 were six cruisers.

With American carrier planes now able to range at will over the Japanese homeland, it was only a matter of time before these sorry survivors were singled out for destruction. Admiral Halsey planned it personally: it was to be a formal revenge for Pearl Harbour, an all-American operation without the British Pacific Fleet. It took the form of a fearsome three-day blitz on the Japanese naval bases, concentrating on Kure. Between July 24 and 26, 1945, the American carrier forces struck round the clock. In those hectic days they sank the Amagi, Ise and Hyuga, Haruna, Settsu, and five cruisers, effectively destroying Japanese hopes of forming a possible suicide squadron from their last heavy warships. If any single date is required for the formal annihilation of the Japanese fleet, it may be set as July 24/26, 1945.

Although the British did not participate in the mass attacks on the Japanese naval bases, they were nevertheless active during this final phase. Ranging over the Inland Sea, British carrier planes sank two frigates and several other small fry, and also claimed a hit on an escort carrier. The biggest feather in the caps of the British, however, was earned thousands of miles away: in a dramatic and successful midget submarine attack on the port of Singapore.

At Singapore lay the Japanese heavy cruisers Takao and Myoko, both of them marked down for attack by the Submarine Flotilla of the British Pacific Fleet. Two XE-craft (improved versions of the midget submarine which had crippled the German battleship Tirpitz in her Arctic lair in late 1943), were detailed for the job: XE-1 (Lieutenant Smart) and XE-3 (Lieutenant Fraser). On 30th July, 1945, the two midgets were on their way to the approaches to Singapore Roads, towed by their parent submarines: Spark and Stygian.

In the history of submarine warfare this attack is particularly interesting because of the use of the echo depth finder in navigating to the target. By the early hours of July 31, set as the day for the attack, XE-3 was manoeuvring up the Johore Strait at 30 feet. The boom was safely passed at 10 30 hours, and the target, Takao, was sighted at 12 50 hours. As XE-3 closed in on her victim there was a disconcerting moment. As Fraser put it, "I was very upset to see a motor cutter filled with Japanese troops only about 30 yards from my periscope". XE-3, however, remained undetected as she crawled towards Takao across the uneven harbour bottom, fetching up against the hull of the Japanese cruiser with a loud clang at 14 42 hours.

With great daring, Fraser decided to make his attack with XE-3 wedged squarely beneath Takao's hull. The attack used two weapons: limpet mines, attached to the enemy hull by the XE-craft's diver, and fused explosive charges, released from the midget's hull from inside. Operating with great difficulty in the murky waters of the harbour, diver Leading Seaman Magennis attached six limpets to Takao's bottom. It was a long and exhausting job, for he had to scrape off patches of weed and barnacles to get the limpets to stick. After placing the mines and returning inside XE-3, Magennis had to go back outside and release the starboard explosive charge, which refused to detach itself. Tired though he was, Magennis had no hesitation in immediately volunteering for this strenuous and extremely dangerous job. As Fraser's report has it: "He went on oxygen again at 16 25 hours and made his exit to the casing with a large spanner in his hand. After seven minutes he managed, by much banging at the carrier and levering at the release pins, to get the carrier away."

With the explosives safely placed in position, Fraser turned to the task of wriggling XE-3 clear of her victim and retreating to the open sea for the rendezvous with Stygian. Despite several harrowing moments the retreat passed off safely. The boom was passed at 19 49 hours and at 21 00 hours, XE-3 was able to surface and proceed down the Johore Strait. Rendezvous was safely made with Stygian at 23 45 hours.

Smart, in XE-l, had had bad luck from the start of the approach. One mishap after another had combined to delay his attack so badly that he risked being caught inside the boom if he had pressed on to his own target. Smart therefore took the extremely brave decision to attack Fraser's target as well and take the risk of being blown up by the detonation of XE-3's limpets and charges. The possibility of this was heightened by the fact that the detachable charges were fitted with disturbance fuses, and XE-l would stand a likely chance of setting them off. But the calculated risk taken by Smart paid off; he dropped his charges and retreated safely. Fraser and Magennis received the Victoria Cross for their attack, Smart the Distinguished Service Order.

Takao, left with two sets of explosive charges and six limpet mines, the resultant explosion effectively destroyed her as a fighting ship by blowing the bottom out of her. The post-war fate of the Japanese warships which survived Halsey's Blitz of July 1945 was inglorious. Nagato, last of the battle fleet, was used as a target ship during the Bikini Atoll atom test in 1946, together with the cruiser Sakawa. The other cruisers and carriers were either used as targets, scrapped, or sunk at sea by the victors; the Americans in particular sank a hecatomb of surrendered Japanese submarines off Gato Island in April 1946.

The fate of the last vessels of the Imperial Japanese Navy was the grim end to a remarkable story. Japan's emergence as a modern power only dates from the last three decades of the 19th Century. By careful study of the best European models, she built a navy second to none in either materiel or fighting spirit in under 30 years. In that period Japanese naval designers not only participated in the birth of the Dreadnought era: they proved again and again that they could lead the world in laying down new concepts for the development of the fighting ship and the evolution of naval warfare.

What went wrong? It is now generally accepted that Japan's decision to go to war in December 1941 was a calculated risk; a gamble which came within an ace of success. But as far as the total defeat of her prime instrument of war in the Pacific - the Combined. Fleet - is concerned, several serious errors stand out. The first is that in 1941, the Combined Fleet was a contradiction in terms. Its carrier force was superb but the battle fleet-the big gun-was still looked to as the weapon which would bring decisive victory. Submarine strategy was totally misguided on the Japanese side, whereas the Americans used their submarines correctly and reaped the rewards. Above all, however, the Japanese naval strategists had to cut their coat according to their cloth: the one thing they could not afford was a war of attrition, and this they got. The Guadalcanal campaign, for example, cost them the equivalent of an entire peace-time fleet; losses which could never be replaced. The very speed with which the Americans assumed the offensive in the Pacific, never to lose it, showed what a narrow margin the Japanese Navy had.

The result was an unreal metamorphosis which led the Japanese into building huge white elephant like Shinano and the aircraft-carrying I-400 submarines. It saw the Combined Fleet change from an instrument of the offensive and of victory to a sacrificial victim whose purpose was only to stave off defeat. This process first became dominant at the time of the Marianas campaign in June 1944, and it led to the final destruction of the Combined Fleet. That there was great heroism among the men who took Yamato out on her last voyage cannot be doubted. But the former cold professionalism which had carried the Japanese Navy to its high tide of victory in the summer of 1942 was gone. In ships, in men, and in men's ideas, too much had been lost in the disastrous naval operations in the Solomon Islands, at Midway, and in the battle of Leyte Gulf.

Chapter Eleven
USS Indianapolis

When the Japanese attacked Pearl Harbour on 7th December, 1941, the heavy cruiser *Indianapolis* was undergoing training exercises close to Hawaii. Returning immediately to Pearl Harbour, the cruiser joined Task Force 11. In early 1942, *Indianapolis* sailed with the carrier USS *Lexington* and conducted raids in the Southwest Pacific against Japanese bases on New Guinea. Ordered to Mare Island, California for an overhaul, the cruiser returned to action on 7th August, 1942 and joined US forces operating in the Aleutians.

Remaining in northern waters, the cruiser sank a Japanese cargo ship on 19th February, 1943. That summer, *Indianapolis* supported US troops as they recaptured islands in the Aleutians. Following another refit at Mare Island, *Indianapolis* arrived at Pearl Harbour and was made flagship of Vice Admiral Raymond Spruance's 5th Fleet, providing fire support as US Marines prepared to land on Tarawa.

Following the US advance across the central Pacific, *Indianapolis* saw further action and supported US air strikes across the western Carolines. In 1944, the 5th Fleet provided support for the invasion of the Marianas and Saipan and bombarded Iwo Jima. Indianapolis then took part in the Battle of the Philippine Sea, before being sent to aid in the invasion of Peleliu that September.

After a brief refit at Mare Island, the cruiser joined Vice Admiral Marc A. Mitscher's fast carrier task force on 14th February, 1945. Steaming south, they aided in the landings on Iwo Jima. On 24th March, 1945, *Indianapolis* took part in the bombardment of Okinawa. A week later, the cruiser was hit by a kamikaze plane while off the island. Hitting *Indianapolis*' stern, the kamikaze penetrated through the ship's upper deck and exploded. After making temporary repairs, the cruiser limped home to Mare Island and underwent extensive repair to the damage, only emerging from dry dock in July 1945.

The U.S.S. Indianapolis was destined to play a pivotal role in the ending of World War Two. Due to the ship's great speed as well as its proximity to Los Alamos, New Mexico (the location of the Manhattan Project), the Indianapolis was selected for a top-secret mission. She was tasked with transporting from San Francisco to the island of Tinian in the Marianas, a vital, piece of uranium 235, encased in a lead cylinder. The uranium was the catalyst for the reaction of the atomic bomb destined for Hiroshima. Three smaller parts had already been delivered, each on a different

aircraft. Any one of the smaller parts would be enough to prime the bomb but the larger piece was essential for effective detonation.

In the very early morning hours of 16th July 1945, shrouded in security and secrecy, but with a huge assembly of Admirals, Generals and many technicians at pier-side looking on, the atom bomb components were loaded aboard Indianapolis. Several large wooden crates were stowed in one of the ship's hangars, and placed under guard. Orders were given that should the ship come under attack and considered endangered, the crates were to be immediately thrown over the side. Even given the strangeness of this particular order, the nature of the cargo itself was kept secret from all aboard including Indianapolis' commander; Captain Charles McVay. Indianapolis sailed into history on that fateful morning.

The heavy cruiser steamed out of San Francisco Bay just after dawn on 16th July, 1945, wrapped in a heavy cloak of secrecy and headed for the Pacific Island of Tinian where American B-29 bombers were based. On board were some of the atomic bomb technicians.

She steamed at high speed, unescorted, to the island, making record time by covering the 5 000 miles in ten days, which included a stop at Pearl Harbour for replenishment. She unloaded her lethal cargo on 26th July. Her mission accomplished, the warship, with one thousand, one hundred and ninety seven men on board, then began a journey into Hell that would end with the worst naval disaster in U.S. history. On that same fateful morning, one of the newest, largest, and most technologically advanced attack submarines of the Japanese Imperial Navy got underway. It was the I-58, under Commander Hashimoto. His orders were to patrol the waters east of the Philippines; find and sink, enemy shipping.

From Tinian, Indianapolis sailed south, made a brief stop to refuel and receive new orders at Guam (Headquarters for the Pacific Fleet, under the command of the Commander In Chief of The Pacific Fleet, Chester A. Nimitz), Her new orders were to sail to Leyte Gulf on the East Coast of the Philippines, some 1 500 nautical miles from Guam, through waters patrolled by Japanese submarines and infested with sharks, there to join with the battleship Idaho, for several days of gunnery practice and refresher training. The reason being, about four hundred of the crew were green sailors fresh out of boot training. From Leyte she was to rejoin the fleet off Okinawa for the expected invasion of Japan. According to the official record, a single coded message was sent from Guam to Idaho advising her of Indianapolis' orders. Reportedly, the radio message was garbled at the receiving end. Idaho didn't ask for a repeat of the message. Consequently they didn't know Indianapolis was on her way.

The Indianapolis did not have sonar to detect submarines. Captain McVay, had asked for an escort, but his request was turned down. The US Navy also failed to pass on information that Japanese submarines were still active in the area. Indianapolis steamed out of Guam on the 28th July. McVay planned a three day voyage to Leyte at an average speed of 15 knots and had only four of her eight boilers on line.

As the watch changed at midnight, Monday, 29/30 July, Indianapolis was now making 17 knots in a moderate sea with visibility poor but improving under overcast skies. The night was calm, and the moon had just slipped behind the clouds. Captain McVay felt the darkness would help conceal his ship if a submarine should happen upon her course, so he told the officer on watch that, at least for a while, he could steer a straight course rather than zigzag. The officers were relaxed. They had just carried out a sensitive mission to deliver a 'secret weapon'. They were unaware, of course, that they had just delivered the first atomic bomb in history.

At midnight, the moon reappeared. At precisely that moment, Captain Hashimoto of the Japanese *I-58* raised his submarine's long range periscope. The experienced commander couldn't believe his eyes. There, in his sights, was the *Indianapolis,* just 10 000 yards away. Three torpedoes were immediately fired at the cruiser. The first torpedo fired struck the *Indianapolis* toward her bow, killing many of her crew instantly. The second torpedo, which hit almost simultaneously, struck toward the centre of the ship, almost directly under the bridge, causing more casualties and completely cutting off communications with the bridge.

.

This was the mortal blow, igniting an explosion that almost broke the ship in two. It would take only twelve minutes for the ship to dip her bow, roll to port and slip beneath the sea. Captain Hashimoto, stated after the war that a third torpedo hit the *Indianapolis,* but her crew felt the impact of only the first two. When the first torpedo exploded at the bow of the ship, most of the sailors aboard the *Indianapolis* were sleeping. But not for long! Realizing what had happened, the men raced to the ladders to reach the upper decks. Moments later at the second explosion, sailors were thrown violently against the bulkheads; many were killed instantly.

The explosion knocked out all electric power aboard ship and any chance for an SOS. (Even though the radiomen on duty swore that at least three SOS messages had been sent before power was lost.) For many years it was believed the loss of electric power had prevented any SOS message from getting off the ship. However recent revelations would seem to support the radiomen. As fires raged below, the huge ship began listing onto its side. As it rolled, hundreds of crewmen jumped into the water to escape the burning ship. The vessel was 610ft long, and still had four propellers turning.

Indianapolis' 17 knot forward speed through the water continued shipping thousands of tons of sea water through collapsing forward bulkheads. Sea water surged in through the gaping hole in her side. She began to go down by the bow and then to list to her port, side. Officers began to shout orders for all hands to abandon ship. By the hundreds they jumped into the ink-black, midnight sea, taking their burned and wounded shipmates with them. According to the survivors, Indianapolis rolled completely over to port and went rapidly down bow first, taking many sailors with her to a watery grave

In the 12 minutes it took the *Indianapolis* to go down, few boats or life rafts had been lowered, and many sailors hadn't even had time to grab a lifejacket. About 900 men, were left drifting in groups in the huge expanse of the Pacific Ocean. The nearest island was over 300 miles away. A few of those in the water were able to reach a raft or debris from the ship to cling to. Just as many, however, had neither raft nor life

jacket and were forced to continually tread water to survive, finding relief only when a life jacket became available through the death of a shipmate. And beneath the waves, another danger was lurking. Drawn by the carnage of the sinking, hundreds of sharks from miles around headed towards the survivors. The sharks began attacking when the sun rose and continued their assault throughout the ordeal.

Huge sharks, up to 15 ft. initially fed off the dead bodies. But soon they came for the living, too. Some of the men would pound the water, kick and yell when the sharks attacked. Most decided that sticking together in a group was their best defence. But with each attack, the clouds of blood in the water, the screaming, the splashing, more sharks would come. In the clear water the men could see the sharks circling. Then, in a lightning strike, one would come straight up and take a sailor and take him straight down.

Due to the rapidity of the ship's sinking, life rafts which were designed to float free of the ship, failed to do so. Fuel oil from the ships ruptured tanks coated the sea and the men, making most violently ill. When the sun rose on that first day, there was reason for optimism. After all, the crew knew they were due to join up with USS Idaho the next day for gunnery practice. Surely they'd be missed and search missions would immediately be mounted. However, such was not the case, and for the next four and a half days, the men of the Indianapolis would know terror, thirst, hunger and despair on a massive scale. Many would give up the struggle and slip quietly beneath the sea, never to be seen again by their shipmates. Some prayed, some cursed. It would be the quintessential struggle of man against nature. One by one sharks began to pick-off the men on the outer perimeter of the clustered groups. Agonizing screams filled the air day and night. Blood mixed with the fuel oil.

The survivors say the sharks were always there by the hundreds swimming just below their dangling feet. It was a terror filled ordeal, never knowing if you'd be the next victim. By the third day, lack of water and food combined with the unrelenting terror began to take its effect on the mental stability of the men. Many that had taken in sea water began to hallucinate, become delirious and slowly go mad. Imagining secret islands just over the horizon, or that they were in contact with friendly submarines coming to the rescue. Fights broke out and hope faded. By Wednesday evening, the third day, survivors estimate that only 400 or so were still alive, the dead littered the surface of the sea.

The sharks, though, were not the only killer. Under the scorching sun, day after day, without any food or water, men were dying from exposure or dehydration. Their lifejackets waterlogged, many became exhausted and drowned. When it got dark they would get so cold, their teeth would chatter. Struggling to stay alive, desperate for fresh water, terrorised by sharks. As each day and each night passed, more men died.

As the ship was operating on a secret mission, no notification had been sent to Leyte from Pacific H.Q alerting them that *Indianapolis* was en route. As a result, it was not reported as overdue. Though three SOS messages were sent before the ship sank, they were not acted on for various reasons. For the next four days, *Indianapolis*' surviving crew endured dehydration, starvation, exposure, and terrifying shark attacks.

At 10 25 hours, Thursday morning, 24 year old Lieutenant Chuck Gwinn, piloting his Lockheed Navy Ventura PV-1 bomber based on the island of Palau, about 300 miles south of the location where Indianapolis went down, was on a routine antisubmarine patrol. It was his second flight of the day; earlier, having returned to base for maintenance. On that second patrol, Gwinn was in the rear of the plane working with his crew. He was leaning out of the plane, when he chanced to glance down at the ocean, and changed the fate of three hundred and seventeen men. Gwinn had spotted a huge oil slick. Thinking the large oil slick indicated that an enemy sub had just submerged beneath his plane, he dropped down several hundred feet for a depth charge run. The bomb bay doors were opened, ready to drop depth charges on the suspected enemy sub. Gwinn glanced out the window just as he was about to release his depth charges, and there, spread out over the ocean, were hundreds of delirious men waving to get his attention. Immediately Gwinn regained altitude and radioed his base at Palau. "Many men in the water." and gave his latitude and longitude. He orbited the location answering questions from Palau. Some hours were wasted in getting through to the bureaucracy, they had at first refused to believe him.

Initially, the men thought they'd been missed by the plane flying over. Then, just before sunset a large seaplane suddenly appeared, changed direction and flew over the group. Then, some three hours after Gwinn's first report, a Catalina PBY flying boat was eventually dispatched. At her controls, a 28 year old Navy pilot from Frankfort, Indiana named R. Adrian Marks. En route to the location reported by Gwinn, Lt. Marks overflew the USS Cecil Doyle, whose skipper was a close friend. Marks informed the skipper of his mission. On his own initiative, the Doyle's captain, Graham Claytor, disobeyed orders to proceed to Leyte Gulf in order to lend assistance. At this point, his fuel state near critical, Gwinn headed for his home base, little knowing the part fate had played in his life or the lives of three hundred and seventeen American sailors and marines. Arriving at the survivors' location, Marks dropped to about 100 feet above the surface of the sea while his crew began dropping rafts, and supplies. While this was happening, his crew informed him they could see men being attacked and eaten alive by sharks!

Upon seeing these men under shark attack the crew voted to abandon standing orders prohibiting landing in open seas. This act of humanity is all the more remarkable when you realize Marks and his crew had no idea who these sailors might be; English, Aussies, Japanese or American. Marks landed the PBY. (Years later Marks related he knew the day might come when he'd be forced to make an open sea landing, so he had planned for the eventuality. On that day he would put his theory into practice). In a daring manoeuvre, he landed between swells. Although many hull rivets popped out from the force of the landing, his PBY made it! He taxied his plane as close as he could to the first large group of men and immediately began taking survivors aboard. Some nearby survivors were so weakened by their ordeal, that when they slipped out of their life jackets, they drowned while attempting to swim to the plane.

Learning the men were from Indianapolis, a thoroughly shaken Marks, frantically, and now in plain English, repeatedly radioed for help. The Cecil Doyle replied she was on the way. When the PBY's fuselage was full, the crew carried men onto the wings. All night long, Marks and his crew fought to get as many men as possible out

of the shark infested sea. The wings' fabric covering was soon filled with holes, and covered with survivors, tied in place with parachute cord. Adrian Marks and his gallant and courageous flight crew saved 56 men that day. A record that has never been equalled for a sea plane of that size since!

Navy ships raced to the scene and began looking for the groups of sailors dotted around the ocean. Near-by ships rushed to the scene and began to pluck the sailors out of the water. A tally made at the completion of the rescue revealed that only three hundred and seventeen sailors of the original estimated nine hundred who escaped the sinking ship survived their ordeal Responding to Marks' calls for help, the destroyers, Cecil Doyle, (DE-368), Talbot, (DD-390) and Dufilho, (DE-423), converged on the scene. The Auxiliary Ships Ringness, (APD-100) Bassett, (APD-73), and Register, (APD-92) also came to the rescue of the remaining Indianapolis crew. By morning Lieutenant Marks' PB-Y was a floating hulk, and in no position to fly. The Cecil Doyle came along side and took off the rescued survivors. Marks stripped the plane of all instruments and secret gear, and transferred himself and his crew to the Doyle. He then requested her skipper to destroy his plane by gunfire, lest if fall into enemy hands. The Doyle trained her guns on the PB-Y's port side and successfully destroyed the plane.

Marine Detachments aboard U.S. Navy capital ships has been a tradition since the founding of the U.S. Navy. There were thirty nine marines aboard Indianapolis when she went down. Marine Detachments are the spearhead of the Ship's Landing party, the first ashore, the first to fight and die if necessity calls for it. Marine Detachments are the armed 'muscle' of the ship's Boarding Party, should the opportunity for boarding an enemy vessel present itself. They operate the Ship's Brig, and man several of the ship's weapons systems. They work and live side by side with the officers and sailors of the Ship's Company. They literally fight and die together. It was no less true aboard Indianapolis.

Of the thirty nine Marines aboard, only nine survived the Indianapolis sinking and the subsequent ordeal. Captain McVay recommended the Navy Cross, (posthumously), for Captain Edward L. Parke, USMC, and the Commanding Officer of the Indianapolis' Marine Detachment. Writing of Captain Parke, Captain McVay's recommendation read in part,"... For extraordinary heroism in rescuing and organizing a large group of men following the sinking of the USS INDIANAPOLIS... Finally collapsing himself from exhaustion. His unselfish conduct in the face of the greatest personal danger was outstanding and in keeping with the highest tradition of the Naval Service". Following medical treatment on Guam, the three hundred and seventeen weary, but deliriously happy, survivors were returned to the US aboard the escort carrier, Hollandia, (CVU-97).

The Indianapolis was a very high profile ship, owing to her pre-war fame and her wartime service as the Flagship of Admirals Spruance and Halsey. Being the centre of attention in the Pacific; the media of the day, radio and press all strove to get reporters aboard Indianapolis to record the news. Young men just out of Annapolis all wanted to be assigned to Indianapolis. That's where the 'action' was, and consequently enhanced chances for recognition and promotion. Politically influential fathers pulled strings to get their sons assigned to the Indianapolis.

When the ship was lost, these same influential families began to pressure the navy about the loss of their sons. The navy reacted badly. Admiral Earnest King then the Chief of Naval Operations ordered a Court Marshal for Captain Charles B. McVay.

The captain of the *Indianapolis* was among the survivors plucked from the sea. But Captain McVay's ordeal didn't end there. Looking for a scapegoat, the US Navy placed responsibility for the disaster on Captain McVay. He was accused of having made an error of judgment when he told the officer on watch that he could stop zigzagging, thus making the *Indianapolis* an easier target for the *I-58.* At McVay's trial, even the Japanese Captain Hashimoto was called to testify and stated that an evasive course would have made no difference.

On 19th December 1945 Charles Butler McVay III was found guilty of the specification of the first charge; hazarding his vessel by failing to zigzag. He was found innocent of the second specification; failing to sound a timely order to abandon ship. McVay's punishment was to be dropped 100 points on the promotions list. Effectively ending what had been by all accounts an absolutely brilliant naval career. Following the proceedings, an unprecedented thing happened. Almost to a man, the officers sitting in judgment signed a petition asking the court to set aside the verdict in light of McVay's record. As Admiral King had retired in the interim, it fell to ADM Chester Nimitz to grant the petition of the court, and he set aside the punishment. He could not set aside the fact of the conviction. Admiral Nimitz restored Captain McVay to duty and posted him as commandant of the New Orleans Naval district where he was promoted to Rear Admiral, where he finished his career and retired.

Tragedy continued to stalk McVay even in retirement. What could only be termed ‘hate mail’ was constantly sent onto his home; he was the recipient of emotionally charged phone calls from parents and loved ones of those who lost their lives in the tragedy of the Indianapolis. His wife contracted cancer and passed away within a few short years of their move to a new home in Litchfield Connecticut. Eventually the weight of loneliness and calumnious phone calls and mail took its toll on the man. In the fall of 1968 Charles Butler McVay III, last Captain of the USS INDIANAPOLIS (CA-35), stepped out on his front stoop, and using his navy issued service revolver, took his own life. The Indianapolis had claimed her final victim.

Laid down on 31st March, 1930, USS *Indianapolis* (CA-35) was the second of two *Portland*-class built by the US Navy. An improved version of the earlier *Northampton*-class, the *Portland*s were slightly heavier and mounted a larger number of 5-inch guns. Built at Camden, New Jersey, *Indianapolis* was launched on 7th November, 1931. Commissioned at the Philadelphia Navy Yard the following November, *Indianapolis* departed for its shakedown cruise in the Atlantic and Caribbean. Returning in February 1932, the cruiser underwent a minor refit before sailing to Maine.

After participating in a number of fleet training exercises, *Indianapolis* embarked President Roosevelt for a ‘Good Neighbor’ tour of South America in November 1936. Arriving home, the cruiser was dispatched to the West Coast for service with the US Pacific Fleet.

A solitary B-29, The Enola Gay, (A Boeing, super fortress four-engined, high altitude

heavy bomber), a single bomb in its bomb-bay, headed for Hiroshima, Japan. Also aboard, were several of the 'brass' Indianapolis had transported from Mare Island to Tinian. These men actually armed the bomb en route to Hiroshima. History records the flight of the Enola Gay, and the end of conventional war as mankind had understood it. Aboard the Enola Gay was one of the atomic bombs delivered by Indianapolis destined to be dropped on Hiroshima. The Enola Gay, was named in honour of his mother by its pilot, U.S. Army Air Force Colonel Paul W. Tibbets

Even though the Indianapolis had been sunk on 30th July 1945, the navy did not release the news to the press until August 15th. The day Japan surrendered. News of the surrender all but overshadowed the loss of Indianapolis.

Chapter Twelve
Conclusion

The Japanese Government, Army, and Navy rulers who made Japan's national policy in the name of Emperor Hirohito were struggling to end this disastrous war with a negotiated peace. Hopefully, this would avoid Allied military occupation, and

preserve Japan's historic imperial system. By the spring of 1945, Japan was clearly defeated: following failure to secure Russia's good offices for negotiations, their last chance for a conditional peace. Thus, the Japanese Minister of War, General Anami, stated that Japan must now fight on to the bitter end in defence of the home islands. Japan still had two million combat troops and 9 000 *kamikaze* aircraft. These forces could be expected to wreak tremendous casualties upon the invaders, who, in the end, would be compelled to negotiate peace.

American assessments of the situation were not vastly different from those of General Anami. Japan was certainly defeated militarily, besieged from the sea, and being pulverised by U.S. Navy carrier aircraft and U.S. Army Air Forces B-29 bombers that were flying from bases in the Marianas. At a meeting in the White House on 18th June 1945, U.S. Army Chief-of-Staff General George C. Marshall urged that Japan must be invaded in order to end the war. Therefore, President Harry S Truman approved the planned landings on Kyushu scheduled for 1st November 1945 (Operation 'Olympic'), and five months later against Honshu (Operation 'Coronet'). While Marshall supported invasion, he had serious reservations about potential American casualties, estimating that seventy thousand Americans would be killed or wounded in a two hundred thousand man operation against Kyushu. Japanese troops had amply demonstrated that they could and would fight desperately even when the outlook was hopeless.

The alternative for forcing Japan to surrender, short of invasion, was also discussed at the meeting. The representatives of the highly secret U.S. Manhattan Project, located in New Mexico, claimed that two atomic bombs would be available for operational employment by the end of July. The first of these revolutionary weapons would be the bomb named 'Little Boy', with an explosive Uranium-235 core-fissionable material that had been laboriously extracted. Atomic scientists were confident that an explosive charge would drive a plug of U-235 into the U-235 core, establishing a critical mass to create an explosion of gigantic dimensions. The scientists were less confident on the other type of bomb. This was the 'Fat Man', an implosion weapon which used plutonium (Pu239) housed in nuclear reactors. The implosion weapon principle would require testing in mid-July at a proving ground in New Mexico: and, if the principle worked, a 'Fat Man' would also be available at the end of July.

The U.S. Army Air Force had prepared everything required to drop the atomic bombs when they were ready. The 509th Composite Group had been activated in December 1944 under the command of Colonel Paul W. Tibbets, Jr., and included the 393rd Bombardment Squadron with the most advanced model long-range B-29 bombers; the only American aircraft with the capacity to carry the first atomic bombs. The group, after undergoing intensive training had in April/May 1945 moved to Tinian Island in the Marianas. Both in training and in familiarisation flights to Japan, the 509th Group had been dropping orange-painted 10 000-pound T.N.T filled bombs, which were similar in ballistic characteristics to the 'Fat Man'. Only Colonel Tibbets and a few others in the group shared the atomic secret. The cities of Kokura, Hiroshima, Niigata, and Kyoto were nominated for the first atomic strikes. Nagasaki was later substituted for Kyoto when Secretary of War Henry L. Stimson forbade an attack against Kyoto because of its cultural antiquities.

American military leaders understood Japan's reluctance to surrender her ancient imperial system, and they also reasoned that the Emperor would be the only authority that could enforce the capitulation of Japan's military forces. The military leaders were therefore inclined to modify the Allied unconditional surrender terms to permit Japan to retain her Emperor. This view was not accepted at the Allied heads of state conference in Potsdam. Instead, the Potsdam proclamation published on 26th July 1945, called for the unconditional surrender of all Japanese armed forces, or else the acceptance of "prompt and utter destruction". On 28th July, Prime Minister Suzuki announced that his government would "treat the Potsdam Declaration with silent contempt". Suzuki, actually favoured peace and may well have used the wrong word, but his response unleashed violent reactions.

President Truman had had enough and events moved swiftly. He had learned of the world's first successful nuclear detonation on 16th July, 1945 and was now more determined than ever to bring the war to a successful conclusion as soon as possible. In Washington, General Carl A. Spaatz, on his way to take command of the United States Army Strategic Air Forces in the Pacific, was told of the atomic strike plans. His orders were that the 509th Group would deliver its first 'special bomb' as soon after 3rd August as weather would permit a visual attack. The primary target was Hiroshima, with Kokura the secondary and Nagasaki the tertiary. Since visual bombing was mandatory, an advance B~29 weather observer aircraft would scout and report on each target. The strike mission included an atomic laden B-29 and two observer B-29's.

Predictions of bad weather over southern Japan held off the attack until 6th August, 1945 when at 02 45 hours Colonel Tibbets lifted his B-29 'Enola Gay' (named after his mother), off the runway at North Field and was followed at two minute intervals by the observer planes. At take-off the "Enola' Gay" grossed 65 tons in weight, 8 tons over normal B-29 bombing weight, partly because of the fact that the 'Little Boy' weighed 9 000 pounds. Since a crash of the plane while taking off might have blown off one end of Tinian Island, Captain William S. Parsons, a U.S. Navy ordnance expert who accompanied Tibbets as bomb commander, armed the 'Little Boy' during the flight toward Japan. At 0 715 hours on 6th August, the weather scout B-29 over Hiroshima piloted by Major Claude Eatherly signalled that the target was open, thus sealing the fate of the city.

As a military objective, the city of Hiroshima was chiefly important as a port and the site of an army garrison. Hiroshima had been the point of embarkation for Japanese troops moving into China and to the South Seas. It was also the seat of the 2nd General Army, which was responsible for defence of the south-western section of the homeland. Volunteer and government-enforced evacuations had reduced the city's population from three hundred and eighty thousand in 1942 to about two hundred and fifty thousand in 1945, but it remained Japan's seventh largest city.

Until now the city had almost entirely escaped air attack, and few people took the appearance of a few high-flying planes seriously. Thus, sightings at 08 06 hours of two B-29's with a third in trail, all flying very high at an altitude of 31 600 feet, did not seem significant enough to call another defence alert. But those Japanese who watched the approaching planes (and who survived) noticed that the lead bombers suddenly separated in tight diving turns that carried them rapidly away. Something

that fell from the remaining plane was hurtling down towards them, it was 'Little Boy' from the 'Enola Gay'. Exactly 17 seconds after 08 15 hours an instant of pure, blinding, utterly intense bluish-white light cut across the sky, followed by searing heat, a thousand-fold crash of thunder, and finally an earth-shaking blast that sent a mushroom cloud of dust and debris boiling up to 50 000 feet.

The 'Little Boy' had been aimed at a bridge in almost the centre of the built-up part of the city, and it detonated at an altitude of just below 2 000 feet, almost precisely on its mark, with a force later calculated to have been equivalent to 17 000 tons (or 17 kilotons) of T.N.T. By blast and by an ensuing firestorm, approximately 4.7 square miles around the ground zero (directly below the bomb burst) were completely destroyed. Approximately 60 000 out of 90 000 buildings within 9.5 square miles were destroyed or badly damaged. Very few people had taken shelter, and the full extent of personnel casualties at Hiroshima will never be accurately known. The Japanese eventually inscribed the names of sixty one thousand four hundred known dead on the cenotaph erected at ground zero. On the other hand, the United States Strategic Bombing Survey estimated that there were one hundred and forty thousand casualties, including seventy one thousand known dead and missing (presumed to be dead) and sixty eight thousand injured, of whom twenty thousand were known to be seriously injured. The Bombing Survey estimated that over twenty thousand of the killed and missing were school children.

Ironically, for a strategic bombing attack, most of Hiroshima's larger industrial factories were on the perimeter of the city, and these factories (and the workers who had already reported for duty) escaped destruction. The Bombing Survey concluded that only 26 per cent of Hiroshima's total production plant was destroyed in the atomic strike and that the plants could have been kept in operation if the war had continued.

Where the execution of the 'Enola Gay' mission against Hiroshima was almost flawless and all crews returned immediately to Tinian, the 509th Composite Group's second mission, flown on 9th August with 'Fat Man' plutonium bomb, went much less smoothly. Again there were to be three planes in the striking force, an armed B-29 called 'Bock's Car' piloted by Major Charles W. Sweeney and two observer aircraft. The city of Niigata was ruled out as too far distant for attack, leaving Kokura as the primary target and Nagasaki as the alternative. Kokura was important because it was the location of a vast army arsenal on the northern tip of Kyushu. Nagasaki had a fine harbour of some commercial importance and four large Mitsubishi war production industrial plants. Unlike Hiroshima's flat terrain, Nagasaki's topography was broken by hills and valleys, which would reduce destruction.

Both Kokura and Nagasaki were to be scouted in advance by weather B-29's. Prediction of weather over Kyushu dictated that the strike mission had to be flown on 9th August, and since a storm was building up *en route* to Japan the strike B-29 and the two observer planes to accompany it were scheduled to fly northward individually and rendezvous over Yakoshima Island off the south coast of Kyushu before proceeding to their target.

There was considerable apprehension on Tinian as Major Sweeney launched the 'Bock's Car' from North Field at 03 49 hours on 9th August. Another U.S. Navy

ordnance expert, Commander Frederick L. Ashworth, was aboard as bomb commander, but the 10,000 pound 'Fat Man' had to be armed before take-off, greatly increasing the hazard of an atomic accident. Major Sweeney also discovered that 600 gallons of gasoline could not be pumped from an auxiliary tank in his plane, and this substantially reduced his reserve fuel supply. Sweeney lost additional time and fuel circling Yakoshima Island awaiting one of the observer B-29's, and after 40 minutes he decided to go on without it. (This aircraft, which happened to carry the official British observers, scientist William Penney and Group-Captain Leonard Cheshire, would arrive at the target a few minutes after the blast.) Apparently during the delay, clouds closed over Kokura, and after three runs over the city had failed to permit visual observation of the aiming point (but used up about 45 minutes additional time), the 'Bock's Car' strike plane was headed for Nagasaki. It too was hidden by clouds; and with fuel steadily dwindling, Commander Ashworth authorised a radar drop. At the last moment, a hole in the clouds permitted the bomb to be visually aimed and dropped at 11 01 hours, but the 'Fat Man' nevertheless missed the assigned aiming point by about three miles, a distance which placed the bomb over Nagasaki's industrial section rather than in its built-up commercial area. After the drop, Major Sweeney headed to an emergency landing on Okinawa, where he landed with only a few gallons of fuel left.

Only vague references to an 'incendiary' attack at Hiroshima had appeared in Japanese newspapers, and the people at Nagasaki were little prepared for the atomic strike. The weather B-29 had touched off an air raid alert at 07 48 hours, but nothing had happened, and at 11 01 hours only about four hundred people were in the city's tunnel shelters, which could have accommodated a third of Nagasaki's two hundred thousand registered inhabitants. As at Hiroshima, the 'Fat Man' at Nagasaki was detonated in the air and at an altitude of approximately 1 750 feet. The implosion principle of the 'Fat Man' was much more efficient, and the force of the 'Fat Man' was estimated at 20 kilotons. With the more powerful bomb, the scale of destruction at Nagasaki was greater than at Hiroshima, but the area destroyed and personnel casualties were smaller because terrain afforded protection from radiant heat and ionizing radiations to about one-fourth of the population.

The intervening hills saved the central part of the city from destruction. (By comparison, in Hiroshima approximately 60 per cent of the population was within 1.2 miles of the centre of the explosion; and in Nagasaki only 30 per cent of the population was so situated.) Official Japanese casualty figures nevertheless include twenty four thousand killed, two thousand missing, and twenty three thousand injured, and these statistics number only verified cases.

The United States Strategic Bombing Survey believed that the casualties were actually in the order of thirty five thousand dead and somewhat more than that injured. There was no fire storm at Nagasaki and less public panic. Since several of the large factories were in the area of maximum destruction, damage to industry in the Nagasaki strike was quite heavy; excluding the dockyard area (outside the radius of the bomb's effect) 68.3 per cent of the industrial productive area of the city was destroyed.

There had been little debate at the time regarding the use of the bomb, mainly because the Allies had spent two billion dollars developing it. This is equivalent to

twenty six billion in today's terms and represents about half the current US annual trade deficit. However, since the end of the war, the world has debated not only the choice of targets, but also whether the bombs had to be dropped at all. It is argued that Japan was on the verge of collapse, and with the planned invasion of the mainland still three months away; the Allies could afford to wait. In recent years, a global outcry has arisen that the United States has no moral standing on the issue of weapons of mass destruction; as they are the only nation, ever to use nuclear weapons in war. There is a consensus that the Americans have blood on their hands and revisionist historians challenge the traditional view that; "dropping atom bombs on Hiroshima and three days later, Nagasaki was necessary to bring the Pacific War to an end, thus saving lives".

It is claimed that air bombardment, sea blockade, and Russian intervention would have forced Japan to capitulate, regardless of atomic bombing. This argument is based on the grounds that the fire raid on Tokyo in March 1945 did more damage than the atom bombs. The Tokyo raid burned out 40 per cent of the city leaving one hundred thousand civilian casualties, one million homeless and half the capital's population displaced. But, the counter argument is that, the Japanese gave no sign of capitulation after this fire raid; their rigid code of honour, as well as face saving, together with concern for the future of their emperor whom they venerated as a god prevented this. However, memoirs and records now show that the emperor wanted to end the war, but he could not prevail over the military leaders. As more information becomes available, the debate intensifies over whether the atomic bombings were really necessary to save lives. It is accepted that there will always be doves and hawks that try to balance between reducing the suffering of the people in a lost cause and national pride.

For instance, Atomic bombing proponents claim that some Japanese leaders were eager for national suicide. This sentiment is supported by kamikaze attacks, and battles to the death on Iwo Jima and Okinawa. Paradoxically, while western historians undermine the American moral position, Japanese historians actually bolster it; claiming that the atomic bombings broke the stalemate and proved salvation to the Japanese peace faction, who seized upon the atomic bombing as a new development to facilitate surrender. This was boosted when the second atom bomb was dropped on Nagasaki to provide the doves with a scientific reason to accept the inevitable. The peace faction asserts that without the atomic bombings Japan would have continued fighting. Thereby, necessitating the invasion of mainland Japan planned for November 1945 and into 1946.

When the losses at Iwo Jima and Okinawa are taken into consideration, the human toll of invading Japan would have run into millions. For example, the fight for the five-mile-long island of Iwo Jima, lying seven hundred and fifty miles southeast of Tokyo, lasted five weeks, during February and March 1945. This battle cost twenty thousand Japanese and six thousand American dead. The most costly and terrible action in the Pacific took place at Okinawa, where the US navy assembled a fleet of 1 500 vessels to get troops ashore. It was a floating city replete with repair shops, hospitals, kitchens, laundries, arsenals of munitions, living quarters, and combat control centres. This fleet, operating in hostile waters 6 000 miles from the United States, also provided aircraft carriers for hundreds of aircraft. Okinawa witnessed the

greatest Kamikaze raids of the war, and the results were staggering. The kamikaze's claimed 40 US ships sunk or damaged beyond repair and 370 damaged.

U.S. casualties at Okinawa were the largest of the Pacific war. Over twelve thousand American servicemen were killed and thirty six thousand wounded. Almost 50 per cent of the American dead were naval personnel lost to Kamikaze attacks. Therefore, with the Okinawa experience fresh in their minds, military strategists feared that the invasion of Japan would produce a veritable bloodbath. Especially, when tested on the battlefield, the Japanese will to resist defied all possible estimates. Expected Allied casualties ranged from half a million to one and a half million. Japanese losses would most certainly have been significantly higher, perhaps even obliteration.

The fact that the Pacific War lasted so long is undeniably due to the fanatical commitment of the Japanese soldier. Compared to the five million German soldiers who surrendered to the Allies in Europe, less than 5 per cent of Japanese forces in the Pacific surrendered. It was considered a disgrace to country and family, and a fight to the death was preferred.

But, returning to the bombing debate, there is also the contention that the Americans could have exercised restraint and demonstrated the power of the atom bomb on pre-designated and uninhabited areas. President Truman rejected this suggestion outright. He decided to use the bomb without prior warning for three reasons;
1. To prevent the Japanese moving allied prisoners of war into these areas.
2. The Japanese could have shot down the bomber,
3. There was no guarantee that the bomb would detonate.

The President stated; "If the object is to use the bomb to end the war then there is no acceptable alternative other than direct military use". This may be justified by the Japanese military that still ferociously resisted surrender. Even after two atomic bombings on major cities, after Soviet entry into the war, and when additional atomic bombs were anticipated. This was due to American intelligence leaking to the Japanese that they had 100 atom bombs and planned the total and prompt destruction of Japan. In reality, only 3 more bombs could be produced by September, and 7 by December. However, even with this information, the hawks still adamantly opposed surrender, claiming the Japanese would keep fighting to the bitter end for the Emperor in the faith that they shall find martyrdom and eternal life.

But, the emperor accepted the futility of prolonging the conflict and intervened in support of the peace faction. On 15th August he broadcast to the nation that the war must be brought to an end. The Japanese people he stated had endured the unendurable and suffered the insufferable. He announced Japan's acceptance of Allied terms and ordered his forces to lay down their arms. Many thousands refused to accept what they considered to be a national disgrace, and in symbolic futility committed suicide. Some fanatical diehard Imperial Guards attempted a coup, but it was unsuccessful. Loyal army commanders obeyed the Emperor and refused to join the rebellion. World War Two was over

With a view to assessing the arguments in favour and against the use of atomic bombing we will have to go back to the outbreak of war between America and Japan.

The war started in the Far East when a superbly trained Japanese task force steamed undetected across 3 000 miles of Pacific Ocean. On reaching their operational zone, on 7th December 1941, just off Pearl Harbour, over 350 war planes took off from 6 Japanese aircraft carriers to launch a combined operation.

The Japanese, being the pioneers of the large carrier strike force, decimated the American Pacific battle fleet, to inflict the worst ever military defeat on the United States. Following this seaborne blitzkrieg, in the first 3 months of hostilities the Japanese netted conquests the size of the North American continent. To try and put this into perspective, the Japanese effectively coordinated operations through 6 time zones and reached within striking distance of India and Australia. In a wave of conquest that is unmatched in both world wars, simultaneous operations were launched against British, Dutch and American possessions; delivering fatal blows to European imperialism. Sheer audacity combined with remarkable duplicity, placed Japan in a position of overwhelming strength throughout the Far East.

Admiral Yamamoto the commander of Japan's Combined Fleet proposed a sudden and paralysing knockout on the U.S. fleet at Pearl Harbour. He calculated that the United States would be so weakened by this proposed attack that she would be unable to mobilize sufficient strength to go over to the offensive for about two years. By that time, the conquered territory would be fortified and this would undermine American determination to continue the war. The Japanese speculated that the United States, in the face of potentially unacceptable losses would probably compromise, thus allowing Japan to retain a substantial portion of her territorial gains.

Japanese intentions, however, were not in accord with Japan's capabilities. They did not think clearly through the strategic problems associated with war with the United States. Of far greater significance, they failed to appreciate the cyclone of wrath they provoked by the *'sneak attack'* on Pearl Harbour. To every American the Japanese were perceived as the embodiment of cowardly stab-in-back aggressors.

Pearl Harbour ended all isolationist sentiment and served to arouse the people of the United States to such fury that in a war of vengeance, nothing short of unconditional surrender would satisfy them. They were determined to push the war against all odds to final victory. There would be no negotiated peace on this ruinous war embarked on by Japan. The traumatic shock of Pearl Harbour effectively united one hundred and thirty million Americans as no other event in their history had ever done. The wave of American hatred against Japan was staggering and resulted in a tremendous influx of young volunteers into the U.S. armed forces. The 'day of infamy' mobilised all American resources that would eventually break on Japan with colossal force. Furthermore, the Japanese had badly miscalculated. Escaping damage from the attack, and this was to prove critical to the outcome of the war, were the 3 all-important American aircraft carriers in the Pacific, the *Lexington, the Enterprise and the Saratoga.*

In failing to seek out and dispatch these carriers, Japan committed its first and probably the greatest strategical error of the entire Pacific conflict. This was to prove decisive at Midway six months later when four Japanese aircraft carriers were sunk. Out of necessity, the American fleet carriers had become the major capital ships and

forced the US to adopt carrier warfare, which in the long run was to give her victory. Far from being a strategic necessity as the Japanese were later to claim, the surprise attack on Pearl Harbour was in effect a short-term tactical masterpiece but a long-term strategic blunder.

Never in military history has an operation proved more fatal to the aggressor. Once the economic and industrial resources of the US were brought to bear, Japan could never win the Pacific war. For instance, at no time did Japan ever achieve even 10% of US production. The Japanese had taken on the world's most powerful nation. A nation that possessed overwhelming industrial might, vast food producing capacity, huge manpower and was free from bombing. As a result, Japan would pay the ultimate price.

By November 1943 it was evident that the balance had clearly shifted. Despite early Japanese victories, Yamamota's pessimistic forecast that the war would go badly if it lasted more than six months had become true. Japanese gains were immense, but behind the conquests there was neither the manpower nor the industrial resources needed to ensure victory. Half of the Japanese fighter planes for example were still the same design as at Pearl Harbour. Superior technology enabled the Americans to undertake a dynamic two pronged Pacific offensive, supported by operations in China, South East Asia, and the north Pacific.

The Pacific War was the largest naval conflict in history. The scale was astounding and the distances immense. Across the huge expanses of the Pacific, in this new kind of war, two of the most powerful navies in the world found themselves locked in a death struggle. Every conceivable type of naval activity was represented: carrier aviation battles, brutal surface engagements, bitterly fought night-fights, and stealthy submarine battles. The war was also fought in every possible climate, from Arctic conditions in the Aleutians, to the appalling heat and swelter of the South Pacific.

There were no titanic clashes of armies as experienced in Russia, France or even the Western Desert. Sea power was the instrument of victory and that power was centered on the aircraft carriers to give every task force a most potent weapon in either offence or defence. The carrier-borne planes decimated enemy aerial and naval resistance, allowing the transports to take the fighting men to operational areas. But the ships alone could not take or hold a piece of land. The very idea of warships alone being able to cow the enemy into submission had died spectacularly at the Dardanelles.

When the fleet had done its job, it was up to the footsloggers to go ashore and take the land. In the Pacific war this was a particularly bloody affair. Putting troops ashore in the face of a determined enemy had always been one of war's most dangerous and complicated manoeuvres. For success to be assured, assault forces need both direct air support and effective off shore naval bombardment. Plus special landing craft to bring tanks and artillery ashore. And even then, well dug-in defenders could still inflict a heavy toll. The Americans gradually gained the upper hand, and in June 1944, their technical and training superiority massacred the Japanese air arm at the great Marianas turkey shoot. In a single day the Americans shattered two fleet carriers, four hundred aircraft and five hundred aircrew. On top of this over one

hundred land based aircraft were destroyed. The cost in material was bad enough, but even more serious was the loss of what was left of even partially trained airmen.

The clearing of the Marianas introduced the strategic bombing campaign against Japan. B-29 heavy bombers with a range exceeding three thousand miles could now reach most Japanese cities, including Tokyo. The way to Hiroshima was now open in spite of desperate banzai charges and kamikaze attacks. In October 1944, the fate of the Imperial Japanese fleet was sealed at the battle of Leyte Gulf; staking all on victory, capital ships and carriers steamed out to do battle with the largest US armada yet seen.

This mighty three-day battle, the greatest sea battle in history, resulted in the virtual annihilation of the Imperial Japanese Fleet. Of major significance during this battle, Japanese planes swept in low to attack us naval vessels. But instead of attempting a conventional bombing or strafing attack they deliberately crash dived onto ships. In what the Japanese hailed as a triumphant vindication of human sacrifice, the Americans suffered their first kamikaze casualties. Although Allied troops were acquainted with their enemy's sacrificial nature, they were completely unprepared for what came out of the sky during the Battle of Leyte Gulf. Great heroism cannot be doubted, however, the former cold professionalism that had carried the Japanese to the high tide of victory in 1942 was gone. The Japanese saw no other option than kamikaze attacks; their aircraft and aircrews being totally outclassed by their American counterparts. Any aircraft that could get off the ground could be converted into human missiles. They also developed and produced special aircraft solely for ‘no return’ missions.

Rudimentary training bases were set up for seven-day courses on kamikaze tactics. Little training was received, only take-offs, training on landing was not needed. After holding ceremonial rituals, and writing farewell poems, Kamikaze pilots would fly off to die in planes containing 550-pound bombs. They were often university students, motivated by obligation and gratitude to family and country. Thousands of young eager volunteers came forward; only too willing to show veneration for the emperor by killing themselves on an enemy ship and taking as many as possible of their enemies with them. By the time the atom bombs were dropped; seven thousand five hundred Kamikaze volunteers had been killed, 120 US ships had been sunk, and many more damaged. Three thousand allied sailors had been killed and another six thousand wounded.

Their courage was never in doubt but the intelligent use of it was. Ironically, the kamikazes and the sacrificial philosophy behind them were one of the reasons why President Truman decided to drop the atomic bombs. The advantage of employing sacrificial dive-bombers is that they are difficult to shoot down. The fear and panic that Kamikazes generated made ships' gunners so jittery that they fired on their own planes returning from strikes on Japanese targets. The effect of these attacks on American morale was immediate and devastating. Just the anticipation of kamikaze attacks drove some American sailors insane.

For the remainder of the war the allies were subjected to unrelenting kamikaze attacks. Airborne kamikazes were not the only units in action. The Japanese developed other suicide weapons. They had the human torpedo called Kaiten; the

rocket propelled human bomb named Okha and the suicide fast sea craft Shinyo. The damage done by Kamikazes was colossal. The losses would have doubled or tripled if the invasion of the Japanese mainland had gone ahead. Suicide tactics were a vital part of the final Japanese defence.

Probably the greatest kamikaze sacrifice was the giant battleship Yamoto that only had enough fuel for a one-way trip in April 1945 to Okinawa. She was expected to deal out maximum punishment on the Americans before beaching herself and firing off the last of her huge 18-inch shells. However, she was caught and sunk by American aircraft as she left Japanese waters, going down with two thousand four hundred men. This action heralded the end of the dreadnought age. It was the last time that a battleship was sunk by enemy action at sea.

A further significant factor in the Pacific is that the prolongation of the war against Germany adversely affected resources, and ended hopes of the invasion of Japan in early 1945. It was only after Germany's defeat in May 1945 that the Allies were able to turn their full resources against Japan; thus setting the stage for the ultimate act of the Pacific war, the invasion of Japan, the Pacific D-Day. A task that demanded maximum Allied effort, for it was expected that the Japanese would defend their motherland with great tenacity.

The bloody conquests from Guadalcanal to Okinawa had demonstrated to the Allies that Japanese fanaticism increased as their homeland was approached. Determined and suicidal resistance had been encountered all the way across the Pacific that was intensified the nearer they got to the Japanese mainland. At Okinawa twenty five thousand Japanese troops hemmed in by naval and air bombardment had held off American forces six times larger for one hundred days. Every inch of ground, despite the pounding of naval guns and carrier planes, had to be cleared with rifle, grenade and flamethrowers. The bloody assaults on Iwo Jima and Okinawa provided a bitter foretaste of what the Allies could expect when invading Japan. To counter the invasion, the entire Japanese population was mobilised. Many military commanders viewed this as the trump card for Japan's defence. They believed that Japan retained the capability to win this one final battle and amassed their kamikaze weapons. Theoretically the kamikazes could wipe out the entire Allied fleet expected to invade Japan.

The Japanese people were rallied akin to Churchill's "We will fight them on the beaches etc." and were told if they did not take an enemy soldier with them, they did not deserve to die for the Emperor. Two and a half million Japanese regulars faced six hundred and fifty thousand Allied troops. Eight million local volunteers armed mostly with bamboo spears, were prepared to die for their Emperor. They were ordered to fight to the end. Perhaps all armies expect their troops to do this, but only the Japanese, in the modern era, have done this with any consistency. One might describe this as folly or insanity, but it is still no less a trial for the men trying to destroy such resistance. After three years of crushing defeats, Japan was in a desperate plight, regardless of the assurances of her military leaders that exhorted the war weary and homeless population to even greater efforts in defence of their homeland.

But, Japan no longer possessed the means to wage modern warfare. The Midway and Coral Sea losses were never made good, and by 1945 she had little fuel or aircrews. The bombing attacks had left thirteen million homeless and the naval blockade had severed Japan's life lines to the outside world. Whilst the Japanese could not match the American quality of aircraft, they could in numbers, albeit 50 per cent of which were kamikaze.

The will and spirit of America under arms, and the sacrifice and horror of war kept Japanese positions under constant and accurate attack. The effect was devastating to their morale, robbing them of much needed sleep and the opportunity to make repairs or to resupply. The intensive submarine war which was waged against Japan's naval and merchant fleets. American submarines fought history's only successful undersea campaign. Despite unreliable torpedoes, the US were able to wreak havoc on Japan's war effort and its vital supply lines. It must be remembered that the Japanese went to war for the stated purpose of acquiring a secure and uninterrupted supply of raw materials; especially petroleum. Instead, the flow of merchant ships from recently won possessions to the Japanese mainland was greatly hampered by an aggressive submarine campaign. Towards the end of 1944 her sea lanes were just about totally strangled. US submarines roamed Japanese controlled waters almost at will, hunting and sinking targets of opportunity, both merchant and naval.

The submarine campaign was complemented by the fast carrier forces which also roamed the Pacific, drawing away the enemy's ships and aircraft which were needed for their anti-submarine operations. The overall result was disastrous for Japan. Production was eventually reduced to a standstill. Training had to be cut to the bare minimum. The lack of raw materials eliminated the possibility of building ships in sufficient numbers to replace losses. Less ships meant that even less raw materials could be delivered, to build even less ships, to replace even greater losses. It was the carrier forces which enjoyed much attention. The fast carriers played a major role in attaining victory in the Pacific. Spearheaded by the large *Essex* class carriers, with their superior aircraft skilfully flown by daring pilots and aircrews, they wrested control of the Pacific away from the Japanese. Numerous escort and support ships which were needed to protect and service the carriers. Combined into the Fast Carrier Task Force, these ships were able to move quickly and strike isolated strong points with overwhelming power. All of the United States Navy's many ships and aircraft were only as good as the men who manned them.

A mighty American armada was assembled for the final blow on Japan, and the stage was set for the greatest mass suicide in history. This was the situation immediately prior to dropping the atom bombs on Hiroshima and Nagasaki that resulted in the Japanese surrender. Thus rendering operations Olympic and Coronet unnecessary. Japan's surrender ended a dream that had begun with high hopes of victory. The gamble had failed and the empire was now reduced to their shores. To a nation never before defeated in war, headed by an emperor regarded as a god, unconditional surrender was the ultimate disgrace. The bitterness of defeat spread throughout Japan a mood of numbness and exhaustion.

There are three main reasons for Allied victory in the Pacific. The ability of the Americans to keep strong naval task forces at sea for months without returning to

base. The leap-frogging offensive to by-pass less strategic outlying Japanese garrisons, and Japan's merchant fleet that was essential for the importation of vital raw materials had been decimated by American submarines. The destruction of Japanese shipping also prevented reinforcements and re-supply. Japan's submarine strategy was totally misguided whereas the Americans used theirs correctly and reaped the rewards. Aggressive American submarine attacks actually eclipsed the feats of the U-boats in the Atlantic. The Japanese met the first ever conquerors in their history on 30th August, when the first American occupation forces plus a small British contingent arrived at Tokyo bay.

Three days later General Macarthur accepted the surrender on board the US battleship Missouri. The Missouri was selected to represent the navy and the home state of President Truman. General Percival the British OC who surrendered at Singapore and American General Wainwright who surrendered at the Philippines were present at the signing ceremony.

Whatever the moral opposition to the use of the atom bomb, it must have been a tremendous relief after the ferocious battles they had endured that they would not take part in an invasion of Japan. It is perhaps unseemly to defend the vapourising of two cities that some view as the most monstrous acts of the twentieth century. But it has to be appreciated that the great tragedy of Hiroshima and Nagasaki was not that so many people were instantly incinerated, but that the alternatives were far worse. Taking into consideration the terrible losses expected from invading Japan, plus the Manhattan Project's cost and the desire to convince the Soviets of the United States' superiority, the only surprise would have been a decision not to use the bomb. President Truman always staunchly defended the atomic bombing. He was convinced that it shortened the war, saved American lives, and avenged Pearl Harbour. To him it was a powerful weapon to be used in a just war against a hated enemy.

In his first public explanation after Hiroshima, he said: "Having made the bomb, we used it against those who attacked us, against those who have starved, beaten and executed American prisoners of war. And against those who have abandoned all pretense of obeying international laws of warfare. The Japanese began this war without warning at Pearl Harbour. They have been repaid many fold and a million lives saved. Let there be no mistake about it. I regarded the bomb as a military weapon and never had any doubt that it should be dropped on the enemy. In deciding to use this bomb, I wanted to make sure that it would be used as a weapon of war in the manner prescribed by the laws of war".

Most of Truman's advisers supported dropping the bombs, though there were exceptions. Most notably, during the Potsdam conference, Eisenhower indicated that he was opposed to using it because Japan had already lost the war. He told Truman that he hoped the United States would not be the first to use the atom bomb. The problem with Eisenhower's view is that the starting and ending of war is a political act, not a military one. Politicians make war; the military merely obey their political masters.

Taking into account all the money and effort that went into building this super powerful weapon, then only to leave it on the shelf as American troops die by the

thousands, would, from a political standpoint, have been unthinkable. Perhaps the main reason for dropping the bombs was that America was tired of the war and wanted it over quickly. GI's in the European theatre didn't want to be reassigned to the Pacific; they wanted to go home to their families. Therefore, in all probability, Truman ordered the bombings because delaying the war's end would have been political suicide.

The atomic bombings of Hiroshima and Nagasaki brought an end to the greatest war in human history. This event, possibly one of the most contentious of the twentieth century, occurred after the Japanese military leadership, who, in order to save face, chose to ignore President Truman's Potsdam proclamation calling for unconditional surrender. They steadfastly refused to give up and were determined to keep going even if it meant sacrificing twenty million Japanese lives.

This was at a stage when Japan was already effectively beaten and the defeat of Germany had left her alone against the world. The Japanese were defenceless on the seas; their air force was gone; and incendiary bombs were burning out major cities. On top of this, news was being received from every front of Japanese setbacks: in Burma the British Army recaptured Rangoon and on Okinawa the Americans eliminated remaining Japanese forces. And seeking targets of opportunity, allied carrier based aircraft were swarming over Japan.

Perhaps no other aspect of World War Two is as controversial as the decision to drop the atom bombs on Japan. But, some advantages did arise from this human tragedy. Shortly after the war ended, the harnessing of nuclear energy, as an efficient power source owes its origins to the Manhattan Project, despite the setbacks of Chernobyl and Three Mile Island.

When the Enola Gay detonated 'little boy' over Hiroshima; strategic air power reached a terrifying new level. And decades later, Japanese were still dying from radiation. Be that as it may, the cessation of hostilities saw the smoothest and most beneficial military occupation in history. In only five years Japan was transformed into an ally of the west. This was largely due to the architect of American victory in the pacific, General Douglas Macarthur. He embarked on social engineering to refashion Japan along western lines. The Emperor was retained, but he was no longer regarded as a living god. Macarthur was the most brilliant officer ever to graduate as head of his class at West Point. He was decorated thirteen times for bravery under fire and was the youngest American to be promoted to General and the youngest chief of staff in US history; truly a legend in his own lifetime.

Mercifully, the suffering inflicted on the peoples of Hiroshima and Nagasaki has never been repeated. However, of far greater significance is the avoidance of conflict between major powers since 1945. This is the longest period in history, and is attributed to the existence of the atomic and later the hydrogen bomb.

The nuclear balance, precarious as it may be, has proved a deterrent. For that, whatever the ethical arguments, the world, and mankind should be grateful.

FREE eBooks

WHOEVER
WHENEVER
WHEREVER
YOU ARE

INSTANTLY DOWNLOAD THESE MASSIVE BOOK BUNDLES

CLICK ANY BELOW TO ENJOY NOW

3 AUDIOBOOK COLLECTIONS

Classic AudioBooks Vol 1 ▪ Classic AudioBooks Vol 2 ▪ Classic AudioBooks Kids

6 BOOK COLLECTIONS

Sci-Fi ▪ Romance ▪ Mystery ▪ Academic ▪ Classics ▪ Business