

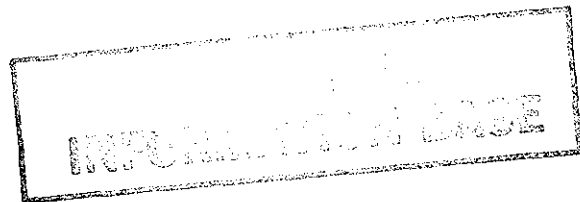
HISTORIC RESOURCE STUDY
USS ARIZONA MEMORIAL

Volume 1

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PREFACE

The label "turning point" is often abused and certainly overused. There is little argument, though, that the Pearl Harbor attack was a dramatic event which in the space of a few hours plunged the United States into the most destructive war of the twentieth century and changed forever the way most Americans viewed the world around them. It might be argued that even without Pearl Harbor the U.S. would have become an active combatant in World War II. True, perhaps, but the particular nature of the attack precipitated such a fierce commitment to victory that the conduct of the war and the peace which followed might have been quite different had America been drawn into the war in less dramatic circumstances. Indeed, the far reaching mobilization of American resources- military, economic and psychic- set in motion by the Japanese attack remains a force in shaping national policies and attitudes nearly half a century later.

More than one million visitors a year to the USS Arizona Memorial at Pearl Harbor testify to the compelling nature of the events of December 7, 1941. The interpretive theme of the USS Arizona Memorial encompasses the attack on Pearl Harbor and other installations on Oahu, the career of the battleship Arizona and her crew, post-attack salvage work at Pearl Harbor, and the immediate impact of the attack on Hawaii's civilian population

and military defenders.

This study focuses on the central events of Sunday, December 7, 1941. It opens with a brief background survey of pre-war contact and rivalry between Japan and the United States. A detailed examination of Japanese-U.S. relations is beyond our scope, but this subject is canvassed to establish the context of the national policy decisions which led to war and to the military deployments prior to the attack. It should be noted also that this study does not deal with archeological sites associated with traditional Hawaiian uses of Pearl Harbor, nor does it treat the U.S. acquisition and development of the harbor as a naval base.

The extensive historiography of the Pearl Harbor attack makes it one of the most thoroughly examined military actions ever fought, but this historic resource study does nonetheless break some new ground. First, the attention to U.S. military perceptions of Hawaii's Japanese community makes it clear that the authorities' suspicion and lack of understanding of this group was a major, if not the single most important, factor in U.S. unpreparedness. Second, the examination of U.S. Army and Navy efforts to locate and engage the Japanese fleet in the hours after the attack highlight many of the shortcomings of the command structure in Hawaii. Third, the treatment of the post-attack preparations to defend Hawaii from a Japanese invasion is an attempt to invoke a sense of the intense and very real fear that prevailed as the islands braced for seige.

In addition to these thematic treatments, the study incorporates the recollections of many individual actors whose experiences are presented here as part of a full length study for the first time. This material is taken for the most part from personal interviews and the holdings of oral history programs. Particularly interesting are the stories of George Nakamoto, the civilian tug captain, and Malcom Reeves, the Northampton scout plane pilot.

For American scholars, journalists and the general public the Pearl Harbor attack has sparked controversy and accusations of incompetence and worse. Any study of the topic demands some examination of the factors which led to U.S. forces being taken by surprise, and it is impossible to ignore the attitudes, assumptions and judgements in both Hawaii and Washington which resulted in disaster. In the wake of the attack and for years afterward the U.S. commanders in Hawaii were pilloried for their supposed negligence. By the same token their supporters have attacked the actions and motives of officers and officials at the Washington command echelon. This study reviews mistakes made at both ends of the chain of command, but finds no credible evidence to support charges of flagrant dereliction of duty or a conspiracy to "set up" U.S. forces in Hawaii and withhold warning of an impending attack on Pearl Harbor.

This study relies as much as possible on contemporary documents

and first hand personal accounts of the Pearl Harbor attack. In some instance the stress of battle, the torrential rush of events, and (in the case of oral history interviews conducted many years later) the passage of time have combined to produce sources marred by factual errors. Taken as a whole, however, they are largely in agreement and present a remarkably detailed and accurate picture of the Pearl Harbor attack from the American perspective.

The same, unfortunately, is not true of Japanese sources. Most Japanese military documents were destroyed during World War II or when Japan capitulated. Many, if not most, of the Japanese participants in the attack were killed at Midway or in subsequent battles. As a result, this study relies heavily on published sources for the Japanese version of events. Some of the principals survived the war and have written about their experiences. The Japanese Self-Defense Agency's War History Research Section has undertaken a multi-volume (more than 100 volumes to date) history of World War II utilizing surviving documents and drawing on the memories of participants. The volume on the Pearl Harbor attack, Hawai Sakusen, is an indispensable source. Dr. Gordon Prange's At Dawn We Slept is also valuable. Prange spent decades studying the Pearl Harbor attack, and in the course of his studies befriended and interviewed dozens of important Japanese and American participants.

A body of folklore has developed around the Pearl Harbor attack, with stories and "facts" being passed from source to source with little critical examination. This study addresses some of that folklore in an attempt to separate fact from fiction. First and most important is the role of Hawaii's Japanese-Americans. Soon after the attack wartime rumor and many official reports had it that an enormous pool of fifth columnists had provided vital aid to the attackers.

Official investigations completed shortly after the war revealed that espionage had been limited to the staff of the Japanese consulate. The Niihau incident with its unusual attendant circumstances was the only instance of actual aid to the enemy. The canard of disloyalty has been thoroughly discredited by scholars and investigators who have examined Hawaii's Japanese community, but it is a persistent myth. A reading of transcripts of oral history interviews with Pearl Harbor survivors, for example, reveals several instances of perfectly sincere belief in swarms of Japanese-American spies and saboteurs. Questions and comments of visitors to the USS Arizona Memorial also indicate a widespread belief that Hawaii's Japanese were instrumental in the success of the attack.

For years stories have circulated to the effect that divers were killed in salvage operations aboard the Arizona wreckage. The most common version holds that explosive gases trapped inside the hull were ignited by a cutting torch. A close examination of

contemporary records- particularly the Pearl Harbor Naval Shipyard war diary- fails to confirm these accounts. The diving operations at Pearl Harbor were indeed hazardous and there were casualties, but none apparently occurred on the Arizona operations.

The explosion which sank Arizona has been the subject of conflicting accounts. Some, including eyewitness reports, say that it was ignited by a bomb which went down her stack. Subsequent reports suggest that the uptake armor gratings were intact when inspected later by salvage divers, making it impossible for a bomb to have traveled down the battleship's funnel, but the evidence is inconclusive. It has been established, however, that regardless of whether a bomb went down the stack, the fatal damage was caused by the explosion of her forward ammunition magazines, not the ship's boilers. The question of whether a bomb went down the funnel remains unanswerable in light of our present knowledge of the Arizona wreckage.

This work would have been impossible without the assistance and encouragement of others. I am grateful for the funding provided by the Arizona Memorial Museum Association, the cooperating association of the USS Arizona Memorial. The National Park Service staff of the USS Arizona Memorial, especially Superintendent Gary Cummins and Chief Ranger John Martini, contributed many valuable suggestions. NPS Chief Historian Edwin Bearss and Western

Regional Historian Grodon Chappell furnished guidance and encouragement. The divers of the Submerged Cultural Resources Unit made the observations used to document Arizona's present condition. Captain Thomas Kimmel, USN (ret.), was kind enough to provide me with personal papers of his father, Admiral Husband E. Kimmel. Professor Franklyn Odo of the University of Hawaii Ethnic Studies Program and Professor Gary Okihiro of the University of Santa Clara gave me important insights into the history of Hawaii's Japanese community.

I owe a special debt to the many participants in and witnesses to the Pearl Harbor attack who took the time to recount their experiences. These interviews often occurred during their vacations to Hawaii, and recalling the events of December 7, 1941 was a stressful interruption for many. I wish particularly to acknowledge five Pearl Harbor veterans who also provided me with documentary material: Mr. Heijiro Abe (Soryu pilot), Captain Nathan Asher, USN (ret.) (Blue), Captain James Daniels, USN (ret.) (Enterprise pilot), Mr. Robert Hudson (Oglala), and Rear Admiral Malcom Reeves, USN (ret.) (Northampton pilot).

In conducting documentary research the staffs of many archival agencies rendered important assistance. At the Naval Historical Center's Operational Archives Dr. Dean Allard and his staff were patient, helpful and knowledgeable. In the National Archives Mr. John Taylor of the Modern Military Headquarters Branch and Mr. Frederick Pernel of the Modern Military Field Branch provided

invaluable assistance. The same holds true for the staffs of the Office of Air Force History, the Office of the Chief of Military History, the Marine Corps Historical Center, the Defense Audiovisual Agency, the Smithsonian Institution, the Hawaii State Archives, and the Hawaii War Records Depository. Professor Ron Marcello, director of the North Texas State University Oral History Program, made available the hundreds of transcripts of Pearl Harbor survivor interviews he has conducted. Thanks are due, too, to librarians at the University of Hawaii's Hamilton Library, the Library of Congress and the Pearl Harbor Naval Base Library. I also wish to thank Mr. Mark Smith, who prepared the maps accompanying the text.

Throughout the text times and dates given (unless otherwise noted) are local. Geographical names are given in their 1941 forms. The Dutch East Indies later became Indonesia; French Indochina was divided into Vietnam, Laos and Cambodia; and Malaya formed part of what is today Malaysia. This study mentions both Japanese-Americans and Japanese nationals, and to avoid confusion all names are rendered in the Western style, with given names preceding family names. The term "Japanese" is generally reserved for references to Japanese nationals. Occasionally it is used here as an adjective encompassing Japanese-Americans and Japanese communities in Hawaii or the mainland U.S. In such cases it should be clear from the context that the term is being used as an ethnic descriptor and carries no connotation of citizenship

or loyalty. The term "Hawaiian" properly refers to the Polynesians whose ancestors inhabited Hawaii before its first contact with the Western world in 1778. In cases where the word is part of proper noun or term of long established usage (e.g., Hawaiian Department, Hawaiian waters) it is used here, but in other cases the word Hawaii is used in adjectival form.

Finally, this study describes the condition of the wounded and the handling of dead resulting from the Pearl Harbor attack. These descriptions may be disturbing to some. They are included not out of disrespect for those who suffered or a desire to sensationalize, but in order to portray as completely as possible the events of December 7, 1941. No historical account can include every detail, but to eliminate these descriptions would be to sanitize the narrative. Historians have a special obligation to present the whole truth, and that responsibility surely applies to recording the sufferings of those killed and wounded in battle.

CHAPTER 1

The Japanese attack on Pearl Harbor is perhaps the most dramatic event in the history of Japanese-American relations. It left an indelible imprint on both countries and it continues to exercise an important influence on the consciousnesses of both nations. It did not, needless to say, occur in an historical vacuum. The attack climaxed nearly a century of political and economic developments which drew the destinies of both nations together and ultimately into conflict. It is impossible to understand the significance of Pearl Harbor without some idea of Japanese-American relations up to December 7, 1941.

The Opening of Japan and the Meiji Restoration

From the early 17th to the mid-19th centuries the ruling Tokugawa shogunate (samurai government) enforced a calculated policy of isolating Japan from contact with other nations and maintaining an agrarian-based feudal social and economic system. The Tokugawa system encouraged the development of insularity and xenophobia among Japanese at all levels of society. It also served to put Japan at a hopeless disadvantage in the inevitable confrontation with the rapidly expanding industrialized nations of the West.

The beginning of the end for the shogunate occurred in 1853 when the U.S. Navy's Pacific Squadron, commanded by Commodore Matthew

C. Perry, appeared in Tokyo Bay. Perry demanded that Japan conclude a treaty with the United States regularizing relations between the two countries and opening Japanese ports to American vessels (most of which were engaged in the expanding trade with China).

The feudal shogunate acquiesced, for it had little room for maneuver when faced with Perry's steam warships and cannons. The opening of Japan set in motion a chain of events which led to the fall of the shogunate. Dissatisfied elements of Japanese society, led by younger samurai seized control of the government. In 1868 they abolished the shogunate and proclaimed the "restoration" of the Meiji Emperor.[1]

The Meiji restoration had an urgent and clearly defined goal: the preservation of Japanese sovereignty. The new leaders of Japan feared their nation might suffer the fate of China, forced by Western military superiority to yield many of the prerogatives of national independence. In looking at the international system of the late 19th century they concluded that only the development of a strong military force equipped with modern weapons could guarantee that Japan would not fall victim to Western expansion.

The development of a strong Japanese army and navy, they realized, depended on developing a modern industrial economy.[2] In a remarkably short period the Japanese, with extensive use of Western advisors, developed an efficient military arm and an

integrated industrial base to support it.

Japanese Industrialization and Expansion

Japanese policy goals quickly became more complicated than simple survival. A modern industrial society needs raw materials and mass markets to sustain high production volumes. Japan was poor in natural resources, especially oil. The intensive capital investment required for industrial development precluded the growth of domestic consumption on a scale to support her industries. Japan's leaders looked to foreign conquest to supply needed raw materials and mass markets. The nation's industrial policies demanded full integration into the international system, and the international system in the late 19th and early 20th centuries was imperialism at its zenith.

It would be an oversimplification to explain Japanese expansionism in strictly economic terms. Bushido, the samurai ethic, survived and flourished after 1868, and Japanese were as eager as other peoples to enter, for reasons of national prestige, the ranks of the imperial powers.

That entry was accomplished with spectacular rapidity. In less than a generation Japan had grown from a backward nation of peripheral consequence to a major power dealing on equal terms with Russia, Great Britain, and the United States. In 1894-95 Japan fought and defeated China. The creaking Qing dynasty was forced to sue for peace and yield the island province of Taiwan

to Japan. In 1902 Japan became a factor in the pre-World War I treaty system when she concluded an alliance with Great Britain. In 1904-05 Japan fought Russia in a bloody war for domination of northeast Asia. To the amazement of the world, Japan defeated the Czar's forces. The spoils of war included an important voice in the affairs of Manchuria (still nominally part of China) and outright annexation of Korea.

One of the more intangible- but not the least important- results of the Russo-Japanese War was the diminution of White prestige in the eyes of Asian peoples. The myth of Western invincibility underlay the colonial system where small numbers of Europeans dominated millions of nonwhite subjects. That myth was severely shaken by the victory of an Asian nation over a major European power, an event which encouraged subject nationalities from India to the Philippines.

While Japan was emerging from isolation the United States was expanding westward across the Pacific. In the 1880's the Hawaiian Kingdom leased Pearl Harbor to the U.S. for use as a naval base. In 1898 the United States annexed Hawaii outright, and in the same year acquired Guam and the Philippine Islands as a result of her victory over Spain. These events brought Japan and the United States into competition for influence in Asia at roughly the same time.

In World War I Japan fought on the Allied side and as one of

the victors was awarded a mandate over German possessions in the Marianas, Caroline, and Marshall Islands (known collectively as Micronesia). Just as importantly, Japan took advantage of the world's preoccupation with the war in Europe to enhance her influence in China. The chronic instability of Chinese politics made that nation an irresistible attraction for Japanese expansionists in the early 20th century. In 1915 Japan forced the Chinese government to accede to a set of twenty-one demands which, if enforced, would have made Japan pre-eminent in China.

Collapse of the World Order

This development alarmed the Western powers, particularly the United States, which viewed itself as China's protector. American protection took the form of the "open door" policy, which was predicated on maintaining the nominal independence of China and granting equal access to Chinese markets and resources to all powers. Since the predominance of any single foreign power in China was a threat to the open door policy, Japan's activities there were a direct challenge to American policy. The acceleration of chronic civil war and social disintegration in China worsened the situation and made it increasingly difficult to maintain the open door policy.

The First World War provided a further series of blows to the international order. Japan felt deprived of her just share of rewards at the Paris peace conference. The Western conferees'

rejection of a racial equality clause in the treaty added insult to injury.

In a futile attempt to inject a measure of stability into international relations in the Pacific Japan, Great Britain, and the United States agreed in 1922 at the Washington Naval Conference to limit naval armaments. The agreement called for Japan to limit capital ship tonnage to 60% of the tonnage of each of the Anglo-Saxon countries. This so-called 5-5-3 ratio was deemed by many Japanese as yet another Western attempt to impose inferior status on their nation.

Japanese Militarism

The onset of the worldwide Great Depression of the 1930's brought acute suffering to Japan. Starvation was not uncommon in rural areas, and the crisis produced sharp changes in Japanese politics. Until the late 1920's a system of civilian party government had been emerging in Japan. The depression shattered that fragile system, and the army stepped into the vacuum.

Junior army officers were deeply affected by the tales of recruits and draftees who had experienced the nation's bitter plight at first hand. Those younger officers attempted in the early and mid-1930's to take a direct hand in politics to alleviate the situation. They were guided by vaguely defined goals of establishing a military government founded on a uniquely Japanese mixture of ultranationalism, quasi-fascism, and

Confucian social ethics.

In 1931-32 Japanese Army officers acting without authorization from Tokyo provoked fighting between Chinese and Japanese troops in Manchuria which led to the area's incorporation into the Japanese political system. The Manchurian incident was followed by unsuccessful army mutinies in Tokyo in 1932 and 1936. After the suppression of the 1936 mutiny senior army officers were in firm control. Not only had they curbed their idealistic subordinates, but they dominated the terrified civilian politicians.

In 1937 conflict erupted once more between Chinese and Japanese troops, this time near Beijing's Marco Polo Bridge. It is uncertain whether the clash was inadvertant or an engineered provocation, but it served as a pretext for further Japanese aggression. The military-dominated government in Tokyo elected to respond with a heavy handed policy that evolved into a full scale war with China. This second Sino-Japanese war was destined to be among the bloodiest in history and drag on inconclusively until Japan's final defeat in 1945.

The World Crisis

Events outside Asia were to draw the isolated conflict between China and Japan into a larger conflagration. The outbreak of the Second World War in Europe in 1939 inaugurated a stunning succession of German victories. Germany quickly defeated France

and the Netherlands and imposed a virtual state of siege on Great Britain. These events altered Japan's options, because Britain, France, and Holland were the principal colonial powers in Asia. The lands they ruled- particularly the East Indies (present Indonesia), Indochina, Malaya, Singapore, and Burma- were rich in the natural resources Japan so desperately needed. The preoccupation of the proprietary powers with events in Europe presented Japan with an opportunity for easy pickings.

U.S. policy during this period was ambivalent. President Franklin D. Roosevelt wished to block the expansion of Japan and Germany, but many Americans espoused a policy of isolationism and wanted the United States to avoid involvement in the wars of Europe and Asia. Despite the domestic political opposition of isolationists, the United States rendered important financial and material aid to the countries at war with Germany and Japan. Hoping to keep the U.S. neutral with the threat of a two ocean war, Germany (with her European partner, Italy) and Japan concluded the Axis, or Tripartite, Alliance in September 1940.[3]

In July 1941 the Japanese government made the momentous decision to secure guaranteed access to the natural resources of Southeast Asia by occupying the area, even though that course might well mean war with the United States.[4] It was a decision made in desperation. Senior Japanese officials had little confidence in Japan's ability to defeat the formidable coalition of Western powers, but felt their nation had little choice.

Admiral Osami Nagano, chief of the Naval General Staff expressed the mood when he told the Emperor, "The government has decided that if there were no war, the fate of the nation was sealed. Even if there is war, the country may be ruined. Nevertheless a nation which does not fight in this plight has lost its spirit and is already a doomed nation." [5]

Wasting little time once the decision had been made, the Japanese Army seized southern French Indochina that same month (they had occupied northern Indochina a year earlier). American reaction was swift and drastic. President Roosevelt proclaimed an embargo on the shipment of oil to Japan. The colonial government of the Dutch East Indies, dependent on American support, followed suit. It is difficult to overstate the importance of oil in Japan's 1941 policy decisions. Military and naval authorities calculated that Japanese industry and military forces would grind to a halt in a matter of months if the flow of oil were not restored. Japan depended almost entirely on imported oil, and the nation's leadership interpreted the embargo as tantamount to an act of war. [6]

Negotiations to settle differences between Japan and the United States were intensified in the waning months of 1941, but both countries refused to budge from their fundamental positions. Japan demanded a free hand in China and the lifting of the oil embargo. The U.S. refused to restore the flow of oil unless Japanese forces withdrew from China. With neither side willing to

make any meaningful compromise, war seemed a forgone conclusion. On December 2, with a Japanese carrier force already en route to Hawaii, the Japanese government made a final confirmation of its decision to go to war with the United States.[7]

1. Japanese emperors are referred to not by personal names, but by the names chosen for their reigns. The personal name of the Meiji Emperor (r. 1867-1912) was Mutsuhito; the current sovereign's reign name is Showa (r. 1926-).

2. For treatment of the relationship between Meiji industrial and military policies see: E. H. Norman, Origins of the Modern Japanese State (New York: Random House, 1975), 225-34.

3. For analysis of the effect of the Axis pact on American policy and opinion see: Paul W. Schroeder, The Axis Alliance and Japanese-American Relations, 1941 (Ithica: Cornell University Press, 1958), passim.

4. U.S. Congress, Hearings Before the Joint Committee on the Investigation of the Pearl Harbor Attack, 39 pts., 89th Cong. 1st sess., 1946, 20:4018-19 (hereafter PHA).

5. Paul S. Dull, A Battle History of the Imperial Japanese Navy (1941-1945) (Annapolis: U.S. Naval Institute Press, 1978), 5.

6. Hiroyuki Agawa, The Reluctant Admiral: Yamamoto and the Imperial Navy (Tokyo: Kodansha International, 1983), 226; Gordon W. Prange, with Donald M. Goldstein and Katherine V. Dillon, At Dawn We Slept: The Untold Story of Pearl Harbor (New York: McGraw-Hill, 1981), 169.

7. Nobutake Ike, ed., Japan's Decision for War: Records of the 1941 Policy Conferences (Stanford: Stanford University Press, 1967), 283.

CHAPTER 2

U.S. Buildup in the Pacific

U.S. policy makers were not oblivious to Japanese political developments and were well aware that Japan's leaders increasingly considered war with the United States as inevitable. They responded to the increasing tensions in the Pacific by increasing American military strength and presence in the region.

The Philippines

In the Philippines American and Filipino ground forces under the command of General Douglas MacArthur were expanded into a formidable (at least on paper) army. More importantly, the air forces under MacArthur's command were greatly augmented with the addition of the new and powerful B-17 bomber. The B-17, with its long range and heavy bomb load, gave American forces the capability of striking directly at important Japanese bases on Taiwan.[1] So confident was MacArthur that his increased strength would permit him to defeat any Japanese assault that he said on December 5, 1941, "Nothing would please me better than if they would give me three months and then attack here." [2]

Pacific Fleet to Pearl Harbor

The most powerful American piece on the Pacific chess board was

not the force in the Philippines, but the U.S. Pacific Fleet. Normally, the fleet was based on the West Coast and made a training cruise to Hawaii each year. Hawaii, with its vital Pearl Harbor naval base, was the principal American bastion in the Pacific. Its geographical location, more than 2,000 miles from the American mainland and roughly halfway between the West Coast and forward Japanese bases in the Marshalls, made this strategic center the natural choice for the Pacific Fleet's advance base in any war against Japan.

The Pacific Fleet, commanded by Admiral James O. Richardson, left the West Coast for Hawaii as scheduled on April 2, 1940. Richardson planned to keep the fleet in the Hawaiian area until May 9, when it would return to the mainland. Less than a week before his departure, though, Richardson received a dispatch from Admiral Harold R. ("Betty") Stark, Chief of Naval Operations, altering the fleet's schedule. The change created such a bitter disagreement that it eventually cost Richardson his job. Stark's message read:

In view of the possibility of Italy becoming an active belligerent in May, you may receive instructions to remain in Hawaiian waters with the ships of the fleet then in company with you. Changes in scheduled movements individual units prior nine May not contemplated. Utmost secrecy is desired for the present. Acknowledge.[3]

The implications of Stark's message encapsulate American policy and strategic concerns in 1940-41. They also illustrate the global nature of the world crisis with which the Roosevelt

administration was attempting to deal. The movement of the Pacific Fleet might seem remote from events in Europe, but U.S. officials perceived a vital interdependence between events in different parts of the world. President Roosevelt and Secretary of State Cordell Hull were convinced that the positioning of the fleet closer to Japan would have a restraining influence on Japanese expansionism. That restraint, they felt, would decrease the chances of war in the Pacific. As a result, Britain and her allies could concentrate their resources on the fight against Germany and American resources would not be diverted from the programs of aid to the Allies.[4]

Richardson Objects

As it became apparent that Washington intended that the fleet remain in Hawaii indefinitely Richardson made it clear that he could not disagree more strongly with the decision. On May 22 he complained to Stark that facilities in Hawaii were inadequate to maintain and provision the ships, crews, and equipment of the Pacific Fleet.[5] Stark replied five days later that these logistical considerations were secondary, that the purpose of basing the fleet in Hawaii was "the deterrent effect your presence may have on the Japs going into the East Indies." [6] Richardson pressed his argument with Secretary of the Navy Frank Knox and with the President himself in a personal meeting in October 1940.

Richardson's principal objections centered on the decreased efficiency of the fleet resulting from Pearl Harbor's inadequate facilities, and he noted the danger of the port's exposed position 2,000 miles closer to Japanese bases as an afterthought. When he spoke with Roosevelt he countered FDR's deterrent argument by stating that the military complexion of the Japanese government equipped those leaders with the professional expertise to detect the military disadvantages of basing the fleet in Hawaii.[7] Richardson's vehement exceptions to administration policy led to his dismissal shortly after his confrontation with his commander-in-chief.

Ironically, while Richardson was more concerned with the logistical disadvantages of basing the Pacific Fleet in Hawaii than with its exposure to Japanese naval power in the Central Pacific, his superiors in Washington worried about the danger of a surprise attack. On November 12, 1940, less than a month after the Richardson-Roosevelt meeting, British torpedo bombers attacked the Italian fleet anchored in the harbor of Taranto. The resulting destruction sent a wave of unease among those in Washington who contemplated the possibility of a similar strike against the Pacific Fleet in Hawaii. On November 22 Stark wrote Richardson suggesting the placement of anti-torpedo nets in Pearl Harbor. Richardson responded, "torpedo nets within the harbor are neither necessary nor practicable." [8]

The problem was soon out of Richardson's hands. He was

relieved of command by Admiral Husband E. Kimmel on February 1, 1941. Kimmel was a hard-driving officer who demanded results, not excuses, from his subordinates. When confronted with incompetence his temper sometimes got the better of him, but he possessed the leadership needed to command the Pacific Fleet under adverse conditions. One of his senior staff remembers the loyalty Kimmel inspired as well as his "boiling rage" at failure to complete an assignment on time.[9] Kimmel was no more enthusiastic than his predecessor about basing the Pacific Fleet at Pearl Harbor, but he was less prone to argue the matter with the president. He applied himself to making the best of a poor situation by making the fleet as ready as possible to execute American war plans from its base in Hawaii.

U.S. War Plans

The Pacific Fleet's plan, WPPac-46, was subsidiary to the overall strategic plan, Rainbow 5, prepared jointly by American and British military staff officers. Rainbow 5 decreed that if the war became a worldwide general conflict involving both the United States and Japan, the defeat of Germany was to be given top priority. The strategy in the Pacific was to be essentially defensive. WPPac-46 set the fleet's primary objective as defense of the Malay Barrier (the geographical swath formed by Malaya, the Philippines, and the Dutch East Indies). The presence of thousands of miles of Japanese controlled waters between the Pacific Fleet and the Malay Barrier, plus the prospect of most

resources going to the European theater, made it necessary to adopt a strategy of indirection to accomplish that goal. The task set for the Pacific Fleet, then, was not to steam into an encounter with the Japanese Navy on unequal terms, but to harrass the Japanese with diversionary tactics in the Central Pacific. The fleet was to divert Japanese strength eastward by: 1) capture and control of the Caroline and Marshall Islands; 2) disruption of Japanese trade routes and protection of allied shipping; and 3) defense of Guam, Samoa, Hawaii, and the western hemisphere.[10]

Although the plan called for the assumption for a strategically defensive position, it did not mean a passive role for the Pacific Fleet. The fleet would be committed over a vast area of the world's largest body of water and would take the tactical offensive against Japanese possessions in the Central Pacific. Kimmel's task, especially with the steadily increasing chances of war between the United States and Japan, was to hone his fleet to a sharp edge in expectation of an assault against Japanese forces, while he himself could expect little in the way of reinforcements.

Japanese Plans

Kimmel's counterpart on the opposite side of the Pacific was Admiral Isoroku Yamamoto, commander-in-chief of Japan's Combined Fleet. Yamamoto had inherited a strategic doctrine which, in many

ways, complemented WPPac 46. The Japanese Navy, conceding a quantitative edge to the United States, envisioned engaging the U.S. fleet in a campaign of attrition as it moved into the Western Pacific. As American units moved deeper into waters closer to the Japanese homeland (and suffered a corresponding diminution in operating efficiency) the Japanese Navy would harrass them with submarine attacks until the diminished U.S. forces met the main body of Japan's fleet under conditions favorable to a Japanese victory. [11]

The desperate need for the resources of Southeast Asia entailed grave risks for this strategy. A Japanese invasion of those distant and farlung territories would tie up so much of Japan's military potential that the invasion routes, supply lines, and even the homeland itself would be vulnerable to American attack. Yamamoto's challenge was to devise a plan which would allow Japan to occupy the Western possessions in Southeast Asia while simultaneously ensuring the security of Japan's strategic flank. The situation was rendered even more acute by the presence of the U.S. Pacific Fleet in Hawaii, 2,500 miles closer than the West Coast to the prospective theater of operations.[12]

Yamamoto's plan was bold and original. He envisioned an opening blow directly against the U.S. Pacific Fleet that would be timed to coincide with the start of the Japanese offensive against American, British and Dutch forces in Southeast Asia. By crippling the main component of U.S. power in the Pacific at the

outset of the war Japan would be free of the threat of a trans-Pacific naval offensive while she seized the vital natural resource areas.

Yamamoto's Reservations

Yamamoto entertained the unrealistic hope that the surprise blow would demoralize the United States and lead it to accept a peace settlement which would leave Japan the preeminent power in the Pacific.[13] That Yamamoto so seriously misread the American character is puzzling, since he had spent several years in the United States as a language student and naval attache. But if he underestimated the American capacity to respond to adversity, Yamamoto was under no illusions as to the comparative industrial capacities of the two nations. He realized that the Japanese victory would have to be a quick one, for the enormous industrial potential of the United States could quickly make good the losses suffered at the outbreak of the war, and it would not be long before American factories and shipyards would shift the numerical balance to Japan's overwhelming disadvantage. When Japan had entered the alliance with Germany in 1940 he told Prime Minister Fumimaro Konoye:

If it is necessary to fight, in the first six months to a year of war against the United States and England I will run wild. I will show you an uninterrupted succession of victories. But I must also tell you that if the war be prolonged for two or three years I have no confidence in our ultimate victory.[14]

In contemplating the prospect of delivering a decisive initial

blow, Yamamoto realized that the U.S. decision to base its fleet in Hawaii not only increased the menace to Japan, but placed it closer to Japanese controlled waters. The idea of a Japanese surprise attack on Pearl Harbor had been circulated among the officers of both navies for years. U.S. fleet exercises in 1933, for example, were predicated on the assumption of a Japanese surprise attack on Hawaii, and in fact, demonstrated the feasibility of such tactics.[15] Five years earlier Lieutenant Commander Rynosuke Kusaka, who was to serve as chief of staff of the Pearl Harbor strike force, had written a paper on an air attack against Pearl Harbor.[16] As war between the U.S. and Japan appeared increasingly likely, Yamamoto not only grasped the fact that such a bold move had a reasonable chance of success, but that the development of the aircraft carrier in the 1920's and 1930's provided him with the ideal weapon for executing a surprise attack on the U.S. Pacific Fleet. While less imaginative naval officers were wedded to the battleship as the core of fleet, Yamamoto and like minded colleagues in the Japanese and other navies realized that aviation increased the striking range of battle fleets tenfold. The success of the British carrier raid against the Italian fleet in Taranto helped to confirm Yamamoto in a growing conviction that it was possible to cripple the U.S. fleet with a surprise carrier attack on Pearl Harbor.[17]

Within a month of the Taranto attack, according to Yamamoto's

own recollection, he had decided that, should war with the United States be unavoidable, Japan should open the war without warning with a carrier attack on Pearl Harbor.[18] A great deal of preparatory work now lay before Yamamoto and the Japanese navy.

Initial Planning and Organization

Yamamoto's tasks included overseeing the preparation of detailed plans, assembling the right combination of personnel, organization and training of fleet units, development of specialized ordnance, and- perhaps most difficult- convincing other senior Japanese Navy officers that his plan was viable.

He first committed himself in written form on January 7, 1941 in a letter to Admiral Koshiro Oikawa, the Navy Minister. He outlined his conviction that the U.S. fleet must be neutralized by a sudden blow at the outset of any war with the United States and proposed that this task be assigned to his fleet's air units. In his role as cabinet minister, Oikawa was the link between the navy and the highest officials of the Japanese government. But perhaps Yamamoto had a different motive in confiding first to the minister. The Navy Ministry also controlled personnel assignments, and Yamamoto was anxious to command the operation himself.[19]

About the same time he also discussed the idea in general terms with Rear Admiral Shigeru Fukudome, chief of staff of the Combined Fleet. Yamamoto set in motion the planning process by

assigning members of his own staff aboard the Combined Fleet flagship Nagato to work up plans for the Pearl Harbor operation, and he concurrently drew on the talents of the Navy's most experienced and competent airmen to work separately on the plan. This two-track planning process illustrates Yamamoto's talent for getting the most out of his subordinates. By having his Combined Fleet staff develop a plan he ensured that the project would receive the attention of a closely integrated staff team which would overlook none of the details which, if ignored, can ruin a military operation. By drawing on the abilities of the Japanese Navy's best pilots, Yamamoto injected into the planning process the combination of daring and practical experience that the project needed.

The pilot he first chose to examine the proposal was Rear Admiral Takajiro Onishi, chief of staff of the Eleventh (land-based) Air Fleet. Onishi, one of the navy's senior aviators, was to achieve subsequent reknown as chief of Japan's kamikazes. To assist him in analyzing and enlarging on Yamamoto's idea Onishi chose Commander Minoru Genda, an experienced combat pilot.[20] Onishi's first reaction to Yamamoto's idea was negative. Although his own personal temperament and behavior were far from the norm of Japanese naval officers, he felt the plan was too unconventional and risky. Also, it is curious that of the Japanese admirals who objected to Yamamoto's plan, Onishi was the only one who predicted that a

surprise attack on Pearl Harbor would so enrage the American people that they would be satisfied by nothing less than the complete subjugation of Japan.[21]

Genda's Outline

Genda worked throughout most of February under Onishi's general supervision preparing the main outline of the Pearl Harbor attack plan. He developed a number of salient points:[22]

1. Surprise, including secrecy at the planning stage, was paramount. Without it the raiders would find the Americans waiting in ambush; the Japanese could inflict little damage, would suffer heavy casualties, and lose their precious carriers.
2. Priority targets at Pearl Harbor should be the American aircraft carriers. Without a carrier force the U.S. could not hope to challenge Japanese naval domination of the Pacific.
3. Destruction of U.S. aircraft on Oahu would be necessary to ensure that Japanese bombers could attack the fleet unhindered by air opposition.
4. All available Japanese carriers should be concentrated and used for the operation. The maximum concentration of Japanese naval air power would ensure the greatest damage to the U.S. fleet.

5. All types of bombing should be used in the attack. Torpedo bombing promised the most effective results, but American ships might be protected by torpedo nets, and there were doubts whether the Japanese could develop torpedoes to run in the shallow waters of Pearl Harbor. Horizontal and dive bombers must be included in the attack force in case torpedoes proved impractical.
6. A strong fighter element should be included to escort the bombers and provide air cover for the fleet.
7. Refueling at sea would be necessary. Japanese ships, designed for their traditional strategic role of decisive battle near Japan, lacked the range to make the round trip to Pearl Harbor without refueling.
8. A daylight attack promised best results. Planes should be launched from carriers shortly before sunrise and arrive over Oahu in the early daylight hours.

Onishi presented Yamamoto with the results of this study about March 10. But while the airmen had been at their labors, the Combined Fleet staff had been busy at the same task. Rather than producing a conceptual framework for an attack plan, the fleet staff focused on the specialized problems presented by the Pearl Harbor raid. Captain Kameto Kuroshima, Yamamoto's senior staff officer, [23] supervised the work of a number of staff specialists

in logistics, submarine warfare, navigation, and communications. Yamamoto and his staff also toyed with the idea of coordinating the strike with an invasion of Hawaii, an idea that was not abandoned until September.[24]

Personnel and Organization

In April the plan began to move beyond the theoretical stage with major organizational and personnel changes. On April 10 the Japanese organized the First Air Fleet, a revolutionary grouping which concentrated the navy's heavy carriers under a single command. The unit consisted of two divisions of two carriers each. The First Carrier Division included the venerable Akagi (flagship for the division and the First Air Fleet) and Kaga, each displacing about 42,000 tons and capable of 31 and 28 knots respectively. The newer Soryu and Hiryu formed the Second Carrier Division. These vessels displaced only 30,000 tons but were three knots faster than Akagi. In September they would be joined by Japan's newest carriers, Shokaku and Zuikaku, forming the Fifth Carrier Division. Commanding the First Air Fleet was Vice Admiral Chuichi Nagumo, who would lead the carrier force from triumph to triumph until it met disaster at the battle of Midway scarcely a year after its birth.[25] Nagumo had spent most of his seagoing career aboard battleships and cruisers and, lacking a background in aviation, was not an obvious choice to command the First Air Fleet. He was aided immeasurably (some would say dominated) by the assignment of Genda as the fleet's

air staff officer.

The day the First Air Fleet was organized Fukudome bid farewell to the Combined Fleet and reported to the Navy General Staff in Tokyo as head of its First Bureau, the agency which oversaw the development of plans for the fleet. His successor as Combined Fleet chief of staff was Rear Admiral Seichi Ito, an officer who made little contribution to the Pearl Harbor attack. Ito served only until August, when he was appointed navy vice chief of staff and replaced in the Combined Fleet by Rear Admiral Matome Ugaki.[26]

The Navy General Staff Objects

In late April Yamamoto felt that planning and fleet reorganization had advanced enough to send Kuroshima as his emissary to the Navy General Staff to argue for the adoption of the Pearl Harbor attack plan. Kuroshima met with Captain Sadatoshi Tomioka to present his case. The fact that Tomioka's superior was Admiral Fukudome, Yamamoto's former chief of staff, did not ensure a cordial reception for the plan. Tomioka and other officers in the general staff's Operation Section were skeptical. According to Fukudome's postwar recollections, they saw too many unacceptable risks:[27]

1. Surprise, the key to the plan's success, would be difficult to achieve. The chances that secrecy might be compromised by foreign intelligence agents, chance meetings with other

ships on the high seas, and American reconnaissance were simply too great.

2. Japan's traditional strategy, predicated on a gradual American advance through the Mandates followed by a decisive battle near the homeland, was still sound. There was no compelling need to eliminate the U.S. fleet before seizing Southeast Asia.
3. Operational difficulties were formidable. Maintaining radio silence and refueling at sea offered too many chances for the plan to go awry.
4. Diplomatic negotiations aimed at averting war were still in progress. Japanese naval officers were under no illusions about their chances for success in a war against the United States. A surprise attack on Pearl Harbor would dash any remaining hope of peace.

The convention-bound precincts of the Navy General Staff were not the only center of opposition to Yamamoto's plan. His own key subordinates, the officers upon whom he depended for its success, were also less than thrilled. Nagumo and his chief of staff, Rear Admiral Ryunosuke Kusaka (the originator of a much earlier Pearl Harbor study), learned of the project not from Yamamoto, but from Fukudome shortly after the latter left the Combined Fleet. When Kusaka visited Fukudome in Tokyo in April Fukudome told him what was afoot. Kusaka was aghast, as was

Nagumo when he learned of Yamamoto's plan from Kusaka.[28] Perhaps their reluctance stemmed partly from pique at not being taken into Yamamoto's confidence as soon as the First Air Fleet was formed. It is testimony to Yamamoto's unconventional manner that he would ignore regular command channels (Nagumo was his direct subordinate), but it is unlikely that the tradition minded Nagumo would have embraced the idea, regardless of who informed him.

Training

Despite their feelings, Nagumo and Kusaka wasted little time in preparing their fleet for the formidable task set for it in Yamamoto's plan. Not only the carriers but the escort and support vessels had to become accustomed to operating and maneuvering as a unit. The delicate choreography of refueling underway was an especially important part of the training program, because most of the First Air Fleet's ships did not have the range to make the round trip to Pearl Harbor without taking on additional fuel.[29] Just as crucial to the success of the plan, obviously, was the training of the air crews. Divided by type of aircraft, the various air groups were based at different naval air stations in southern Japan, and began their training in early May. Genda and his superiors placed great hopes in the effectiveness of the Nakajima B5N2 Type 97 (known to the Allies as the Kate) torpedo bombers, which began their training in the Kagoshima area in June.[30].

Ordnance

There were a number of important unanswered questions relating to the use of aerial torpedoes. First, the American ships might be protected by torpedo nets. Second, conventional torpedoes, designed for use in the open sea, would plunge into the shallow bottom of Pearl Harbor (with a maximum depth of 50 feet) before beginning their runs to target. The Pearl Harbor attack plan required the development of a new torpedo with a depth of run shallow enough for the U.S. fleet's anchorage.[31] Fortunately for the First Air Fleet the navy's ordnance experts had begun work independently in January on this difficult problem.[32]

While staff and support personnel occupied themselves with these problems, the fliers worked to perfect the skills needed for the attack. Screaming over populated areas on the fringes of Kagoshima Bay (which had somewhat the same topography as Pearl Harbor), they put on hair-raising exhibitions of flying skill for residents of the area. Lieutenant Heita Matsumura, squadron commander of Hiryu's torpedo planes, recalls practicing torpedo approaches at 100 knots with his flaps and wheels down- a maneuver which could cause his plane to stall and crash with the slightest mishap.[33]

The horizontal bomber pilots also had their work cut out for them. If the torpedo planes were, for one reason or another, precluded from effective participation in the attack

responsibility for sinking the battleships in Pearl Harbor would devolve on the horizontal bomber pilots (who also flew Kates). The major problem with horizontal bombing was the low accuracy rate. Relentless practice raised the rate of hits at high altitude (10-15,000 feet) from 10% to nearly 50%. Another obstacle was the lack of armor piercing bombs heavy enough to penetrate armored battleship decks. Again, the Japanese Navy's resourceful ordnance specialists addressed the problem. They fitted 40 centimeter (15.7 inch) 800 kilogram (1,760 pound) armor piercing battleship projectiles with fins and produced an improvised but effective bomb.[34]

The Mitsubishi A6M2 Type 0 (known to the Allies as the Zeke) fighter pilots, slated to ensure air control, also underwent training with new equipment and techniques. Voice radio, which had a range of about 100 miles, would be inadequate for the Pearl Harbor operation. The fighter pilots had to learn to use Morse keys during flight operations.[35] The crews of Aiichi D3A1 Type 99 (known to the Allies as the Val) dive bombers, newly issued to the fleet, had to become accustomed to the new planes and succeeded in achieving an accuracy rate of 50 to 60%.[36] In late August the training program received fresh impetus with the assignment of Commander Mitsuo Fuchida, an experienced and respected horizontal bomber pilot who would be in overall command of the First Air Fleet's air units and lead them over Pearl Harbor.[37]

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1. John Costello, The Pacific War, (New York: Rawson, Wade, 1981), 101-06.
 2. Ibid., 652.
 3. James O. Richardson, as told to George C. Dyer, On the Treadmill to Pearl Harbor: The Memoirs of Admiral James O. Richardson, USN (Retired) (Washington: Department of the Navy, 1973), 307.
 4. PHA, 2:463, 616, 618.
 5. Ibid., 1:259.
 6. Ibid., 1:261.
 7. Ibid., 1:263-65.
 8. Ibid., 14:973-75.
 9. Omar Titus Pfieffer interview, Marine Corps Oral History Collection, U.S. Marine Corps Historical Center, Washington.
 10. PHA, 6:2502-03.
 11. Sadao Asada, "The Japanese Navy and the United States", in Pearl Harbor as History: Japanese-American Relations, 1931-1941, ed. Dorothy Borg and Shumpei Okamoto, with Dale K. A. Finlayson (New York: Columbia University Press, 1973), 235-36.
 12. Shigeru Fukudome, "Hawaii Operation", United States Naval Institute Proceedings 81 (December, 1955), 1317.
 13. Prange, 21; Dull, 7.
 14. John Dean Potter, Yamamoto: The Man Who Menaced America (New York: Viking, 1968), 43.
 15. Ladislav Farago, The Broken Seal, "Operation Magic" and the Secret Road to Pearl Harbor (New York: Random House, 1967), 127.
 16. Agawa, 193.
 17. Potter, 53.
 18. Prange, 15.

19. Ibid., 16; Agawa, 219.
20. Minoru Genda, Shinjuwan Sakusen Kaikoroku (Tokyo: Yomiuri Shinbun, 1972), 10-12.
21. Fukudome, "Hawaii Operation", 1318; PHA, 1:178; Prange, 18-19; Agawa, 221, 229.
22. Prange, 25-26.
23. A position for which there is no exact equivalent in American military staffs, the senior staff officer was a sort of assistant chief of staff.
24. Hitoshi Tsunoda, Hawai Sakusen (Tokyo: Boeicho. Boei Kenshujo Senshishitsu, 1967), 93; John J. Stephan, Hawaii Under the Rising Sun: Japan's Plan for Conquest after Pearl Harbor (Honolulu: University of Hawaii Press, 1984), 81-83.
25. Prange, 101, 416.
26. Ibid., 101, 177.
27. Fukudome, "Hawaii Operation", 1319-20.
28. Prange, 112.
29. Prange, 184.
30. Prange, 158-59
31. Shigeru Fukudome, Shikan: Shinjuwan Kogeki (Tokyo: Jiyu Ajiya-sha, 1955); 212.
32. Prange, 105-06.
33. Heita Matsumura interview with author, Honolulu, December 9, 1983.
34. Prange, 161-62.
35. Ibid.
36. Ibid.
37. Mitsuo Fuchida, Shinjuwan Sakusen no Shinso; Watakushi wa Shinjuwan Joku ni Ita (Nara: Yamato Taimusu Sha, 1949), 36-37.

CHAPTER 3

Inclusion of Submarines

Yamamoto, for all his air mindedness, was reluctant to place the entire burden of the Pearl Harbor attack on the First Air Fleet. His reservations may have stemmed from lack of confidence in Nagumo, nervousness about placing all his eggs in one basket, or simply a politic desire to appease those critics within the navy who were disgruntled by the revolutionary plan. Whatever his reasons, Yamamoto decided to employ a large submarine force in the Hawaii operation to supplement the efforts of his naval air force. On July 29 he consulted with Vice Admiral Mitsumi Shimizu, commander of the Sixth (submarine) Fleet and ordered him to prepare a large undersea force to participate- albeit as auxiliaries- in the Pearl Harbor operation.[1]

This force, which would consist of twenty-five fleet submarines and five midget subs, would proceed to Hawaii independently of Nagumo's fleet. Its assignment included reconnaissance, interception of American reinforcements sent to Pearl Harbor and U.S. ships attempting to sortie from the anchorage, and rescuing downed pilots, The midgets would penetrate the harbor and torpedo any major warships missed by the attacking aircraft.[2]

Midget Submarines

The midget submarines were perhaps the most unique weapons used

in the attack. Each was crewed by a junior officer and an enlisted man, displaced 46 tons, and measured 78 feet, 10 inches by 6 feet, 6 inches. Despite their diminutive size, they were formidable weapons. After release from a mother ship they had a 100 mile range (at 4 knots) and could achieve bursts of speed of up to 24 knots submerged. Their two torpedoes could inflict as much damage as ordnance delivered by more conventional means.[3] According to the plan developed by Shimizu's staff, they were to be launched from the mother subs about 10 miles from the mouth of Pearl Harbor, stealthily enter the anchorage before the air attack, lie in wait until its conclusion, and then torpedo whatever targets of opportunity remained.[4]

Theoretically the crews of the midget submarines had a chance to survive their mission and return to their mother ships, but no one- least of all the crews themselves- was under any illusion about the odds against these tiny craft escaping through Pearl Harbor's narrow channel in the aftermath of the attack. The crews were not fanatical volunteers, but carefully selected and trained submariners who, because of a combination of pre-war Japanese iron military discipline and social pressure, accepted their fate. Ensign Kazuo Sakamaki, the sole survivor of these ten seamen, summed up their predicament succinctly:

None of us was a volunteer. We had all been ordered to our assignment. That none of us objected goes without saying: we knew that punishment would be very severe if we objected; we were supposed to feel highly honored.[5]

War Games

The inclusion of submarines in the Hawaii Operation and the progress in training did not suffice to calm the doubts of the Navy General Staff. When Kuroshima visited Tomioka in August, he met with the same objections that had met Yamamoto's plan at its inception. It was too risky, too unconventional, and stretched Japan's limited naval resources far too thin.[6]

In a bid to make its case the Combined Fleet staff prevailed on the general staff to set aside time for gaming the Pearl Harbor attack at its annual map exercises at the Naval Staff College. From September 12 to 16 the assembled staff officers and fleet commanders rehearsed Japan's strategic plans for opening the war against the Western powers. The final day was devoted exclusively to Pearl Harbor.[7]

The results were not reassuring. On the first round the Japanese lost two carriers sunk and two damaged, a loss rate of more than 50% (the Fifth Carrier Division was not yet assigned to Nagumo). In addition only half the Japanese aircraft returned to their ships. In return for these sacrifices the umpires ruled that the First Air Fleet could expect to inflict only minor damage on the Americans. A second round of maneuvers, in which Nagumo incorporated lessons learned from the first, resulted in much heavier losses for the Americans: four battleships and two carriers sunk and one of each badly damaged. Still, Japanese

losses were not insignificant: one carrier sunk, one damaged, and 127 planes lost.[8]

The chief difference between the two rounds was the route to Hawaii. On the first, Nagumo approached Pearl Harbor from an easterly direction and was spotted by American patrol planes. The second approach was made from almost due north, an unexpected route which minimized the chances of discovery. Still, Nagumo was loathe to accept the northern option because the bad weather would present formidable problems of maneuvering, navigation, and underway refueling. It was only with great difficulty that Genda persuaded Nagumo to give priority to the element of surprise and use the northern route.[9].

The skeptics who witnessed the war games knew that it was a highly theoretical exercise dealing only with immutable known factors and general probabilities. Missing were the components of blind luck and human fallibility which are so often decisive in battle. Even in this highly abstract rehearsal the great risks of Yamamoto's plan were glaringly obvious. What if the carrier force were intercepted? What if the Pacific Fleet were not at Pearl Harbor? What if the weather did not behave as predicted? The September war games seem to have actually strengthened the resolve of the naval officers opposed to the Pearl Harbor attack. After their conclusion Fukudome reported to Admirals Ito and Nagano and recommended against the Pearl Harbor operation. They agreed with him.[10]

Further Arguments

It is not difficult to imagine the atmosphere of tension and frustration which prevailed in the inner circles of the Imperial Japanese Navy. The likelihood of war was increasing daily. Japan would undertake risky and far flung operations at the outset against the combined forces of the world's two greatest naval powers, Britain and the United States. In the midst of this grave predicament the commander of Japan's naval operating forces obstinately insisted on a gamble that would stretch naval resources even more, and in addition, put at risk the main strength of her carrier fleet.

In late September Nagumo met with Admiral Nishizo Tsukahara, commander of the Eleventh Air Fleet. Also present were Kusaka and Onishi, their respective chiefs of staff. Tsukahara complained that the Pearl Harbor attack would strip his command of too many airmen and planes to fulfill his assigned objective- air support of operations in Southeast Asia. Nagumo, his uneasiness not assuaged by the map maneuvers, needed little convincing to join Tsukahara in presenting a united front of Japan's senior naval air commanders. Even their chiefs of staff, Kusaka (who had speculated about such an operation years before) and Onishi (who had earlier endorsed and even contributed to Yamamoto's plan) were moved to agree.[11]

On October 3 Kusaka and Onishi boarded the battleship Mutsu

(serving as Combined Fleet flagship while Nagato underwent repairs) to present their commanders' and their own objections. Yamamoto refused to bend and invoked his authority as commander-in-chief of the Combined Fleet to make it clear that the Pearl Harbor attack would be part of Japanese naval strategy. Pulling rank was all very well, but Yamamoto knew that leaving execution of his plan to fearful and doubting subordinates could doom the project. At the gangway to see Kusaka and Onishi off the flagship Yamamoto put his hand on Kusaka's shoulder (an un-Japanese gesture) and said:

Kusaka- I understand just how you feel. But the Pearl Harbor raid has become an article of faith for me. How about cutting down on the vocal opposition and trying to help me put that article of faith into practice? Where the actual operation is concerned I guarantee I'll do my best to meet any requests you may have.[12]

The personal approach worked well enough on subordinates, but the planners in the Navy General Staff remained unimpressed. They not only continued to oppose the Pearl Harbor plan, but attempted to emasculate it in early October by reassigning Akagi, Hiryu, and Soryu to operations in Southeast Asia, leaving Nagumo with only three carriers. Once again Kuroshima journeyed to Tokyo as Yamamoto's envoy and on October 18 demanded that all six heavy carriers be assigned to the Pearl Harbor operation. Tomioka countered with the by then familiar objections to Yamamoto's plans. This time Kuroshima played his chief's trump card. Yamamoto, he said, would resign if he did not receive full

support for his plan.[13]

Yamamoto Forces the Issue

Nagano and his colleagues may have been sorely tempted to take Yamamoto up on his offer and be rid of the problem for once and for all. But that move would have had disastrous consequences. They knew that Yamamoto's personal charisma and undoubted brilliance made him, for all practical purposes, the Japanese Navy's one indispensable man. It would hardly do to have him leave under disputatious circumstances on the eve of war. The fleet and squadron commanders were accustomed to his methods, and coordinated operations under those conditions depended upon Yamamoto at the helm. Additionally, the blow to morale at all levels might seriously endanger the Navy's chances for success in the rapidly approaching conflict.

The general staff had no choice but to relent. Nagano, in his own testimony, claimed after the war that it was the threat to resign which compelled him to yield.[14] Once Nagano decided to let Yamamoto have his way, opposition to the Pearl Harbor attack collapsed. The exact date of Nagano's decision is a matter of dispute among historians and participants in the deliberations. Some sources give it as mid or late October, but Nagano himself told postwar interrogators that he decided on November 3 to accept Yamamoto's demands.[15]

Final Preparations

With the major issue settled Yamamoto and his staff devoted their energies to completing preparations for the attack. One of the most striking features of Japanese planning and preparation for the attack is how much uncertainty existed on important questions just weeks before it took place. Less than six weeks remained before planners settled on December 7 (Hawaii time) as the date of the attack. Early December was chosen as a compromise between the need to avoid the worst of the winter storms in the North Pacific and the need to give the First Air Fleet as much time as possible to complete its training. From an operational point of view, December 9 would be ideal, because it would provide a nearly full moon to aid in night operations, but the Japanese knew that the Pacific Fleet's operating schedule put more ships in harbor on weekends than on weekdays. All these considerations pointed to Sunday, December 7 as the best day to attack.[16]

Tactical questions aside, there remained the delicate issue of coordinating the attack with official notice to the U.S. government that Japan was no longer seeking a peaceful solution to the differences between the two countries. The Japanese did not consider a surprise attack dishonorable (indeed, they had begun the Russo-Japanese War with a surprise attack on the Russian fleet), but some in the government, especially diplomats, felt that some sort of formal notice on the record was required. Obviously, the advance warning time would have to be minimal or else the advantage of surprise would be lost. A compromise was

struck within the Japanese government in which its representatives in Washington would formally break off negotiations a scant thirty minutes before the attack began.

Tojo told American interrogators after the war that the Emperor was adamant about the half hour notice and "repeatedly" insisted that the government notify the U.S. in advance. Tojo's account is open to doubt. Although the Emperor was by all accounts unenthusiastic about Japan going to war, it would have been a radical deviation from the norm of Japanese political behavior in 1941 for him to have taken such a strong stand on what was, under the circumstances, a minor issue. One is left with the strong suspicion that Tojo was trying to protect the Emperor from American retribution. The situation in 1945, when the monarch's personal intervention was decisive in bringing about Japan's capitulation, was very different. The Japanese military officers who stood in the way of surrender were then- unlike 1941- thoroughly discredited by an obviously lost war.[17]

There still remained an air of improvisation about the preparations of the First Air Fleet. It was not until the eve of the fleet's departure that the sufficient number of specially modified shallow water torpedoes (with a maximum depth of run of twelve meters [40 feet]) were ready. Bomb racks were modified to accept the special 800 kilogram armor piercing missiles while the carriers were actually underway. The lack of adequate time for training the latecomers of the Fifth Carrier Division, which was

something of a scratch unit (the final batch of pilots did not report aboard until October 10), forced the Japanese to sacrifice the advantages of a dawn attack. Pilots from Shokaku and Zuikaku were unable to train as a unit for night operations, so they would have to wait until dawn to take off from their carriers. The 90 minute flying time from the launch point meant the attacking aircraft would arrive over Oahu in full daylight.[18]

The First Air Fleet, complete with supporting units, did not assemble until early November, when it conducted a full dress rehearsal at Saeki Bay in Yamamoto's presence. On the 17th the 100 officer pilots (most pre-war Japanese naval pilots were enlisted men) of the attack force were assembled aboard Akagi and addressed by Yamamoto.[19]

On November 23 Nagumo outlined the final plan to elements of the First Air Fleet in a set of operations orders. The task force would center around the six aircraft carriers. The light cruiser Abukuma served as flagship of the screening unit of nine destroyers. The battleships Hiei and Kirishima provided insurance against disaster if the force were forced into a surface engagement. Augmenting the battleships' 14 inch guns were the 8 inch guns of heavy cruisers Tone and Chikuma. They were responsible for providing scout aircraft to reconnoiter Pearl Harbor in advance of the carrier planes. Three submarines (not to be confused with the separate submarine force under Admiral Shimizu's command) would patrol in the van of the fleet's

course. Seven tankers loaded with precious oil to refuel the fleet en route brought up the rear.[20]

1. Prange, 202-03.
2. U.S. Army Forces, Far East. Military History Section, "Submarine Operations, December 1941-April 1942" (Japanese Monograph No. 102) in War in Asia and the Pacific, 1937-1949 (New York: Garland, 1980), ed. Donald S. Detweiler and Charles B. Burdick, 4:9-11.
3. Kazuo Sakamaki, I Attacked Pearl Harbor (New York: Association Press, 1949), 33.
4. Japanese Monograph 102, 13-14.
5. Sakamaki, 30.
6. Tsunoda, 97-98.
7. Ibid., 101.
8. Ibid., 104; Agawa, 228.
9. Genda, Shinjuwan Sakusen Kaikoroku, 115.
10. Agawa, 229; Prange, 223.
11. Prange, 261-62.
12. Agawa, 230.
13. Ibid., 231; Prange, 297.
14. International Military Tribunal for the Far East, Court Proceedings, Exhibit 1197-A, p. 10317, Record Group 238, National Archives.
15. Agawa, 231; Prange, 299 (note 22); PHA, 1:236.
16. PHA, 1:239; Prange, 285.
17. International Military Tribunal for the Far East, Court Proceedings, Exhibit 1201-A, pp. 10480-81, Record Group 238, National Archives.

18. PHA, 1:237-38; Prange, 269, 340.

19. Tsunoda, 203; PHA, 1:178.

20. For Nagumo's operation orders see U.S. Army Forces, Far East. Military History Section, "Pearl Harbor Operations: General Outline of Orders and Plans" (Japanese Monograph No. 97) in Detweiler and Burdick, 4:7-20.

CHAPTER 4

Final Japanese Plans and Sortie

The fleet was to rendezvous at Hitokappu Bay on the Kurile island of Etorofu and, refueling at sea as necessary, sail east to a point about 200 miles north of Oahu before launching its aircraft. There was to be no aerial reconnaissance or cover en route, but scout planes from the heavy cruisers were to precede the attack planes and reconnoiter Pearl Harbor and the alternate fleet anchorage at Lahaina Roads. The aircraft of the attack force were to be grouped in two waves about 30 minutes apart.

All 40 torpedo bombers were grouped in the first wave, where chance of achieving surprise was the greatest and the chance of surviving their low and slow approaches was best. Specific targets were assigned to the different torpedo and bombing elements, with the Kates of the first wave assigned to hit four carrier berths on the northwest side of Ford Island and four battleship moorings on Ford Island's southeast shore. Dive bombers were to attack Wheeler Field, the Army Air Corps fighter base in central Oahu, and the naval air station on Ford Island. Fighters would establish air control. The second wave was assigned as targets Kaneohe Naval Air Station, the marine airfield at Ewa, and the army bomber base at Hickam Field. The dive bombers of the second wave were to strike any carriers left afloat.

Yamamoto's staff had not overlooked the need for contingency plans. In the event that the U.S. fleet was anchored outside Pearl Harbor the operating orders called for all Kates in the first wave to be armed with torpedoes. Torpedoes would be most effective in sinking the American ships in deep waters outside the restricted confines of the harbor. If the First Air Fleet encountered serious opposition the main body of the Combined Fleet would sortie from Japanese home waters and sail eastward to the rescue. If, on the other hand, the task force failed to encounter the U.S. fleet at or near Pearl Harbor Nagumo was to return to Japan.[1]

With preparations as complete as humanly possible, the Sixth Fleet submarines scheduled to take part in the attack began leaving their Japan in mid-November. The carriers and escorts rendezvoused as scheduled at Etorufu. Before Nagumo's fleet sortied on November 26 the pilots were briefed on the mission and provided with maps of Oahu and Pearl Harbor to study during the long days at sea which lay ahead.[2]

U.S. Intelligence

Secrecy and security were uppermost in the minds of the Japanese planners of the Pearl Harbor attack. Without it they had little hope of success and every likelihood of disaster. They were

concerned almost to the point of paranoia that U.S. intelligence agencies would learn of the plan and alert the Pacific Fleet. Few aspects of the Pearl Harbor attack have been the subject of such close scrutiny, analysis, and misunderstanding as the state of American intelligence prior to the attack. It is a topic abounding in subtle permutations and strewn with pitfalls, but the questions of what information was available to U.S. authorities, how it was gathered, how it was handled, and what conclusions were drawn from it form one of the most interesting chapters in the story of Pearl Harbor.

Military intelligence before World War II suffered from low status. Officers who spent their careers in intelligence duty could expect little in the way of prestige and their prospects for advancement were not among the brightest. As one pre-war officer wrote, assignment to intelligence duty was "an uninviting professional dead end".[3]

Hand in hand with low status went disjointed organization and poor coordination. Articulation between agencies and the armed services left much to be desired, and cooperation depended more on the good will of individual officers than on clear guidelines and policy. Good will was not always forthcoming, as one navy staff officer found in January 1941 when he was assigned to draft Secretary Knox's letter to Stimson concerning Hawaii's anti-aircraft defenses. Army staff officers guarded information on the defenses so jealously that to obtain the data he had to

resort to methods more closely resembling espionage than interservice liaison. When the army and navy decided in October 1941 to establish a joint intelligence committee to provide a forum for the exchange of information between the services bureaucratic squabbling vitiated its effectiveness. Failure to agree on a place for the committee to convene prevented it from meeting until after the Pearl Harbor attack.[4]

Even within the individual services jealousy and bickering prevented intelligence sections from functioning as well as they might have. A case in point is the struggle for control over intelligence functions at the highest levels of the navy's command structure in Washington. In April 1941 Rear Admiral Richmond Kelly Turner, chief of the War Plans Division, wanted to take control of the preparation of estimates from the rival Office of Naval Intelligence (ONI). Turner, who won the match, was described by another senior officer who worked with him as a "martinet, very, very gifted, but... stubborn, self-opinionated [and] conceited." [5] After Turner's victory ONI was confined to forwarding reports and information to the War Plans office, which analyzed, evaluated, and disseminated the information as it saw fit.

Ambassador Grew's Report

The sorry state of U.S. military intelligence, when combined with the Japanese government's tight security measures, reduced almost

to nil the chances of American agents or observers learning about the plans for the Pearl Harbor attack. But the U.S. had better luck than it deserved, for the American ambassador to Japan, Joseph C. Grew, relayed to Washington a rumor that the Japanese planned to open hostilities against the United States with a surprise raid on the Pacific Fleet's base in Hawaii.

On January 27- less than three weeks after Yamamoto first committed his idea to paper- Grew cabled the State Department in Washington that the Peruvian charge d'affairs had told him the Japanese "planned, in the event of trouble with the United States, to attempt a surprise mass attack on Pearl Harbor using all of their military facilities." [6] It is unknown to this day whether the source of the rumor was a leak within the Japanese Navy or whether the originator made an inspired guess. Grew forwarded the message to the State Department, which sent the warning to the both services. Its subsequent fate demonstrates the truth of the axiom that even the best intelligence is worthless if it is not given credibility.

The army's Military Intelligence Division flatly refused to believe the story. Brigadier General Sherman Miles, Assistant Chief of Staff for Intelligence (G-2), told postwar investigators, "it was inconceivable that any sources in the know in Japan would have communicated" the plan to the Peruvian charge. The navy was slightly more conscientious in that it shared the substance of the dispatch with Kimmel. On February 1

the Chief of Naval Operations passed on the Peruvian charge's warning, but played down its reliability:

The Division of Naval Intelligence places no credence in these rumors. Furthermore, based on known data regarding the present disposition and employment of Japanese naval and army forces, no move against Pearl Harbor appears imminent or planned in the foreseeable future.[7]

Magic

U.S. intelligence was having difficulty obtaining and evaluating information from human sources, but American technological wizardry went at least part way in filling the gap. In the months before the Pearl Harbor attack U.S. government officials were reading the most secret messages passing between the Japanese Foreign Ministry in Tokyo and Japan's diplomatic outposts. By use of a computer-like machine the Americans were able to decode messages in Japan's top secret diplomatic code, the so-called "Purple" code.[8] Encrypted messages to and from Japanese diplomats were intercepted, decoded, and read by U.S. military and civilian officials in an operation called Magic.

Magic was one of the few interservice operations which worked smoothly. The code breaking was performed in the Washington offices of the army's Signal Intelligence Service under Colonel Otis Sadtler and the navy's Communications Security Section, headed by Commander Laurence Safford. After translation they were forwarded to Admiral Turner and his army counterpart, Brigadier General Leonard Gerow. The two services took turns (on alternate

days) distributing the translated intercepts to civilian officials. The list of Magic recipients was tightly restricted. The White House, the Secretaries of State, War and the Navy, the Army Chief of Staff, the Chief of Naval Operations, and the heads of each service's war plans and intelligence divisions received copies.[9]

Dissemination was so restricted because it was vital that the United States keep the Magic operation under the tightest security. If the Japanese learned the U.S. had broken their codes, they would lose no time in changing them. Even worse, they might send false messages in the compromised code to deceive the Americans as to their true intentions. Security is one thing, but overzealousness is another. In protecting the Magic secret those in control limited its usefulness. Instead of showing the messages to lower ranking analysts who might have been more sensitive to their implications, they circulated the intercepts for the most part only among those who had the power to make policy decisions. An example of the exaggerated security consciousness can be found in the selection of translators. Although few Americans in 1941 were proficient in the Japanese language, Miles was nonetheless reluctant to accept nisei (second generation Japanese-Americans) as Magic translators.[10]

Secrecy inevitably begat ignorance and confusion. One particularly striking example was Admiral Stark's misapprehension that Admiral Kimmel's command at Pearl Harbor was equipped with a

machine capable of decoding Purple. Perhaps the greatest confusion arising from the mismanagement of the Magic operation lies in the area of the information obtained from the Purple messages. These were diplomatic, not military, messages. They contained no details regarding military operations, least of all the Pearl Harbor attack. In fact, Yamamoto's plan was so jealously guarded by the navy that Japanese diplomats were not even informed of its existence.[11] The U.S. command in the Philippines, unlike Pearl Harbor, did have a Purple machine at its disposal, but American forces there were no better prepared for the Japanese attack than the commands in Hawaii.

U.S. Estimates of Japanese Intentions

If U.S. intelligence analysts and policy makers had no hint that the Japanese were preparing to attack Pearl Harbor (except Grew's dispatch, which they discounted), what conclusions did they draw about Japanese intentions? The tone of the Japanese messages between Washington and Tokyo indicated quite clearly that Japan was preparing to go to war. Especially ominous were the messages which established deadlines for the conclusion of U.S.-Japanese negotiations regarding the withdrawal of Japanese forces from China and the resumption of trade between Japan and the United States. On November 5 Tokyo cabled its Washington embassy:

Because of various circumstances, it is absolutely necessary that all arrangements for the signing of this agreement be completed by the 25th of this month. I realize that this is difficult order, but under the circumstances it is an unavoidable one.[12]

The Foreign Ministry relented slightly and on November 22 extended the deadline by four days. But the terms in which the extension was couched were hardly reassuring:

There are reasons beyond your ability to guess why we wanted to settle Japanese-American relations by the 25th, but if within the next three or four days you can finish your conversations with the Americans; if the signing can be completed by the 29th, (let me write that out for you- twenty ninth); if the pertinent notes can be exchanged; if we can get an understanding with Great Britain and the Netherlands; and in short if everything can be finished, we have decided to wait until that date. This time we mean it, that the deadline absolutely cannot be changed. After that things are automatically going to happen.[13]

These indications from Magic that Japan was preparing for war served only to confirm what was obvious from the public statements of the Japanese government. The question was, where would the Japanese strike? The most obvious target was Southeast Asia. The pattern of Japanese encroachment in the region, its abundance of natural resources, and its function as a bastion of Western military power in the Orient all pointed to an early move against the Dutch East Indies, the Philippines, and the British fortress of Singapore. American planners generally assumed that the first hostile Japanese moves against U.S. forces would occur in the Philippines. The buildup of Japanese forces in south China, Taiwan, and Indochina suggested to other observers that the Japanese would aim their initial strike against the Kra Isthmus, the strategic neck of land joining the Malay Peninsula to the rest of Asia.[14]

As late as December 5 General Miles outlined his perception of Japan's strategic options:

1. attack the Soviet Union, which was fighting for survival against the invading Germans.
2. open an offensive against the Chinese province of Yunan in an effort to cut the Burma Road lifeline.
3. occupy Thailand and use that country as a jumping off point for attacks against British-ruled Burma and/or Malaya.
4. attack the Philippines.
5. seize Hong Kong.
6. invade the Dutch East Indies.
7. launch an assault against Singapore.[15]

The plethora of options was bewildering, and those in Washington who tried to read the signs conveyed their misapprehensions to the U.S. commands in Hawaii. Throughout 1941 Stark sent messages to the Pacific Fleet expressing his belief that Japan would move north and attack the Soviet Union. On October 17 he wrote Kimmel, "Personally, I do not believe the Japs are going to sail into us...."[16]

Winds Message

One sign from Magic that Japan was girding for hostilities was

the November 19 "winds" message from Tokyo to its Washington embassy and other diplomatic posts. In that message the government established a system to relay news of an imminent break in relations which could be received even if decoding facilities had been destroyed. If a severing of diplomatic ties was near the daily shortwave news broadcast from Tokyo would include one or more code phrases to alert the envoys. The message setting up the system was couched in the diplomatic code, but the actual execute messages would be broadcast in clear. If U.S.-Japanese relations were "in danger" of rupture the code message would be a weather forecast, "east wind, rain"; if relations with the U.S.S.R. were strained to the breaking point the weather prediction was to be "north wind, cloudy"; "west wind, clear" meant relations with Great Britain were about to break.[17]

At last the United States had an opportunity to derive from Magic a clear indication of Japanese intentions. An intense round the clock watch was established in the military radio listening networks. Whether a winds execute message was broadcast and intercepted is a matter of dispute. Safford maintained that the "east wind, rain" message was intercepted on December 4 (Washington time). His claim was supported by testimony from one of the radio operators placed on alert, but to date no records have been found to support Safford's contention.[18] Equally authoritative testimony from Commander

Arthur McCollum, chief of ONI's Far Eastern Section, denies receipt of a winds execute message.[19] Japanese communication records were destroyed during the war, but Japanese officials interrogated by occupation authorities stated that the execute message was never transmitted.[20]

Although the subject is one of the most hotly debated questions surrounding the Pearl Harbor attack, there is simply no available evidence to settle the issue. More to the point perhaps is what the winds execute message would have told American listeners. It would have warned that Japan was about to go to war with the United States. That conclusion, given the strained state of U.S.-Japanese relations, should have come as no surprise. In any event, it would not have precluded other strategic options for Japan; she did in fact strike simultaneously along an extended front ranging from Malaya to Hawaii. Most importantly, in terms of the controversy surrounding Pearl Harbor, "east wind, rain" would have not contained any hint that the Japanese would open the war with a surprise attack on the U.S. fleet in Hawaii. Captain Ellis Zacharias, a U.S. naval expert on Japan, pointed out that an interception "would have conveyed no information of importance which the Navy and War Departments did not already possess." [21]

1. Ibid, 1:238-242.

2. U.S. Strategic Bombing Survey, Interrogation of Mitsuo Fuchida, Tokyo, November 28, 1945 (Interrogation No. 603), U.S. Strategic Bombing Survey Interrogation Reports, Record Group 243, National Archives.

3. Oscar W. Koch with Robert G. Hayes, G-2: Intelligence for Patton (Philadelphia: Whitmore, 1971), xv.

4. Walter C. W. Ansel interview, U.S. Naval Institute Oral History Collection (hereafter USNIOH), Operational Archives, Naval Historical Center; PHA, 2:209.

5. Pfeiffer interview; PHA., 4:1925-26.

6. PHA., 14:1042.

7. Ibid., 2:819, 14:1044.

8. Technically, codes are characters or words signifying ideas. Ciphers, on the other hand, are systems in which one letter is substituted directly for another. Purple and other systems discussed here are actually ciphers, but for simplicity they will be called codes.

9. Roberta Wohlstetter, Pearl Harbor: Warning and Decision, (Stanford: Stanford University Press, 1962), 168-86; PHA, 4:1734, 8:3558-59, 8:3899, 9:4594-95, 29:2454, 35:96, 36:23.

10. PHA, 2:808.

11. Ibid., 1:237, 5:2175.

12. Ibid., 12:100.

13. Ibid., 12:165.

14. A.A. Hoehling, The Week Before Pearl Harbor (New York: Norton, 1963), 156; Ronald Lewin, American Magic: Codes, Ciphers and the Defeat of Japan (New York: Farrar, Straus and Giroux, 1982), 129.

15. PHA, 14:1377.

16. Ibid., 14:1402; 16:2171, 2176, 2214.

17. Ibid., 12:154.

18. Ibid., 8:3579; Lewin, 73; U.S. Naval Security Group, "Interview with Mr. Ralph T. Briggs", Records of the National Security Agency (NSA), Record Group 457, National Archives. Briggs claimed he intercepted the excute, but records were

altered to obliterate evidence of the interception.

19. PHA, 8:3411.

20. U.S. Army Forces Pacific to Military Intelligence Service, November 13, 21 and 30, 1945, "Interrogation of Japanese Concerning Possible Broadcast of the 'Winds Execute' Messages" (SRH 177), Records of the NSA. .

21. Ellis Zacharias, Secret Missions (New York: G. P. Putnam's Sons, 1956), 247.

CHAPTER 5

Bomb Plot Messages

While Washington scrutinized the message traffic between Tokyo and its embassy in the U.S. a more significant set of cables was being exchanged between the Foreign Ministry and its consulate general in Honolulu. Ensign Takeo Yoshikawa of the Japanese Navy operated in Hawaii as a solo spy under the cover identity of a vice consul. Yoshikawa was a graduate of the naval academy at Etajima but had been forced into early retirement for medical reasons. He had returned to the navy as a limited duty officer specializing in intelligence and in 1940 provided with a cover as a junior diplomat. In April 1941 he was posted to the consulate general in Honolulu under the fictitious name of Tadashi Morimasu.[1]

U.S. codebreakers intercepted Yoshikawa's messages, but since the Honolulu consulate seemed far less significant than the Japanese embassy in Washington, his dispatches to and from Tokyo received little attention. Senior U.S. officers and officials were in fact barely aware of the traffic. So low was the priority assigned to consular traffic that U.S. listening stations mailed the intercepts to Washington rather than transmitting them by radio.[2]

Yoshikawa's reports evinced a keen Japanese interest in the

defenses of Pearl Harbor and the movements of U.S. vessels in and out of the anchorage. Even more significant were his instructions from Tokyo. On September 24 Yoshikawa was directed to use a schematic plot of Pearl Harbor dividing the anchorage into five areas and make reports on which ships were in each area. On November 15 Tokyo instructed him to report on naval units in Pearl Harbor at least twice a week and to "take extra care to maintain secrecy" in conducting his espionage. On November 29 Yoshikawa was ordered, "report even when there are no [ship] movements". He was told on December 2 to make daily reports not only on ships in Pearl Harbor, but also to note "whether or not there are any observation balloons above Pearl Harbor or if there are any indications that they will be sent up. Also advice [sic] whether... the warships are provided with antisubmarine nets." [3]

Kimmel Unaware of Bomb Plot Messages

In postmortems of the attack, those at the Washington echelon pointed out correctly that Japanese agents in other ports received similar instructions. There was nothing, they claimed, to indicate that the interest in Pearl Harbor signified anything more than a wholly understandable interest in the fleet and principal base of a potential enemy. Kimmel (who was at the time unaware of the traffic between Yoshikawa and Tokyo) maintained, however, that had he known of such interest in his fleet and its anchorage he would have treated it as significant. [4]

In his testimony to Congress after the war he was merciless in his indictment of those in Washington who failed to forward Yoshikawa's cable traffic to the Pacific Fleet:

These Japanese instructions and reports pointed to an attack by Japan upon the ships in Pearl Harbor. The information sought and obtained, with such painstaking detail, had no other conceivable usefulness from a military viewpoint.

* * * * *

No one had a more direct and immediate interest in the security of the fleet in Pearl Harbor than its commander in chief. No one had a greater right than I to know that Japan had carved up Pearl Harbor into subareas and was seeking and receiving reports as to the precise berthings in that harbor of the ships of the fleet. I had been sent Mr. Grew's report earlier in the year with positive advice from the Navy Department that no credence was to be placed in the rumored Japanese plans for an attack on Pearl Harbor.

* * * * *

Certainly I was entitled to know when information in the Navy Department completely altered the information and advice previously given to me.[5]

Kimmel went on to say that had he known of the bomb plot messages he would have redeployed his fleet to ambush the approaching Japanese. His statement throws into sharp relief one of the most vexing questions surrounding the issue of missed and misread clues to Japanese intentions: there still remained the problem of deducing the particulars of the Japanese plans. Without those details American readiness could have been improved only marginally. For example, where exactly would Kimmel lay his ambush? To the south of Hawaii, the direction of the nearest

Japanese bases and the most logical direction from which to expect an attack? When was he to expect the attack? Kimmel could hardly keep his fleet at sea in combat readiness indefinitely.

Perhaps the most ironic aspect of Kimmel's ignorance in the matter is the fact that he had at hand the capacity to break Yoshikawa's code and read his messages. The consular code which Yoshikawa used was of lower priority than Purple. The Communications Intelligence Unit at Pearl Harbor could read the lower grade code, but confined itself to forwarding the undecoded consular messages to Washington for decryption and translation by the Magic team there.[6] The Magic team, in turn, often set aside the consular messages while they worked feverishly on the higher priority Tokyo-Washington Purple traffic. One of the cryptographers recalled:

the agency was simply too small and too exhausted.... Our eyes were red and glazed; exhaustion and dream consciousness had overcome us months before the event.... Had these [critics] been among us aen how buried we were in stacks of messages through the "Purple" machine which had... priority, they would not wonder that we failed to process and translate a few messages [in the consular code]....[7]

Monitoring Japanese Navy Radio Traffic

Commander Joseph Rochefort, chief of the Communications Intelligence Unit at Pearl and one of the navy's most brilliant cryptanalysts, was concerned not with diplomatic messages, but with the signals exchanged among the various units and commands

of the Japanese Navy. The Japanese naval code system, JN25, proved more difficult to break than the Purple code, and in the weeks before Pearl Harbor Rochefort and his consumers relied on traffic analysis. By this process intelligence experts deduced the origin and addressees of signals by combining the monitoring of coded messages with known information on the location of various units. Traffic analysis involved the painstaking comparison of large volumes of coded messages and yielded only rough "guesstimates" on the activities of the Japanese fleet. It was much like trying to deduce the nature of postal correspondence by examining envelopes.

The Japanese usually changed their call signs every six months, but after the routine change on November 1, they changed again on December 1.[8] Under these frustrating conditions Rochefort's unit, using techniques such as circuit analysis (establishing the command relationship between stations using a given frequency) and identifying the "touch" of individual operators could read perhaps 10% of the traffic volume carried on the communication circuits of the Japanese Navy.[9] Under these difficult circumstances it is not surprising that signal intelligence failed to yield the whereabouts of Nagumo's First Air Fleet as it plunged through the swells of the north Pacific.

The best guess Rochefort could manage at that point was that at least one division of Nagumo's carriers was in the Marshalls. On December 1 ONI mistakenly placed the carriers in Japanese home

waters. On the same day the Pacific Fleet intelligence officer, Lieutenant Commander Edwin Layton, presented Kimmel with a report on the Japanese fleet which omitted any estimate of the whereabouts of Carrier Divisions One and Two. Kimmel noticed the omission and asked Layton jokingly, "Do you mean to say that they could be rounding Diamond Head and you wouldn't know it?"[10]

To complete the confusing picture for U.S. communications intelligence the Japanese themselves muddied the airwaves with false transmissions. Operators in Japan continued to broadcast messages on the same circuits used by the First Air Fleet, making it appear that the force was still in home waters even as it was en route to Hawaii. American radio direction finders and traffic analysis thus contributed to the erroneous estimates of the Japanese carriers' whereabouts.[11]

"Noise"

Navy intelligence, then, was not so much oblivious to the dangers of a sudden outbreak of war with Japan as focused on irrelevant and incorrect signals that war would erupt at places other than Pearl Harbor. Intelligence analyst Roberta Wohlstetter calls these misleading signals "noise", which she defines as irrelevant or false indications which lead commanders to incorrect expectations about enemy intentions.[12] The bewildering variety of signals and estimates pointing to imminent Japanese moves in

China, Southeast Asia, and against the U.S.S.R. served to divert attention from the possibility that Pearl Harbor might be attacked. The Japanese did invade Southeast Asia at the same time they attacked Pearl Harbor, but clues as to their intentions there must be considered noise, because they shifted concern away from Hawaii and in so doing diminished the likelihood that Stark, Kimmel, and their subordinates would focus their attention on the likelihood of an attack on the fleet's home base.

Army Sabotage Warnings

Army intelligence as it concerned the danger to Hawaii was even farther off the mark than the navy. The army was concerned to the point of obsession with the danger of espionage, subversion, and sabotage by Hawaii's Japanese population (two thirds of whom were U.S. citizens). When it became apparent from Magic that war between Japan and the U.S. was only a matter of time the War Department in Washington alerted its Hawaiian Department to the danger from within. On November 27 Miles cabled Lieutenant Colonel Kendall Fielder, the Hawaiian Department G-2:

Japanese negotiations have come to a practical stalemate. Hostilities may be ensue. Subversive activity may be expected. Inform commanding general [Lieutenant General Walter C. Short of the Hawaiian Department] and Chief of Staff only.[13]

Short replied the next day that Army forces were alerted accordingly against sabotage. The War Department followed with more comprehensive instructions:

initiate forthwith all additional measures necessary to provide for protection of your establishments, property, and equipment against sabotage, protection of your personnel against subversive propaganda and protection of all activities against espionage.[14]

Patton's Plan

The concern about internal security and the imagined threat of Hawaii's 160,000 resident Japanese aliens and Japanese-Americans was no fluke. It had been a serious, albeit unjustified, concern for years. In the mid-1930's Lieutenant Colonel George S. Patton, Jr. (later to achieve fame as commander of the Third Army) had been Hawaiian Department G-2 and evinced similar worries. He even drafted a plan for seizing hostages from the Japanese community's leadership to ensure the cooperation (or at least the acquiescence) of Hawaii's Japanese in the event of war. The plan listed 128 prominent Hawaii Japanese, citizens as well as aliens, to be taken at the outbreak of hostilities. Some of the people on Patton's list came to occupy positions of leadership in postwar Hawaii. They included two future state supreme court justices and others prominent in the early statehood era. The plan was never implemented, but it exemplified the army's obsession with the supposed danger posed by Hawaii's Japanese.[15]

While Patton's successors kept a suspicious eye on Hawaii's Japanese residents Enisgn Yoshikawa continued his espionage work from the consulate in Honolulu. The consul general, Nagao Kita, cooperated fully, and "Morimasu" acquired a reputation among

other consulate employees (most of whom were ignorant of his real function) as something of a privileged character who kept irregular hours, drank freely, and seemed to do little work.[16]

Yoshikawa's approach to espionage was far different from his public behavior. He described it as an unromantic task "based solidly on scholarly research, meticulous observation, and painstaking attention to detail." [17] He was careful to break no laws in conducting his observations and to avoid trespassing in restricted areas. He frequently traveled to the vicinity of Pearl Harbor by car to observe the fleet. He sometimes used a taxi, but more often was driven by Richard Kotoshirodo, a Japanese-American consulate employee whom he used as a general assistant. A post-attack FBI investigation of "Morimasu's" activities characterized Kotoshirodo as "the only American-born Japanese employed at the Consulate in whom the Consulate staff placed any confidence in connection with other than routine matters." If U.S. counterintelligence suspected "Morimasu" of any undiplomatic activity he was discreet enough to retain his privileged diplomatic status. It was not until the American employees of the consulate were interrogated after December 7 that he was identified as Japan's principal spy in Hawaii.[18]

Automobiles were not the only conveyance used by Yoshikawa in his movements. He occasionally rented light planes at the nearby civilian airfield, took long walks, and even swam to reconnoiter Pearl Harbor and nearby places of interest. Although discreet,

Yoshikawa never needed to be secretive in his travels and observations. Pearl Harbor is one of Oahu's most prominent natural features and can be viewed readily from a number of points on the island. Among his frequently used vantage points, Yoshikawa often used Aiea Heights, just above the harbor, and the Suncho Ro teahouse perched on Honolulu's Alewa Heights.[19]

Except for Kotoshirodo, Yoshikawa took no one else into his confidence. If he expected Hawaii's Japanese population to be a pool of willing helpers he was disappointed. Initially encouraged by the "distinct residue of Japanese culture" in Hawaii, he found the Japanese community's "men of influence and character... unanimously uncooperative" and Hawaii's Japanese-Americans "essentially loyal to the United States".[20]

It is one thing for a spy to collect information, but often quite another to transmit it to his controllers. Here Yoshikawa's diplomatic status proved invaluable. He used the consulate's cable channel to send and receive messages in diplomatic code to and from the Foreign Ministry, which served as go-between between Yoshikawa and the Navy General Staff's intelligence section.

The navy's spy in Hawaii wasted little time in commencing a stream of detailed reports to Tokyo. On May 26, for example, he cabled that fleet units in Pearl Harbor consisted of six battleships, seven light cruisers, nineteen destroyers, five

submarines, three aircraft carriers, and a number of auxiliaries. After the September 24 instruction to report on ships in the harbor by section Yoshikawa set up his own code system for designating each area. On December 5 he reported the arrival of three battleships and the departure of Lexington. [21]

The following day, in response to an urgent inquiry from Tokyo regarding the presence of barrage balloons and topred nets at Pearl Harbor, Yoshikawa cabled that there were none. He added prophetically (although he was not privy to the secret Pearl Harbor attack plan), "there is considerable opportunity left to take advantage for a surprise." Captain Tomioka of the Navy General Staff forwarded Yoshikawa's information in radio messages to the First Air Fleet, the last one scant hours before the attack. [22]

Japan's "Sleeper" Spy

The only exceptions to Yoshikawa's solitary modus operandi were caused by the need to establish an agent in place who would be able to function after the outbreak of war and the closing of the consulate. On October 25 Yoshikawa and Kotoshirodo visited Japan's sleeper spy in Hawaii, Bernard Kuehn. Kuehn was supposed to spy for the Japanese after the consulate was closed, but in fact never had the opportunity to perform the espionage duties for which he was greatly overpaid. Why the Japanese risked Yoshikawa's cover to meet with Kuehn is something of a mystery,

but the meeting apparently went undetected by American counter-intelligence.[23]

Kuehn was a former German Navy officer, secret policeman and Nazi Party member who immigrated to Hawaii in the 1930's and operated a succession of small businesses on Oahu. Over the years he had received a considerable amount of money from the Japanese government as a retainer. At the October 25 meeting Yoshikawa passed him \$14,000 in cash, a hefty sum for 1941. The Japanese got little value for their money, for Kuehn was something of a bumbler when it came to even the most elementary principles of espionage. He compromised his cover on a number of occasions when he openly visited the Japanese consulate- usually to ask for more money. It is not surprising to find him identified as a suspected "Nazi agent" by ONI as early as 1939.[24]

The most the Japanese ever got from Kuehn was a scheme for a hopelessly complicated signal system (involving lights, classified advertisements, and sailboat markings) to be used to communicate with Japanese submarines off Hawaii once war broke out. Kuehn was picked up immediately after the Pearl Harbor attack, whereupon he told all. He was tried for espionage and sentenced to death, but his sentence was commuted. Ironically, the consulate clerk who identified Kuehn to the martial law authorities described this Nazi superman as "Jewish looking." [25]

The Mori Call

Kuehn and Yoshikawa are the only Japanese resident spies in Hawaii who can be positively identified from available documentation. Were there others? Despite reports of ubiquitous Japanese espionage networks, no evidence has surfaced to support allegations such as those made in 1942 by the army's Military Intelligence Division:

There is no doubt that the Japanese population was very active in assembling... information for Japanese Intelligence. Their organization is so disciplined and deeply rooted that it defies detection.[26]

There remains, however, inconclusive evidence pointing to supplementary intelligence gathering on Oahu before the Pearl Harbor attack. Mrs. Motokazu Mori, Honolulu stringer for a Tokyo newspaper, conversed by telephone with a journalist in Japan at 2:00 p.m. on December 6. The call was tapped by the FBI, which provided Short's intelligence staffers with a transcript.

The text of the conversation was, on the whole, fairly innocuous. But it did contain references to the numbers of uniformed personnel on the streets, aircraft movement patterns, and talk about different kinds of flowers in bloom, which may or may not have referred to types of ships in port.[27] Short and his subordinates were troubled by the conversation, which they considered highly suspicious. However, they (and subsequent investigators) believed that there was insufficient evidence to conclude that Mrs. Mori's call was part of an intelligence gathering effort.[28]

Postwar interviews with Japanese naval intelligence officers indicate that trans-Pacific telephone calls were used at least occasionally to gather information from sources in Hawaii. They claim also that one such call was placed on the day before the attack in order to ascertain the general tenor of military alertness in Hawaii.[29] It may well be that Mrs. Mori's conversation was innocent, or if she did provide intelligence information she did so unknowingly. More than 40 years later the evidence remains inconclusive.

Lieutenant Commander Suzuki and Taiyo Maru

Regardless of the numbers or quality of its agents in Hawaii, the Japanese Navy considered intelligence for the Pearl Harbor attack too crucial to be left entirely to agents in the field. The importance of the operation demanded that planners from the Navy General Staff travel to Hawaii personally to check the scene. Lieutenant Commander Suguru Suzuki, an airman in the general staff's intelligence section, was dispatched with two other officers in October. They traveled incognito aboard the liner Taiyo Maru, one of the last vessels to make the voyage between Japan and the United States before the outbreak of war. Suzuki assumed the identity of the ship's assistant purser when the ship sailed from Yokohama on October 22.[30]

The voyage of Taiyo Maru was a dry run which followed the First Air Fleet's route across the Northern Pacific. Suzuki and his two

colleagues made frequent readings of weather and sea conditions. They were constantly on the lookout for U.S. air and sea patrols, paying particularly close attention to signs of American alertness as the ship approached Oahu.[31]

When they docked in Honolulu on November 1 the naval officers remained aboard ship: it would hardly do to have their cover stripped away with plans so well advanced. Suzuki claims to have viewed Pearl Harbor from Taiyo Maru's bridge, but the six mile distance between Honolulu Harbor and the virtually landlocked Pearl Harbor make it unlikely. He did, however, hand Consul General Kita an extensive questionnaire containing about 100 queries on the details of Pearl Harbor and its defenses. Kita took the questionnaire back to the consulate, where Yoshikawa answered the questions in detail. The consul general returned to the ship with Yoshikawa's written replies, taking care to conceal both the questions and replies when passing the customs officials who screened all visitors and passengers boarding and leaving the vessel.[32]

Japanese intelligence was characterized by diligence rather than daring. Although the espionage effort lacked the glamour popularly associated with spying it is enough to say that it was equal to the task set for it.

1. Takeo Yshikawa, with Norman Stanford, "Top Secret Assignment", U.S. Naval Institute Proceedings 86 (December 1960), 30-34.
2. PHA, 9:4375.
3. Ibid., 12:261-63, 266.
4. Ibid., 2:794, 6:2610.
5. Ibid., 6:2543.
6. Ibid., 8:3395; Joseph J. Rochefort interview, USNIOH, 150.
7. "A Version of the Japanese Problem in the Signal Intelligence Service" (SRH 252), Records of the NSA.
8. PHA, 36:16.
9. Ibid., 10:4674, 4682, 4687.
10. Ibid., 15:1889, 1895-98, 26:230, 28:886, 36:126-28.
11. Rochefort denied that the Japanese engaged in deceptive radio traffic, but Soryu's communications officer contradicts him. Prange, 338; Rochefort interview, 156-57.
12. Wholstetter, 387.
13. PHA., 14:1329.
14. Ibid., 14:1330.
15. "A General Staff Study. Plan: Seizure of Orange Nationals", n.d., Records of the Hawaiian Department, Adjutant General's Office, Emergency Defense and Mobilization Plans, 1940-1941, Record Group 338, National Archives.
16. PHA, 35:507.
17. Yoshikawa, 34.
18. PHA, 35:336, 366, 555.
19. Yoshikawa, 34; PHA, 35:387, 35:383.
20. Yoshikawa, 35-36.
21. Ibid., 12:260, 262, 268-69.
22. Ibid., 12:269; Prange, 484.
23. PHA, 35:331-32.

24. Ibid., 35:320, 328-29, 330-31.
25. Ibid., 12:267-68; 35:327.
26. Confidential Memorandum; Military Intelligence Division, March 10, 1942, Records of the Army Staff, Office of the Assistant Chief of Staff, G-2, Records Relating to the Attack on Pearl Harbor and Sabotage Activities, ca. 1937-1947, Record Group 319, National Archives.
27. PHA, 35:274.
28. Ibid., 23:875.
29. Prange, 478-79.
30. Ibid., 315-16.
31. Ibid.
32. Yoshikawa, 36-38; Prange, 315-16; PHA, 12:262, 35:342, 517, 569. Yoshikawa mistakenly places delivery of the questionnaire "about ten days before the attack". He says Tokyo ordered him to report twice a week after Suzuki's visit, but that message was dispatched November 15.

CHAPTER 6

Status Of U.S. Forces In Hawaii

The army preoccupation with sabotage, espionage, and fifth column activity in general was shared by responsible navy officers. Captain Irving Mayfield, senior intelligence officer for the Fourteenth Naval District (the shore establishments in Hawaii) was convinced that there were no really trustworthy Japanese in Hawaii; even those who were U.S. citizens were suspect in his eyes. Commander Harold Martin, commanding officer of Kaneohe Naval Air Station, was likewise so concerned with the threat that he had his men lectured on the subject at their weekly inspection on Saturday, December 6.[1]

Hawaii Defense Plan

In spite of their concern about internal security, army and navy commanders in Hawaii did prepare an interservice plan for joint protection of the islands against external attack.[2] The plan explicitly assigned responsibility to the army for protection of the Hawaiian Islands and their vital military bases against air attack. The army was charged with providing antiaircraft fire and fighter interception to repel air raids. Naval defense forces in Hawaii, under the command of Rear Admiral Claude Bloch, Commandant of the Fourteenth Naval District, were responsible for conducting long range air patrols which would spot any hostile

forces long before they reached Hawaii. The underlying premise of the plan was that the Pacific Fleet should be free to execute its strategic assignments ranging over the vast expanses of the Pacific without undue concern over security in its principal anchorage.

On paper it was an adequate plan, but those assigned to carry it out were beset with the usual confusion, misunderstandings, and shortages which attend the execution of so many well laid plans. Colonel Walter Phillips, Hawaiian Department chief of staff, betrayed a fundamental misunderstanding of the army's mission when he told Congressional investigators, "We felt secure against a raid, particularly with the Fleet here...."[3] He failed to grasp that the army was supposed to provide protection for the fleet while it was anchored in Pearl Harbor, not the other way around. It is not surprising then that Phillips admitted, "I never knew what the Navy had [in the way of scout planes]," demonstrating an ignorance of a vital element in Hawaii's defense equation.[4] Phillips' position, it should be noted, was not some obscure and unimportant slot in the military bureaucracy; as Hawaiian Department chief of staff he coordinated the workings of one of the largest and most important military commands in the pre-war army.

Short and Kimmel got along well personally. They played golf together every other weekend and met at least once a week to discuss common concerns.[5] But personal cordiality was no

substitute for institutional articulation. When planning was underway for the construction of a new headquarters building for the Pacific Fleet the navy's senior construction officer wrote Kimmel suggesting that the building design include a joint command center to facilitate interservice operations. Kimmel, assigning a lower priority to such coordination, replied, "There is considerable doubt as to the practicability or necessity of combining the operating staffs of the Army and Navy in one building." [6] Kimmel justified his position in terms of his fleet's responsibility for waging war on the high seas, not in the restricted area of Hawaiian waters. To establish a joint operating facility, he wrote, "would have at least a psychological tendency to divert Fleet units to defensive tasks." [7]

Kimmel's Expectations

If Kimmel was preoccupied with his offensive mission, at least he understood his role in U.S. strategy. He was, however, obsessed beyond the point of prudence with the fleet's assignment to move against the Japanese in the Marshalls. Even after the war he maintained, "I felt, and I believe all the Navy felt, that the real mission of the Pacific Fleet was offensive, and I think that nothing has ever occurred to change that conviction in the minds of any responsible naval officers." [8]

To the extent that Kimmel pondered the danger of a Japanese

attack on his fleet in Hawaiian waters, he never settled definitively on any one direction from which such an attack seemed most likely. The greatest potential for surprise, he realized, lay in an attack from the north, but on some occasions, at least, he believed the greatest danger lay to the southwest, the direction of the nearest Japanese bases. More important than the anticipated direction of an attack were Kimmel's expectations of what type of an attack the Japanese would mount should they strike the Pacific Fleet at or near its home base. Kimmel believed submarines would be the most likely instrument. Under Richardson's tenure as commander-in-chief the fleet had recorded a number of suspected submarine contacts in Hawaiian waters. Kimmel was concerned about the danger represented by those unproven but highly suspicious contacts and felt "an air attack on Pearl Harbor or anything other than a surprise submarine attack was most improbable." [9]

The perception of the submarine danger throws into sharp relief the fact that it was not just interservice coordination and communication that was deficient. Even among Kimmel's flag officers there was sometimes an inexplicable failure of information circulation. Rear Admiral Patrick Bellinger, commander of Patrol Wing Two, was responsible for long range air reconnaissance from Oahu and played a key role in the joint army-navy defense plan. But despite Kimmel's concern about the danger from Japanese submarines, Bellinger was ignorant of the

suspected sub contacts prior to the Pearl Harbor attack.[10]

Awareness of Air Attack Danger

Bellinger and his Army Air Corps counterpart, Major General Frederick Martin, were not oblivious to the possibility of surprise attack. In the spring of 1941 they prepared a plan for joint army-navy air operations for the defense of Oahu. The plan was premised on a number of very shrewd deductions about likely Japanese courses of actions. Martin and Bellinger, looking at Pearl Harbor's vulnerability from their perspectives as aviators, stated in their plan that the most likely method of attack was a surprise air raid by planes launched from carriers north of Oahu.[11]

Even non-airmen, including some in Washington, were momentarily discomfited by the possibility of an air raid. After the British air raid on the Italian fleet in Taranto Stark wrote Richardson on November 22, 1940 urging him to look into the possibility of installing anti-torpedo nets around the ships in Pearl Harbor. Richardson replied with misplaced confidence that the harbor was too shallow for torpedo launches. Admiral Bloch dispatched a more detailed reply to Stark stating:

Considering... the improbability of such an attack under present conditions [and] the unlikelihood of an enemy being able to advance carriers sufficiently near in wartime in the face of active Fleet operations, it is not considered necessary to lay such nets.[12]

Bloch's casual assumption that U.S. forces would enjoy the

luxury of a declaration of war before having to worry about Japanese attacks was not shared by all senior officers. Colonel Philip Hayes (Colonel Phillips' predecessor as Hawaiian Department chief of staff) included in the Department's standing orders the warning, "it is possible that a declaration of war upon the United States may be preceded by a surprise raid or attack on the Pearl Harbor Naval Base by hostile aircraft, submarines, or surface ships...."[13]

Kimmel tended to downgrade the likelihood of an air attack and focused on the danger of a surprise blow by Japanese submarines. He testified, "We considered a massed submarine attack on the ships at sea in the operating areas [south of Oahu] as a probability.... We considered an air attack on Pearl Harbor as a remote possibility." Nonetheless, in September he ordered the planes of the fleet air units dispersed as a precaution against air attack.[14]

Radar

Perhaps one reason why military commanders in Hawaii seemed to minimize the danger of being caught by a surprise air attack was the new air warning radar system being phased into the islands' defense network. Radar in 1941 was a new invention still not fully emerged from the experimental stage. Although it was slated to be integrated with the interceptor command when fully operational, much work remained to be done before that stage was

reached. The Army Signal Corps, charged with putting the system on line, was still training operators and trying to establish radar sites throughout Hawaii when war came on December 7, 1941. Temporary mobile sets were in operation at six locations on Oahu (Fort Shafter, Opana, Kaala, Waianae, Kawaiiloa, and Koko Head), but transportation setbacks had delayed the arrival of components for permanent installations and the National Park Service objected to the placement of a station atop Haleakala, one of Hawaii's highest peaks.[15]

Even without these headaches the Air Warning Service (as the radar network was called) was laboring under serious handicaps. The major problem was not the technical difficulties to be expected in making operational any new system, but the more fundamental lack of inter- and intraservice coordination which typified the U.S. commands in Hawaii. Radar was supposed to function as an adjunct to the interceptor command, but Air Corps involvement throughout 1941 was peripheral and Signal Corps officers found themselves, by default, in effective command. Army-navy cooperation was essential for air defense, but there was no effective liaison between the radar network and the navy. Admiral Bloch admitted he "had no definitive information on or before December 7 as to what the Army [sic] Warning Service was in fact doing." [16]

Navy War Warning

Few aspects of the Pearl Harbor attack have been subjected to such close scrutiny as the messages which passed between Washington and the American commanders in Hawaii from November 27 to December 7. As Japanese preparations for the invasion of Southeast Asia became more obvious and the chances for a diplomatic settlement of Japanese-American differences continued to recede, the War and Navy Departments dispatched a series of signals to Kimmel and Short. Defenders of the two Hawaii commanders maintain that the messages were vague at best, misleading at worst, and withheld information that would have enabled the Pacific Fleet and Hawaiian Department to prepare for the coming attack.

On November 27 Admiral Stark cabled Kimmel:

This dispatch is to be considered a war warning. Negotiations with Japan looking toward stabilization of conditions in the Pacific have ceased and an aggressive move by Japan is expected within the next few days. The number and equipment of Japanese troops and the organization of naval task forces indicates an amphibious expedition against either the Philippines or Kra Peninsula or possibly Borneo. Execute an appropriate defensive deployment preparatory to carrying out the tasks assigned in WPL46. Inform district and army authorities. A similar warning is being sent by the War Department....[17]

Kimmel consulted with his staff and senior subordinates regarding the warning. He also conferred with General Short. Kimmel then redeployed his available carrier units in accordance with plans that were already in motion and given additional urgency by the warning. With an enormous geographic area of

responsibility the primary focus of his attention continued to be the far distances of the Pacific. Among those Kimmel consulted about the warning was Vice Admiral William F. Halsey, commander of the Pacific Fleet Aircraft Battle Force and the fleet's senior air officer. He did not, however, consult with Admiral Bellinger, whose responsibility encompassed air reconnaissance of the approaches to Hawaii.[18]

Kimmel was aware, though, of the exposed position of the Hawaiian Islands and responded by strengthening the defenses of American-controlled islands west of Hawaii. On November 28 a task force consisting of Enterprise and escorting vessels left Pearl Harbor under Halsey's command. Enterprise carried a group of marine fighter planes to reinforce U.S. defenses at Wake, an exposed outpost closer to Tokyo than Pearl Harbor. Because of his consultation with Kimmel, Halsey was aware of the imminence of war. He placed his command, Task Force 8, on a war footing: radio silence was observed, and aircraft guns and torpedoes were armed.[19] Another carrier task force, organized around Lexington, left Pearl Harbor bound for Midway on a similar mission. Kimmel's third carrier, Saratoga, was on the West Coast for repairs.

Army War Warnings

Army correspondence between Washington and Hawaii during this period was more extensive than the navy's, but left General Short

even more in the dark than Kimmel. On November 27 Marshall cabled Short:

° Negotiations with Japan appear to be terminated for all practical purposes with only the barest possibilities that the Japanese Government might come back and offer to continue. Japanese future action unpredictable, but hostile action possible at any moment. If hostilities cannot, repeat not, be avoided, the United States desires that Japan commit the first overt act. This policy should not, repeat not, be construed as restricting you to a course of action that might jeopardize your defense. Prior to hostile Japanese action you are directed to undertake such reconnaissance and other measures as you deem necessary, but those measures should be carried out so as not, repeat not, to alarm civil population or disclose intent. Report measures taken....[20]

On the same date General Miles wired the Hawaiian Department G-2: "Japanese negotiations have come to a practical stalemate. Hostilities may ensue. Subversive activities may be expected...." The following day General Martin received a dispatch from General Henry ("Hap") Arnold, chief of the Army Air Corps. Arnold instructed Martin to guard against internal security threats.[21]

After consulting with his subordinates and with Kimmel, Short had no doubt that Washington considered the most immediate threat to be from Hawaii's Japanese. Short put his troops on alert not against an external attack, but against the danger of sabotage and other fifth column activity. His orders included the massing of army aircraft into tight concentrations on the ground, where they would be easier to guard against saboteurs but easy targets for strafing aircraft. On the 28th he informed Washington of

these actions in a terse message reading, "Report Department alerted to prevent sabotage. Liaison with Navy Reurad [regarding your radiogram number] four seven two twenty seventh." [22] Similar messages between the Hawaiian Department and Washington during the next several days confirmed the posture of alert against fifth column activities.

Marshall's December 7 Warning

While communications passed between Washington and Hawaii regarding the approach of war Magic operators on the morning of December 7 (Washington time) intercepted and decoded a final series of messages from Tokyo to the Japanese ambassadors in Washington. A lengthy message to be delivered to the U.S. government, transmitted in fourteen parts, announced the Japanese government's conclusion that negotiations were hopeless and that further diplomatic efforts to resolve Japanese-American differences were hopeless. The message, to all intents and purposes, broke relations between the two countries and signified Japan's intention to resort to war to achieve her aims. The message concluded with finality: "The Japanese Government regrets to have to notify hereby the American Government that in view of the attitude of the American Government it cannot but consider that it is impossible to reach an agreement through further negotiations." [23]

That message was followed within a matter of minutes by an

instruction from Tokyo to submit the message."at 1:00 p.m. on the 7th, your time [7:30 a.m. Hawaii time]."[24] These intercepts galvanized the Magic staff working that Sunday morning. Officers on duty realized that the situation required an urgent warning be dispatched to the Hawaiian Department and other commands, but neither Marshall (who was horseback riding) nor any other officer with enough seniority to approve such a dispatch was available that Sunday morning. Aides finally located the chief of staff and told him of the urgent situation. After conferring with Admiral Stark, Marshall dispatched a message to Short shortly before noon [about 6:30 a.m. Hawaii time]: "Japanese are presenting at one pm Eastern Standard Time today what amounts to an ultimatum.... Just what significance the hour set may have we do not know but be on the alert accordingly. Inform naval authorities of this communication."[25]

Bad luck and atmospheric conditions conspired at that point to deprive Marshall of the speediest means of transmission to Hawaii. Because the army circuit between Wahington and Honolulu had "faded out" that morning, the message was relayed to the Hawaiian Department via Western Union and RCA. It was received by the RCA office in Honolulu at 7:33 a.m. An RCA messenger wasted little time in setting out for Hawaiian Department headquarters at Fort Shafter, but he was caught en route by the Japanese attack. Snarled traffic, general chaos and roadblocks delayed

delivery until 11:45; by then the last Japanese planes were winging back to their carriers.[26]

The War Warnings: Observations

It is the warning messages, even more than the winds and bomb plot messages, that lie at the very heart of the debate about responsibility for American unpreparedness at Pearl Harbor. They illustrate the assumptions, policies and reasoning of responsible officers and officials in Washington and Hawaii. They form the basis of indictments which have been leveled against Short, Kimmel, Roosevelt, Marshall; Stark, Turner and others. It is therefore necessary to make some observations about these messages and the reactions they engendered.

Stark's dispatch to Kimmel was explicitly a "war warning." Did the use of these words place responsibility on Kimmel's shoulders alone for the subsequent disaster? Such an interpretation would be unreasonable in light of the warning's references to Japanese moves underway against the Philippines, the Kra Peninsula and Borneo. The warning not only contained no cautionary references to his vulnerable position in Pearl Harbor, it had the effect of diverting his attention to a theater of operations thousands of miles distant from Hawaii.

The instruction to "execute an appropriate defensive deployment preparatory to carrying out the tasks assigned in WPL46 [WPPac 46]" also requires a closer look. What Stark meant by this

sentence and how Kimmel interpreted the words is far from clear. Of the principal tasks assigned to the fleet by WPL 46 the only one for which a Pearl Harbor base was advantageous was the limited offensive against Japanese bases in the Marshalls. The most reasonable interpretation of the wording would be that Kimmel was instructed to prepare his fleet to attack the Marshalls while simultaneously keeping them in a tactically defensive posture. The problem with Stark's instructions is that they were contradictory: offensive preparations required concentration of the fleet, and concentration made it vulnerable to attack.

Kimmel's testimony regarding his own interpretation of "appropriate defensive deployment" sheds little light on the subject. It was, he said:

a strategic matter, not a tactical matter. It was a strategic defensive employment- I mean our understanding was- and that was primarily to make sure that when we deployed the fleet, or put them in any position that they would not take on an offensive character or anything that the Japanese could consider offensive.[27]

These words only add to the confusion. The original rationale for basing the fleet at Pearl Harbor was to menace the Japanese, so the obvious "strategic defensive" deployment would have been redeployment to the West Coast, and clearly neither Kimmel nor Stark contemplated such a move.

The subject can be argued ad nauseum, but the most important

point to be made is that Kimmel's instructions were unclear, and he did not insist on clarification. Even if there had been clearer instructions, it is questionable how much better prepared the Pacific Fleet would have been. When Kimmel received the warning he did not consult Admiral Bellinger, the officer in charge of long range air reconnaissance at Pearl Harbor. When Kimmel conferred with Short after the November 27 warnings Captain Charles McMorris, Pacific Fleet war plans officer, told them that the chance of a Japanese surprise attack on Hawaii was "none". Even though Kimmel was- in terms of his personal relations with Short- conscientious about army-navy cooperation, he was not aware that the army alert was for sabotage only (despite the fact that the Hawaiian Department had previously given Admiral Bloch copies of its standing alert orders).[28]

The army, too, was beset by confusion and misapprehension. Short's sabotage alert was the culmination of years of obsession with the imagined danger posed by Hawaii's Japanese. Well conditioned reflex caused the Hawaiian Department to react unquestioningly to Marshall's warning of November 27 by mobilizing against the imagined internal threat. Short correctly interpreted as approval the War Department's silence when he informed Washington on November 28 that his forces were on sabotage alert.[29] The comfortable circle of unexamined assumptions came a full full 360 degrees when Short failed to make sure that Kimmel understood what type of alert he had

ordered for the Hawaiian Department.

Underestimation of Japanese

Underlying U.S. failure to consider a Japanese naval attack on Pearl Harbor as an imminent danger was a consistent and long standing depreciation and misestimation of Japan's military capabilities and willingness to take the risks involved in an attack on Pearl Harbor. Admiral Bloch, for one, believed that the limited fuel capacity of Japanese warships would make it impossible for them to approach Hawaii without being detected. General Short thought that, since Japanese forces were obviously preparing to invade Southeast Asia, they would have to commit all their military assets to that theater.[30]

Vice Admiral Wilson Brown, commander of the Pacific Fleet Scouting Force, believed:

Japanese fliers were not capable of executing such a mission successfully, and... if they did, we should certainly be able to follow their planes back to their carriers and destroy the carriers so that it would be a very expensive experiment.[31]

Brown was operating on the presumption that Japanese leaders assessed the risks in the same way as American officers (a presumption supported in part by the nervous reaction of the Japanese Naval General Staff to Yamamoto's proposal). More fundamentally, Admiral Brown and his peers assumed that the Japanese would, after considering those risks, come to the same conclusions as Americans. That assumption was a classic case of

cross-cultural misunderstanding. An American officer in Yamamoto's position might have been told, "Go ahead and resign; we won't jeopardize our carriers for your pet idea." Organizational harmony, however, is given a higher priority in Japanese culture, and undoubtedly played a crucial role in the general staff's capitulation to Yamamoto.

General Miles, chief of Army intelligence in Washington, expressed the thinking of senior American officers in these words:

We did grant the Japanese the best of good sense. We did very much question whether he would attack Hawaii, because such an attack must result from two separate decisions on the part of the Japanese, one to make war against the United States, which we thought at that time in the long run would be suicidal, as has since transpired, and, two, to attack a very fortress and fleet, risking certain ships that he could not replace, and knowing that the success in that attack must rest very largely on that surprise being successful; in other words, in finding that fortress and fleet unprepared to meet the attack.[32]

Roberta Wohlstetter put it more succinctly:

The Japanese and American estimates of the risks to the Japanese were identical for the large scale war they had planned, as well as for the [Pearl Harbor attack]. What was miscalculated was the ability and the willingness of the Japanese to accept such risks.[33]

Situation of Pacific Fleet December 7, 1941

On the morning of December 7 there were 103 vessels (not counting miscellaneous yard craft) of the Pacific Fleet in Pearl Harbor. This number included eight battleships, two heavy cruisers, six

light cruisers, forty-three destroyers and four submarines. Another 106 of Kimmel's ships were dispersed at other locations in the Pacific ranging from Alaska to the Peruvian coast to the Solomon Islands.

Of the major units absent from Pearl Harbor, the battleship Colorado was at Puget Sound. Saratoga remained in California; Lexington was off Midway delivering planes for the garrison there; and Enterprise was about 150 miles west of Oahu steaming homeward toward Pearl Harbor after delivering planes to Wake. Halsey's Enterprise Task Force, which included three cruisers and eight destroyers had actually been scheduled to arrive at Pearl Harbor before the attack began, but heavy weather had slowed the force's progress. Lexington's Task Force 12 included three cruisers and five destroyers. Task Force 3, consisting of the cruiser Indianapolis and five destroyers, was engaged in training near Johnston Atoll, about 800 miles southwest of Oahu.[34]

Kimmel had concentrated nearly half his fleet at Pearl Harbor. He felt forced to do so because of the necessity of concentrating the ships to prepare for wartime operations and because of the logistical difficulties of operating so far from his sources of fuel. He testified:

the thing that tied the fleet to the base more than any other one factor was the question of fuel. I tried to operate more ships at sea and found I could not do it because I was depleting the fuel supply at a time when it was imperative that we bring this fuel supply up.[35]

If the disposition of his forces worried Kimmel, he was just as concerned about the readiness of the crews who manned the ships. The 46,000 sailors and 2,000 marines in the Hawaii area included many reservists recently called to active duty. Many had never heard a gun fired in practice, let alone in anger. In fact, the Pacific Fleet, testified Kimmel, had had no main battery practice for more than a year.[36]

The Pacific Fleet units in Pearl Harbor, however, were not completely unready. They were in a state of readiness which required about one fourth of all anti-aircraft guns to be manned at all times. Liberty policies restricted overnight liberty to those above the rank of first class petty officer. In general, although Kimmel judged the training of his crews to fall short of the standards which would be required in combat, discipline was good.[37]

Hawaiian Department on December 7, 1941

The army's Hawaiian Department had a total of 43,000 officers and men (including the recently activated Hawaii National Guard regiments) on the eve of the December 7 attack. The great majority were stationed on Oahu, with the 20,000 troops of the 24th and 25th Infantry Divisions at Schofield Barracks comprising nearly half the total. In the critical area of antiaircraft defenses Short commanded eighty to ninety (sources conflict) 3 inch guns (about 70% of which were mobile), twenty 37 millimeter

guns, and slightly more than 100 .50 caliber machine guns. Fixed 3 inch batteries at seacoast defense installations had ammunition at hand, but it was kept crated to prevent deterioration. Ammunition for the mobile three inch batteries (based at Camp Malakole, Schofield Barracks and Fort Shafter) was stored several miles away in underground shelters at Aliamanu Crater.[38]

The three services had a total 394 planes in Hawaii when the Japanese struck on December 7.[39] Nearly all were on the ground, unarmed and with empty fuel tanks. Of the army's 232 nearly half were obsolete or unsuitable for combat. Bomber strength was concentrated at Hickam Field, adjacent to Pearl Harbor; it consisted of twelve B-17 heavy bombers, twelve A-20 attack bombers, thirty-three obsolete B-18 medium bombers, and a scattering of miscellaneous types. The mainstay of the Army's fighter squadrons were ninety-nine P-40's; thirty-nine obsolete P-36's and fourteen ancient P-26's rounded out the interceptor strength. Most of the fighters were at Wheeler Field in central Oahu, with two squadrons temporarily based at Haleiwa and Bellows Fields (on the north and southeast shores, respectively) of the island.[40]

Navy and Marine Corps air strength totaled 162. There were seventy-one patrol reconnaissance patrol planes, divided nearly evenly between Ford Island Naval Air Station in Pearl Harbor and the new air station at Kaneohe Bay on the southeast side of Oahu. Most of the navy's fighters and bombers were at sea with the

carrier groups, but Ford Island held twelve F4F fighters and three SBD dive bombers. At the marine airfield at Ewa, west of Pearl Harbor, were twelve F4F's and thirty-two SBD's. The Navy patrol planes, too few to conduct daily long-range flights covering a 360 degree sector around Oahu, had searched south and southwest of the island the day before and lay placidly at anchor and on their airfields as dawn broke on December 7, 1941.[41]

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1. PHA, 23:650, 738.
 2. For full text of the joint defense plan see Ibid., 33:1153.
 3. Ibid., 22:146.
 4. Ibid.
 5. Ibid., 7:3007.
 6. Moreel to Kimmel, October 20, 1941; Kimmel to Moreel November 6, 1941, "1941. Admiral Kimmel's personal file", Record Group 313, National Archives.
 7. PHA, 6:2788.
 8. Ibid., 6:2786.
 9. Ibid., 1:310, 6:2602, 32:234.
 10. Ibid., 22:568.
 11. Ibid., 1:379; 33:1182.
 12. Ibid., 1:275, 278-79.
 13. Ibid., 1:385.
 14. Ibid., 6:2577; 22:325.
 15. Ibid., 3:1069; 22:211-18.

16. Ibid., 22:468.
17. Ibid., 33:1176.
18. Ibid., 6:2756-57.
19. Ibid., 23:608.
20. Ibid., 2:828.
21. Ibid., 14:1329; 22:198.
22. Ibid., 14:1330.
23. Ibid., 12:245.
24. Ibid., 12:248.
25. Ibid., 14:1335.
26. Ibid., 7:136.
27. Ibid., 6:2730.
28. Ibid., 7:3078; 27:157.
29. Ibid., 7:2922.
30. Ibid., 7:3081; 22:485.
31. Ibid., 26:148.
32. Ibid., 2:877.
33. Wholstetter, 354.
34. PHA, 12:345-49; 21: Item 23 ("Disposition of U.S. Pacific Fleet, 7 Dec. 1941").
35. Ibid., 6:2569.
36. Ibid., 6:2498-99; "Pearl Harbor" reference card file, Office of the Chief of Military History, Washington.
37. Commander-in-Chief, Pacific Fleet to Secretary of the Navy, February 15, 1942. "Report of the Japanese Raid on Pearl Harbor 7 December 1941", CincPac Reports.
38. PHA, 1:149-50; 7:2963; 12:319-20.
39. Ibid., 12:323-24.

40. Memo Hawaiian Air Force to Roberts Commission, December 26, 1941, appended to: "Operational History of the Seventh Air Force, 7 December 1941 to 6 November 1943" (AAF Historical Study No. 41), 1945, typescript in Office of Air Force History, Bolling AFB, Washington DC (hereafter AF History).

41. PHA, 12:351-52; 32:232.

CHAPTER 7

Voyage of the First Air Fleet

While U.S. commanders in Hawaii and officials in Washington fretted over Japanese intentions, Admiral Nagumo's First Air Fleet had been underway since November 26. Upon secrecy, more than any other factor, hinged the success of the fleet's mission. To reduce the chance of being spotted at sea, Nagumo sent no planes aloft during the voyage.[1]

At first the seas were relatively calm, considering the season and latitude. After December 4 (Tokyo time) the weather worsened and some of the ships rolled as much as 45 degrees in the heavy swells. Nagumo varied his formation according to weather conditions. Generally a line of four destroyers followed by the heavy cruisers Tone and Chikuma were in the vanguard. The heart of the formation were the six carriers steaming in two columns. Akagi led the starboard column, followed by Kaga and Shokaku; to port steamed Soryu, Hiryu and Zuikaku. The tankers and remaining destroyers were scattered throughout the formation. The three submarines, originally to be deployed as advance scouts, were kept at the heart of the fleet (where they would be of little use) because of low visibility conditions. The battleships Hiei and Kirishima brought up the rear.[2].

The progress of the force was dictated by the maximum speed of

its slowest ship, the tanker Toei Maru (16 knots). The fleet proceeded at a stately 12 to 14 knots, slowing to 9 knots for the tricky business of refueling at sea. Despite the relatively good weather at the beginning of the voyage, several seamen were swept overboard when securing cables snapped during refueling. The short-legged destroyers required daily replenishment, while Soryu (which returned to Japan with less than 100 tons of oil) and Hiryu each carried an additional 700 tons of fuel in barrels stored on deck. The oil was fed to the engines by bucket brigades during the final dash to the launch point. As the fleet approached Hawaii the tankers Toho Maru, Toei Maru and Nihon Maru, escorted by the destroyer Arare, dropped out of formation on December 4 (Hawaii time) to wait to rendezvous with the main body on its return home.[3]

Radio Silence

Important as they were, fuel supply and navigation were not Nagumo's main worry. The all important question of secrecy was uppermost in his mind. There was little he could do to prevent an accidental encounter with a stray warship or merchantman, but he could and did impose strict radio discipline on his ships. Transmitters were made inoperative by removal of vital parts, and the ships communicated with one another by means of signal flags and blinker lights. Radio messages from Tokyo were picked up by Hiei, which had the best reception capability, and relayed by flag and blinker to the other vessels.[4]

The question of radio silence is important. Revisionist writers have claimed that the First Air Fleet betrayed its progress to American radio interceptors, the information was conveyed to the highest U.S. authorities, and those authorities prevented the dispatch of timely warning to Hawaii (see Chapter 27 for a fuller discussion of revisionist historiography). Genda insisted in a 1947 interview that radio silence was absolute. One of Nagumo's communications staff officers, Lieutenant Commander Chuichi Yoshioka, also survived the war and maintains that radio silence was in force throughout the voyage to Hawaiian waters. A number of former Japanese naval officers who participated in the attack were interviewed by the author; they affirmed that no radio signals- not even low powered "talk between ships"- were transmitted. In the face of such authoritative testimony and the lack of positive proof that the Americans intercepted signals from the First Air Fleet the preponderance of available evidence indicates that Nagumo was successful in preserving radio silence.[5]

A final and most telling point is the discipline, dedication and spirit of self-sacrifice which prevailed in the Imperial Japanese Navy. Everyone in Nagumo's force with access to a transmitter was instructed on the subject of radio silence and understood the need for it. It is difficult to believe that any Japanese officer or sailor would have broken radio silence, no matter how dire the necessity, and jeopardized the success of the

mission and the fate of the Empire.

Radio Messages to First Air Fleet

Radio silence did not prevent the fleet from receiving frequent messages from Tokyo. Relayed via Hiei, Nagumo got daily weather reports and frequent updates from Yoshikawa's intelligence reports (which first passed through the commercial cable, Foreign Ministry and Navy General Staff). The task force commander received final confirmation on December 2 (Hawaii time) that efforts to settle with the United State had been abandoned and that he should proceed as planned. The code phrase "Climb Mount Niitaka" relieved any lingering doubts that Yamamoto's plan would be the opening shot in Japan's desperate strategic gamble.

Final Approach

On December 4 a message from Tokyo brought the news that six battleships, eleven cruisers and the aircraft carrier Lexington were in Pearl Harbor. Updated reports noted Lexington's departure, and a final signal in the pre-dawn darkness of December 7 brought the most important news of all: there was no activity to suggest that U.S. armed forces in Hawaii were preparing to meet a carrier attack. That welcome news was received as the Nagumo force was well underway in its high speed approach to Pearl Harbor. On the morning of the 6th, some 600 miles almost due north of Oahu, the fleet made a final refueling. The remaining tankers and destroyer Kanami left the

carriers. Shortly before noon the carriers and escorts swung south for the final run at 20 knots. This was the most critical period, the point at which discovery by patrolling American planes and ships was most likely. Akagi hoisted the famous "Z flag" which had flown during Japan's climactic victory over the Russian fleet in 1905. Also repeated were the words which had inspired Japan's sailors on that day: "The rise and fall of the Empire depends on this batttle. Every man will do his duty." [6]

As the fleet sped toward its launch point, crewmen and pilots experienced a wide variety of emotions. Seaman Shigeki Yokota aboard Kaga felt "a little frightened". Seaman Masayuki Furukawa on Shokaku worried about the possibility of an American counterattack. [7] Enlisted men were not alone in their worries. Officers listened closely to the last-minute results of Yoshikawa's efforts as they came in over the radio. At 7:03 p.m., less than 24 hours from the launch, the Sixth Fleet submarine I-72 radioed from Lahaina Roads that there were no warships in that anchorage. Some tuned in to radio station KGMB in Honolulu- broadcasting at the Army's request past its normal operating hours to guide an incombng flight of bombers from California- listening for any sign of unusual military activity. They were reassured by the normal sounds of music and chatter. [8]

Launch

Just before dawn the carriers reached their launch point

slightly more than 200 miles north of Pearl Harbor. At 5:30 two Type O reconnaissance seaplanes (not to be confused with the Nakajima A6M2-N, the floatplane version of the Zero fighter) took off from Tone and Chikuma to reconnoiter Lahaina Roads and Pearl Harbor respectively. At 5:50 Nagumo turned his ships east into the wind and increased speed to 24 knots. Captain Kiichi Hasegawa, Akagi's skipper, laconically told the assembled pilots, "All right, all the plans are made, let's get going." Shortly after 6:00 the carriers began to launch the first wave of fifty-one dive bombers, forty torpedo bombers, forty-nine horizontal bombers, and forty-three fighters. As these 183 planes winged southward under Fuchida's personal command they left behind two disappointed fighter pilots scheduled to accompany them. One had crashed into the ocean (he was rescued by a destroyer); the other was the victim of engine trouble.[9]

As the sea became rougher the carriers began launching a second wave shortly after 7:00. It included seventy-seven dive bombers, thirty-six fighters, and fifty-four horizontal bombers. The 167 planes of the second wave were followed by a protective cover of fighters which circled over the fleet during the attack. For the sailors of the First Air Fleet the long wait began.[10]

Nagumo may have also launched four floatplanes (one each from his battleships and heavy cruisers) for scouting duty, but the evidence is inconclusive. Prange, citing no source, says he did. He may have gotten the information from a report of a

Japanese POW interrogation submitted to the Congressional committee investigating Pearl Harbor. Japanese Pearl Harbor pilots interviewed by the author say that, other than the two launched at 5:30, no floatplanes took to the air during the attack.[11]

Enterprise planes

The fighters and bombers of the First Air Fleet were not the only carrier planes winging toward Pearl Harbor that morning. The Enterprise task force under Admiral Halsey had completed its delivery of fighter planes to Wake Island and was due in Pearl Harbor at 7:30 a.m. on Sunday. By what turned out to be one of the few strokes of good luck to befall U.S. forces that day poor weather and refueling difficulties slowed Halsey's progress. Dawn found him still 200 miles west of Pearl Harbor.[12]

At 6:15 Halsey launched eighteen SBD Dauntless dive bombers from Scouting and Bombing Squadrons Six. They were to scout the area between Task Force Eight and Pearl Harbor and land at the naval air station on Ford Island. A two plane flight led by the Enterprise air group commander, Commander H. L. Young, sped off without delay toward Pearl Harbor. Young carried as a passenger Lieutenant Commander Bromfield Nichol, one of Halsey's aides. Nichol was to report immediately to Kimmel with an account of the delivery to Wake (Halsey was still observing radio silence). The rest of the planes assembled in formation and headed toward Pearl

Harbor at 6:37 led by Lieutenant Commander Halstead Hopping of Scouting Six.[13]

At 7:20 Young spotted an unidentified ship headed east in the general direction of Oahu. He investigated and identified her as SS Pat Doheny, a Richfield tanker. Ten minutes behind his group commander, Hopping encountered the tanker at 7:30 and noted her position as approximately 50 miles south of Niihau. At 7:40 Young observed the submarine Thresher, escorted by the destroyer Litchfield, proceeding routinely. By 8:10 Young was abreast of Kaena Point at the northwest tip of Oahu, and anticipating a routine landing at Ford Island, he passed Barbers Point on the island's southwest corner at 8:20.[14]

Opana Radar

As planes from Enterprise and the Japanese carriers converged on Oahu two alert Americans spotted the raiders nearly an hour before they reached the island. Unfortunately, the U.S. command proved unable to take advantage of the early warning.

Privates Joseph Lockard and George Elliott manned the isolated radar station at Opana overlooking the island's north shore. After completing their 4:00 a.m.-7:00 a.m. duty shift Lockard agreed to give the relatively inexperienced Elliott additional instruction in operating the set while they awaited the truck which would take them to breakfast. No sooner had they begun when a large blip appeared on the screen. Lockard at first

thought the set was malfunctioning, but soon concluded his contact was a large flight 132 miles distant approaching Oahu from the north.[15]

Lockard's and Elliott's alertness availed the sleeping American forces nothing. Sometime between 7:00 and 7:30 Lockard phoned the information center at Fort Shafter. His call was answered by the center's telephone operator, Private Joseph McDonald, who told Lockard that the center had secured and everyone had gone to breakfast. Lockard, however, was concerned by the unusually large size of his radar contact and insisted on speaking with someone- anyone- in authority. After checking the building McDonald located Lieutenant Kermit Tyler.[16]

Tyler, a fighter pilot from the 78th Pursuit Squadron, was not regularly assigned to the information center, but was simply there to spend a few hours for familiarization purposes. Like everyone else connected with the Hawaiian Department's radar operation he was essentially a trainee. As he took Lockard's report he remembered listening to the same all night KGMB broadcasts which had captured the attention of Nagumo's staff. He reasoned correctly that the broadcast meant an early morning arrival of U.S. planes from the mainland. Tyler concluded mistakenly that the Opana contact was the echo of that flight and told Lockard "not to worry about it." Lockard, uneasy over the size of the contact, was not reassured. He argued with the lieutenant "as far as [I] thought was reasonably safe", but gave

up when Tyler refused to become concerned.[17]

Midget Sub Contact

The Opana radar sighting was not the only overture contact between Japanese and American forces on December 7. In the pre-dawn darkness just a mile and three quarters south of the Pearl Harbor channel entrance the minesweeper Condor conducted routine sweeping operations. Ensign R. C. McCloy, officer of the deck, noticed what looked like a wave. He and Quartermaster R. C. Uttrick studied the "wave" through binoculars for a few moments and decided they were looking at a periscope- in an restricted area where submerged submarines were automatically presumed to be unfriendly. Seaman R. B. Chavez, the helmsman, wasn't so sure. He could make out the wake about 50 yards away but not the periscope. At 3:57 a.m. Condor signaled news of the contact by blinker to the destroyer Ward on channel entrance patrol.[18]

Ward's skipper, Lieutenant William Outerbridge, ordered general quarters and began a search of the area. After a fruitless half hour he secured at 4:35. Outerbridge was awakened again at 6:37 by Lieutenant (j.g.) Oscar W. Goepner, officer of the deck. He reported a strange object following the supply ship Antares, which was towing a lighter toward the Pearl Harbor entrance. This time there was no doubt. Outerbridge clearly saw the conning tower and periscope of a small submarine just 50 yards

away moving at a respectable 8 to 12 knot clip. At 6:40 Outerbridge gave the order to attack. The first shot from Ward's 4 inch guns went high, but the second struck the intruder at the waterline junction of the hull and conning tower. The submarine heeled over to starboard and sank. Ward followed the shots with a depth charge attack, which yielded an oil slick from the 1,200 foot depths a mile south of the channel entrance.[19]

At 7:01 Outerbridge radioed Pearl Harbor, "We have dropped depth charges upon subs operating in defensive sea area." Fearing that his message might be ignored as just another inconclusive report of a submarine contact, he elaborated in another signal at 7:03: "We have attacked, fired upon, and dropped depth charges upon submarine operating in defensive sea area." The message began making its way up the chain of command to Admiral Kimmel.[20]

The destroyer was not alone in its early morning attack on the submarine. Ensign William Tanner, piloting one of four PBY's from Patrol Squadron 24 on exercises that morning, spotted Ward bearing down on the sub. At first he thought it was friendly submarine in trouble. After briefly weighing the painful alternatives, however, he opted to obey standing orders: sink all unidentified submerged subs in the restricted area. After dropping depth charges he radioed his report into Patrol Wing Two headquarters on Ford Island. Like Ward's signal, Tanner's message had to pass through many hands before anyone could take decisive

action.[21]

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1. PHA, 1:185.
 2. Tsunoda, 266; Prange, 415-17, 453
 3. Prange, 391, 431-32, 460; International Military Tribunal for the Far East (IMTFE), Exhibit 1265 (SCAP Research Report No. 132), Record Group 238, National Archives.
 4. Prange, 376-79.
 5. Prange, 768, note 46-14; "Japanese Challenge New Book on Pearl", Honolulu Advertiser, March 6, 1982; Heijiro Abe, Iyozo Fujita, Junichi Goto, Hideo Maki, Heita Matsumura, and Sadao Yamamoto interview with author, Honolulu, December 9, 1983.
 6. Prange, 427, 445, 468, 477, 483-84.
 7. IMTFE, Exhibit 1265 (SCAP Research Report No. 132), Record Group 238, National Archives.
 8. Ibid., 479, 487; PHA, 18:3015. The I-72 message, transmitted much later than signals which revisionists claim were intercepted by U.S. intelligence, is the only verifiable instance of radio transmission by any Japanese ship in the Hawaii operation before December 7.
 9. Prange, 490-92; U.S. Strategic Bombing Survey, Interrogation of Mitsuo Fuchida, Tokyo, November 28, 1945 (Interrogation No. 603), Interrogation Reports, Record Group 243, National Archives.
 10. Prange, 376, 492; Walter Lord, Day of Infamy (New York: Bantam Books, 1958), 30). Lord says there were 170 planes in the second wave, but because Prange's figures are from Japanese sources, they seem more reliable.
 11. Prange, 492; PHA, 1:239; Abe, Fujita, Goto, Maki, Matsumura and Yamamoto interview.
 12. William F. Halsey and J. Bryan III. Admiral Halsey's Story (New York: Da Capo Press, 1976), 76.
 13. Scouting Squadron Six. "Report of Action with Japanese at Oahu on December 7, 1941", undated [probably on or about December 15, 1941], CincPac Reports.
 14. Enterprise Air Group. "Report of Action with Japanese Air Force at Oahu, T.H., December 7, 1941", December 15, 1941,

CincPac Reports of Pearl Harbor Attack, World War II Action Reports, Operational Archives.

15. George Raynor Thompson, Dixie R. Harris, Pauline M. Oakes and Dulany Terrett. The Signal Corps: The Test (December 1941 to July 1943) (Washington: Department of the Army, 1957), 4.

16. PHA, 27:517-36.

17. PHA, 27:517-36, 566-72.

18. Ibid., 37:1298-99.

19. Ibid., 36:55-58; Report of USS Ward, December 13, 1941, Fourteenth Naval District Reports of Pearl Harbor Attack, World War II Action Reports, Operational Archives (hereafter Fourteenth Naval District Reports).

20. PHA 37:704.

21. Lord, 36, 38; Report of Patrol Wing Two, CincPac Reports; PHA, 22:567.

CHAPTER 8

The Attack Opens

Shortly before 7:30 Kimmel received a call from his headquarters: Ward had reported sinking a submarine just outside the channel. While the admiral waited at home for confirmation Fuchida's first wave used the morning KGMB broadcast as a homing beacon. At 7:35 the Chikuma scout plane pilot relayed the disappointing news that Pearl Harbor contained nine battleships, seven cruisers, but no carriers.[1]

Straining to see through the clouds which blanketed the ocean, Fuchida recalls, at 7:40 "a long white line of breaking surf appeared directly beneath my plane. It was the northern shore of Oahu." Then occurred a mischance of war. To deploy his attackers Fuchida had arranged that one shot from his flare pistol would signal that surprise had been achieved and that the vulnerable torpedo planes would attack first; two shots meant an alert defense and the dive bombers would make the initial strikes to disrupt the American defenses. Seeing no signs of U.S. planes or antiaircraft fire Fuchida fired one flare, but his squadrons failed to make the proper deployment. He repeated the signal. The torpedo planes saw only the second flare, and deployed to open the attack, but the dive bombers had seen both flares and they raced into the lead to strike the first blow.

The bombers jockeyed for position in the confusion, but with the die already cast Fuchida radioed to his planes at 7:49, "To, To, To", the signal to attack. Four minutes later he signaled Nagumo, "Tora, Tora, Tora", the pre-arranged code message that the planes had achieved complete surprise. Incredibly, Fuchida's signal to Nagumo was heard on Admiral Yamamoto's flagship riding at anchor in Japan's Inland Sea.[2]

Despite the mixup with the flares the attack was almost textbook perfect. Dive bombers and strafing fighters attacked U.S. air bases at Hickam, Wheeler, Kaneohe, Ewa, and Ford Island at almost the same instant that the torpedo planes, divided into two groups, struck the anchorages fringing Ford Island. One group of sixteen torpedo-armed Kates flew straight south across Oahu aiming for the carrier berths on the west side of Ford Island. Another group of twenty-four crossed the southern shoreline, turned east, then inland once more over Hickam Field and the navy yard. They then crossed Pearl Harbor's main channel for an unobstructed run against the ships moored on Battleship Row on the eastern side of Ford Island.

As the attack began at 7:55 unbelieving Americans watched as bombs rained down on Hickam and Ford Island airfields while the low flying Kates released their torpedoes against the ships. On Ford Island's west side Utah, moored in Enterprise's usual place and possibly mistaken for a carrier by an inexperienced Japanese pilot, took two torpedoes. Raleigh, moored in line ahead, was

struck by another. Both ships began to list, and the target ship capsized at 8:12 while Raleigh's crew saved the cruiser by heroic damage control efforts.[3]

On the opposite shore of Ford Island torpedoes struck Nevada, Arizona (after running under the keel of the adjacent Vestal, according to witnesses), West Virginia, Oklahoma and California. Tennessee, moored inboard of West Virginia, and Maryland, inboard of Oklahoma, escaped torpedo damage, as did the fleet's flagship Pennsylvania in Drydock One. At least one Kate pilot coming in from the west overshot Ford Island, passed over Battleship Row, and unleashed his torpedo at the navy yard docks. It passed beneath the venerable minelayer Oglala, moored at the long Ten Ten Dock, and exploded against the light cruiser Helena nestled between the dock and Oglala. The blast crippled the cruiser but did more damage to the unarmored minelayer, which began to list and capsized.

USS Utah

Seaman Carl Lee, a mess cook aboard the rapidly listing Utah, began to make his way topside. On the way up he passed his locker, which had fallen over and spilled his possessions on the deck. He experienced for an instant a jolting sense of the fragility of life when he saw his mother's picture lying on the deck. He had no time, however, for philosophical reflection and continued up the ladder. When Lee reached the top he paused

before climbing out onto the deck. He saw the heavy timbers which covered the ship's deck (to absorb the impact of practice bombs) being chewed to pieces by machine gun fire from Japanese strafers. Having second thoughts about the wisdom of taking that particular route topside, he retraced his steps down the ladder. On the second deck he passed the mess compartment where he worked and noted that the list had thrown mess tables, dishes and soapy water into an chaotic mess against the port side of the compartment. Here, he thought, "was one mess I wasn't going to have to clean up." [4]

Others made similar life-or-death choices between the flooding interior compartments and the hazards above. Karl Johnson started down a ladder when the first torpedo hit Utah; he wanted to minimize flooding by securing the bilge manhole cover he had been working on. On his way down the second hit knocked him to the deck where he broke sixteen teeth. Because of the stress of the moment he felt no pain and continued down into the bowels of the ship. While still on the ladder a voice above him asked, "Where are you going?" Johnson looked up, but all he could see was a pair of dungaree legs above him. He told his unknown questioner he was on his way to the bilges, and the voice said, "Don't go down there, you'll get killed!" One look into the inky blackness below was enough to convince him to start back up. Johnson never learned the identity of the shipmate whom he credits with saving his life with a simple question. [5]

Chief Watertender Peter Tomich stayed below decks, even when he realized Utah was capsizing. He remained at his post in the engineering plant to supervise the task of securing the boilers. After the boilers were secured Tomich made sure that all the fireroom crewmen were safely evacuated before attempting to leave. By then it was too late; Tomich was trapped below and perished with the ship.[6]

Another Utah sailor, Seaman John Vaessen, was on duty at an electrical switchboard below decks when he felt the first torpedo jar the ship. Knowing nothing of the attack, he assumed that another vessel had collided with Utah when his compartment began to flood. Vaessen knew that his switchboard was crucial in supplying lighting current for the ship, so he remained at his post until flooding shorted out the emergency batteries. As he began to make his way out of the compartment the ship rolled over.

Hanging on to hatches and any other fixed handholds within his reach, Vaessen escaped injury as fire extinguishers, steel deck plates and other pieces of equipment crashed about him. Although he was trapped four decks below, he did not panic: by one of those strokes of luck which transmute inconvenience into good fortune Vaessen knew the bilges and voids at the bottom of the ship intimately. As an electrician "striker" he had been assigned the dirty and uncomfortable work of stringing lights throughout those spaces for cleaning parties. To compound his

luck he had a flashlight and found a wrench which matched the bolts securing the cover to the bilge. Vaessen made his way up to the bottom of the capsized Utah and began to hammer on the hull with all his strength.[7]

USS Raleigh

Aboard the neighboring Raleigh Ensign Korn, the officer of the deck, was turning over the deck to his relief. With a launch alongside to take crewmen to divine service it appeared to be a normal Sunday morning when a cloud of planes appeared out of the northwest. Korn assumed it was an air raid drill and called for the antiaircraft batteries to be manned. Seaman Frank Berry pulled the alarm for general quarters when he saw a torpedo splash, but the alarm failed to go off. Captain R. B. Simons was in his cabin enjoying a cup of coffee and the morning paper when he felt a dull explosion. Looking out his porthole, he saw water boiling up amidships on the port side.[8]

Korn's quick reaction to the appearance of the Japanese planes, although he thought it was a surprise drill, allowed Raleigh's antiaircraft gunners to put up a systematic barrage within ten minutes. Ensign John Beardall, who had returned from liberty after midnight "not in the best of shape, but not the worst", commanded the port 3 inch battery while Ensign J. W. Werth controlled the starboard. Ensigns Collins and Scapa directed the 1.1 inch guns; experienced petty officers handled the .50 caliber

machine guns.

Despite the efficient response of the antiaircraft crews, Raleigh had already suffered serious damage from the torpedo hit. The missile struck the bulkhead separating the Number 1 and Number 2 firerooms, flooding both areas and causing the ship to list. Damage control parties headed by Ensign H. S. Cohn and Carpenter R. C. Telli counterflooded the forward engine room to correct the list, but the situation was still precarious. Captain Simons ordered all unnecessary weight jettisoned over the side. Raleigh's two scout planes were hoisted up, over and into the water by muscle power (internal flooding had knocked out power for the cranes), and they taxied over to Ford Island. The air crews accompanied the planes, realizing that they were more valuable with their aircraft than aboard the battered Raleigh.

USS Oglala and Helena

On the other side of Pearl Harbor a torpedo plane which had overflown Raleigh and Utah was wreaking havoc at the Ten Ten dock. There the minelayer Oglala was tied up outboard of the light cruiser Helena. Seaman Robert Hudson watched from the minelayer as the dive bombers opened up on Ford Island, and then noticed a Kate coming east across the main channel at 50 feet strafing as it came. As the plane bore down on a moving launch Hudson saw the boat's occupants dive over the side as the craft continued on course without its occupants or crew. About a

hundred yards from the Ten Ten Dock the plane released its torpedo and the pilot had to rise quickly to avoid Oglala's superstructure.[9]

Admiral William Furlong, who flew his flag aboard Oglala, was pacing the deck waiting for breakfast. He saw bombs fall on Ford Island and the torpedo running for his flagship. As senior officer present afloat he told his signal officer to order all ships in Pearl Harbor to sortie. That order was soon cancelled since it would serve no purpose to send out the fleet in the absence of any knowledge of the enemy's whereabouts.[10]

The aborted signal mattered little, for Furlong soon had more immediate concerns. The torpedo passed underneath Oglala and exploded against Helena, crippling both ships. The blast killed about twenty men instantly below decks on Helena. Some died of concussion; others died from flash burns. As on most ships at Pearl Harbor, burn casualties aboard Helena were greater than they might have been, because most sailors wore only shorts and T shirts in deference to the tropical climate. One of many stunned crewmen, Warren Thompson groped about in the darkness (the explosion had knocked out Helena's power) when his passageway was suddenly illuminated by two or three men coming toward him: their hair was ablaze. The sight snapped Thompson to his senses, and he used a blanket to smother the fires.[11]

While Thompson and his shipmates struggled to control the chaos

below the cruiser's antiaircraft guns swung into action in record time. Captain Robert English claimed in his report that they fired their first rounds at 8:01. Helena's claim may very well be true, for Signalman Arthur Trimbur, who had a panoramic view from the navy yard signal tower, said she was the first ship he saw fire.[12]

Despite the fires and flooding below decks, the work of damage control parties stabilized conditons on Helena. It was impossible, however, to control the flooding on Oglala. The old vessel, originally designed as a coastal steamer, was not built to the same standards of watertight integrity as a warship. The force of the torpedo explosion had lifted the fireroom floor plates and ruptured the hull on the port side. The fireroom began to flood and the minelayer began listing. With the situation moving rapidly out of control, Admiral Furlong and others aboard Oglala realized they had to find a way to clear the ship so as not to trap Helena between the Ten Ten Dock and the helpless minelayer.[13]

Flooding in the fireroom eliminated the possibility of moving Oglala under her own power, but help came from an unexpected quarter. Two civilian tugs operated by the Standard Dredging Company were working with the dredge Turbine in the main channel between the Ten Ten Dock and Ford Island. George Nakamoto, master of the tug Balboa, had just arrived at the dredge and was relieving the other tug, skippered by Sam Keone, when the attack

began. Nakamoto saw bombs fall on Ford Island, and the plane which loosed its torpedo at Oglala and Helena crossed his bow on its run toward the Ten Ten Dock.[14]

Furlong summoned the two tugs by "hallooing and motioning" and by dispatching two officers in a launch to the dredge. In the midst of the strafing and bombing the tugs attached themselves to Oglala- Nakamoto at the bow and Keone at the stern. Oglala's executive officer, Commander Roland Krause, took charge of the line handling parties, and sailors on the dock shouted directions to the tugs. With the efforts of a cast ranging from the admiral to civilian tugboat deck hands the listing Oglala was moved astern, cleared Helena and tied up to the dock.[15]

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1. PHA, 26:210; Prange, 449, 501.
 2. Mitsuo Fuchida and Masatake Okumiya, Midway, The Battle That Doomed Japan (Annapolis: U.S. Naval Institute Press, 1955), 27-28, Prange, 502-03.
 3. PHA, 7:3359; Various ships' reports, CincPac Reports.
 4. Carl Lee interview, North Texas State University Oral History Collection, North Texas State University, Denton, Texas (hereafter NTSU).
 5. Karl Johnson interview, NTSU.
 6. U.S. Senate Committee on Veterans' Affairs. Medal of Honor Recipients, 1863-1978 (Washington: Government Printing Office, 1979), 693.
 7. John Vaessen interview, NTSU.
 8. PHA, 23:748-51; Report of USS Raleigh, December 13, 1941 and

Supplementary Report of USS Raleigh, June 10, 1943, CincPac Reports.

9. Robert Hudson interview with the author, February 28, 1983, Honolulu.

10. PHA, 22:595-602.

11. Warren Thompson interview, NTSU; Report of USS Helena, December 14, 1941, CincPac Reports.

12. Report of USS Helena; Statement of Arthur F. Trimbur, December 12, 1941, Fourteenth Naval District Reports.

13. Reports of USS Oglala, December 11, 1941, and December 31, 1941, CincPac Reports.

14. Ibid.; George Nakamoto interview with author, October 4, 1983, Honolulu.

15. PHA, 22:596-97; Report of Rear Admiral William R. Furlong to Chief of Bureau of Personnel, February 13, 1944, copy in the author's files.

CHAPTER 9

USS Oklahoma

While Helena and Oglala struggled for survival the main force of twenty-four torpedo bombers completed their counterclockwise arc over Hickam Field and headed west across the channel toward Battleship Row. A flight of three Kates led by Lieutenant (j.g.) Junichi Goto dropped to 150 feet on the approach. Goto chose as his target Oklahoma, the first battleship he saw. He experienced some momentary confusion, for he could not distinguish between the ship's bow and stern (the battleships were moored facing south, toward the harbor's entrance), but he pressed his attack nonetheless. After dropping his torpedo and clearing Oklahoma and the adjacent Maryland he looked back and saw that his torpedo had struck home. He experienced a feeling of elation; the months of training and practice had been consumated.[1]

Goto's planes were not the only ones which zeroed in on Oklahoma. The ship took five torpedoes in rapid succession and began a rapid list to port after the first explosion. The senior officer aboard was Commander Jesse Kenworthy, the ship's executive officer. He raced to the conning tower, but was slowed by oil and water and water thrown onto the deck by the torpedo explosions. While he was still on the boat deck the ship had already listed to port 35 degrees. After a brief discussion with Lieutenant Commander William Hobby, Oklahoma's first lieutenant,

the two officers agreed that the vessel could not be saved. They gave the order to abandon ship, telling the crew to leave over the starbord (high) side and climb over the hull and onto the bottom as the battleship rolled over.[2]

Gunners Mate Leon Kolb felt Oklahoma's first torpedo hit as more of a thud or vibration than an explosion. He remembers the entire ship rising and falling about a foot. He was wondering what was happening when a message from a loudspeaker dispelled all doubt: "All hands man your battle stations. The enemy is attacking. This is no shit." Kolb had heard from Asiatic Fleet veterans that the Japanese fleet was "a bunch of junk, and that their airplanes were put together with stove bolts", and that if the United States ever went to war with Japan "we can beat them in one day." His first reaction was that the Pacific Fleet was under attack from German pocket battleships. The Japanese could never accomplish anything as daring as an attack on America's most heavily defended naval base.[3]

Boatswain Adolph Bothne was preparing to send a party over the side to clean Oklahoma's hull when he heard a mate scream, "Get the guns covered; them Japs are bombing everything in sight!" The ship's massive bulk absorbed the impact of the torpedoes so well that Bothne never felt even one of the hits. He noticed that the antiaircraft guns were silent and quickly learned the reason why. The ready ammunition boxes were locked and no one had a key. Someone either found a key or, in a scene repeated

dozens of times that morning, broke the lock off the boxes. Access to the ammunition for Oklahoma's port antiaircraft guns made little difference, however. The crews found they had no compressed air to load the guns and, in addition, they were missing their vital fire locks.[4]

Trapped!

Seaman Russell Davenport was in a motor launch in the narrow space between Oklahoma and her inboard mooring partner, Maryland, when he heard the first bombs explode on nearby Ford Island. He quickly climbed up Oklahoma's starboard ladder and ran across the deck in time to see Kates skimming across the channel toward his ship. On his way down the hatch to his battle station in the Turret IV handling room four decks below Davenport was knocked down by a torpedo explosion. The impact jarred the volume to full on a communally owned phonograph belonging to the turret crew. In an incongruous musical accompaniment to the disaster it played "Let Me Off Uptown". He got to his feet, began to run through a compartment, went down another ladder, and another explosion knocked him off. He picked himself up, sped through the carpenter shop, and was running down another ladder to the handling room when yet another torpedo hit. After reaching his station he joined others in dogging down hatches as the ship began to list badly and the power went off. At that point they received the order of the exec and first lieutenant to abandon ship.

By that time water was pouring through the escape hatch and it was too late for Davenport and the others in his compartment. Davenport decided to try to make his way up the escape ladder anyway, and that decision saved his life. As he climbed upward the ship turned completely over and the 14 inch shells in the compartment- each weighing more than 1,000 pounds- rolled about the handling room, crushing several of the men left below (now above him). One man, he remembers, was pinned against a bulkhead, the crushing weight popping out his tongue and eyes. Davenport made his way downward through the carpenter shop to a conveyor belt, moving forward through the conveyor passageway before being driven back by rising water. In a nightmarish journey, pushing aside the floating bodies of shipmates as he went, Davenport swam back to his starting point in Turret IV.

Making their way upward toward the keel Davenport and several others from his battle station found themselves in the ship's "lucky bag", the depository for seabags, peacoats and other personal property. They were trapped in an air pocket with several inches of armored steel between them and the outside. The only feasible escape route was below them: five deck levels filled with water, then a swim across the wide deck (provided they didn't get mired in the muddy harbor bottom). Davenport attempted the escape and made it to the main deck, where he could feel the teakwood planing, but he simply could not hold his breath for the additional traverse of the ship's deck. There was

nothing to do but return to the lucky bag.

Wondering whether the compartment would become their tomb, the men accepted the leadership of a boatswain's mate named Aldridge. He told the others to be as quiet as possible to preserve the limited air and, if possible, sleep. In the hours that passed the group's only source of light, a battle lantern, went out. Hour after hour they waited in pitch darkness, knowing nothing of the events above them. Water in the compartment came up to their armpits, and those who fell into exhausted sleep came to a wet awakening. Despite the increasingly foul air, some of the group tried to find a way out by smashing out adjacent bulkheads with pieces of metal.

Finally, the eleven men in the compartment felt heat from the cutting torches of rescue teams trying frantically to extract survivors. One of those trapped inside told the others it was the Japanese- they were fiendishly torturing those entombed in the hull. Ironically, the rescuers nearly brought doom to those in the lucky bag; the holes they drilled through the hull allowed the trapped air to escape. The lowered air pressure caused the water to rise, and Davenport swallowed a large helping of seawater before he finally climbed into the sunshine. It was noon, Monday, December 8. He had been inside Oklahoma for twenty-eight hours.[5]

Davenport and his shipmates in the lucky bag were indeed

lucky. Many of those in Oklahoma's interior were trapped and drowned when the ship capsized. Some made a deliberate and fatal choice to remain on the battleship as it rolled over in order to see others safely out of danger. Seaman James Ward and Ensign Francis Flaherty remained behind holding flashlights in the darkened interior of a gun turret so that others could find their way to safety. Ward and Flaherty were credited with sacrificing their lives to save their shipmates.[6]

USS West Virginia

Immediately aft of Oklahoma was West Virginia. She took a full salvo of seven torpedoes in the opening minutes of the attack. Lieutenant Matsumura commanded a torpedo squadron from Hiryu assigned to hit the carriers on the west side of Ford Island. Finding the area empty of his assigned targets, Matsumura led his squadron across the small island, turned counterclockwise and sought targets of opportunity on Battleship Row. Still worrying about his failure to find an aircraft carrier, he selected West Virginia as his secondary target.[7]

Seaman Steven Woznik stood on the deck of the hospital ship Solace, moored north and east of Battleship Row, preparing to go ashore for church services. He noticed what may have been Matsumura's squadron come in across the southern end of Ford Island, make a tight turn over the submarine base and bear down on West Virginia. Woznik saw the lead plane drop its torpedo and

then explode against the ship's port side aft. The force of the explosion blew a scout plane off the battleship's after catapult.[8]

Commander Roscoe Hillenkoetter, West Virginia's executive officer, was in his cabin when near the stern when he felt the first torpedoes strike. He came up to the main deck and was making his way forward when another torpedo struck and set fire to the planes on top of the Turret III. Hillenkoetter noticed the ship beginning to list (he estimated a 20-25 degree list within minutes of the first torpedo hit) and used a sound powered telephone to order counterflooding. So rapid and severe was the damage that he never knew whether his orders were received.[9]

Lieutenant Commander John Harper, the ship's damage control officer and first lieutenant, had a more precise picture of the ship's condition, but his luck in transmitting counterflooding orders was little better. At his post in central station the inclinometer showed a 15 degree list when he received reports of flooding on the third deck port side. He tried to send word over the public address system to counterflood the starboard voids, but the loss of electrical power made it doubtful whether damage control parties ever received the order.[10]

Fortunately, others reacted independently and began the counterflooding on their own initiative. Technically, Lieutenant Claude Ricketts' duties had nothing to do with damage control; he

was senior gunnery officer present and had plenty to keep him busy. Before breaking open the locked fire control tower Ricketts satisfied himself that West Virginia's guns were responding as best they could under the circumstances. Soon Captain Mervyn Bennion, the ship's commanding officer, arrived at the tower. By that time the battleship was listing badly to port. Ricketts asked Bennion, "Captain, shall I go below and counterflood?" When the captain agreed to the suggestion Ricketts lost no time in starting below. On his way he picked up Boatswains Mate First Class Billingsley.

Moving against the flow of traffic as wounded men were being brought up, Ricketts and Billingsley groped their way across slippery linoleum covered decks to the first group of counterflooding valves on the starboard side. They found they needed a special crank to turn the valves. Billingsley made his way aft in search of a crank and encountered Shipfitters Rucker and Bobick. The three men returned to the waiting Ricketts, and the shipfitters told the lieutenant they had already begun on their own initiative to counterflood the after part of the ship. All four then began working the valves to achieve the same result in the forward voids. Although she had taken too much water to remain afloat, the listing soon stopped and the ship sank on an even keel. The efforts of Ricketts, Billingsley, Bobick and Rucker probably saved West Virginia from capsizing.[11]

USS California

Moored at the south end of Battleship Row was the flagship of the Pacific Fleet Battle Force, USS California. She too received the concentrated attention of Fuchida's torpedo planes, taking two hits. California was even more unready than other ships in the harbor that morning. Her watertight integrity was fatally compromised by nearly a dozen void compartments which were open in preparation for scheduled maintenance work. In addition, another five manholes were opened to permit inspection of third deck voids for possible fuel leaks.[12]

One member of the crew had an eerie premonition of the ship's fate. Warren Harding, a musician in California's band, had played the previous evening in a competition among the fleet's bands. After the contest, seeking a solitary refuge on the fantail, he had seen a meteor shower just before midnight. He remembered a childhood story from his grandfather: the sight of a shooting star meant someone he knew would soon die. When he saw the meteor shower Harding thought, "My God, how many people do I know that are going to die soon?"[13]

Harding did not have long to wait. Unlike some of the other ships, California had a few minutes warning before the torpedo planes struck. General quarters was sounded at 7:55 with the commencement of dive bombing attacks on Ford Island and strafing of the vessel. Orders were issued to prepare to get the ship underway. Some, like Seaman R. D. Nicholas were alerted by the

noise and already heading for their stations when the call to general quarters came over the loudspeakers. Lieutenant Commander H. E. Bernstein, the communication officer, made sure that keys to the ammunition magazines were available before heading for his battle station in the conning tower. The quick reaction of the officers and men was of little avail, however, as torpedoes began crashing into California's port side at 8:00.[14]

Seaman Nicholas was at his post below decks when two torpedoes exploded just forward of his position. At first he thought the noise was from casemate guns above him. When someone screamed, "Nick, come over here!", he thought, "Well, that's probably some recruit over there that's got scared." Responding to the summons from the forward compartment, he found two men crumpled over. When he began moving the casualties he heard a "zing!" as something ricocheted off the bulkhead. When he took another step the same thing happened again. A close inspection revealed that the flying objects were rivets popping out of the steel bulkheads which had been twisted by the force of the torpedo explosions.

The port side torpedo hits caused California to list, and for a time it seemed as though the ship would capsize as Utah and Oklahoma had. But as on West Virginia, quick work and unusual initiative prevented California from overturning. Gunner Jackson Pharris was in charge of a repair party below decks when water and fuel oil began to pour into the ship. With no power and many of his men overcome by oil fumes, Pharris ordered shipfitters in

his party to counterflood and equalize the list. Had he waited for orders from topside Pharris' efforts would have been too late.[15]

Warren Harding, also below decks, manned a telephone at the foreport repair station. A torpedo exploded near him and flooded the surrounding compartments. Although his post still had light and air from the ventilating system, his compartment was completely isolated and he was trapped four decks below. At 8:10 the power went out. Nicholas, Harding and the others below were operating on emergency power. Most ventilators were off and the only light came from battery operated battle lanterns.

Despite these conditions, California's crew made a superhuman effort to fight the ship and perform their duties. Machinist's Mate First Class Robert Scott's battle station was a compressor feeding air to the antiaircraft guns. When his compartment flooded and word was passed to evacuate the area, Gunner's Mate Third Class Vernon Jensen called to Scott to join the others who were leaving. Scott refused, saying, "As long as I can give these people air, I'm sticking." His dedication cost him his life and earned him a posthumous Medal of Honor.[16]

Ensign Herbert Jones, Chief Radioman Thomas Reeves, and the ubiquitous Gunner Pharris also won the nation's highest award by organizing and inspiring men to brave the fumes and flooding to move ammunition by hand from the magazines to the guns. The

ship's doctor, Commander J. D. Jewell, despite painful burns on his face and arms, continued to attend to the wounded. He was assisted by Mess Attendants Celesteine, Macot, and Wallace.[17]

The torpedo planes scored their greatest successes with hits on California, Oklahoma, and West Virginia, but they did not ignore other targets on Battleship Row. Nevada received one torpedo on the port side at frame 41 (between Turrets I and II). Witnesses reported that another torpedo passed beneath the repair ship Vestal and struck Arizona, moored between Ford Island and Vestal, directly beneath the Turret I. Damage to the forward part of Arizona was so extensive that any evidence of a torpedo hit was destroyed by subsequent explosions.[18]

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1. Goto interview.
 2. Reports of USS Oklahoma, December 16 and December 18, 1941, CincPac Reports; "Summary of War Damage to U.S. Battleships, Carriers, Cruisers, and Destroyers, 17 Oct 41 to 7 Dec 1942" (undated), Wallin Papers, Operational Archives (hereafter "Summary of War Damage").
 3. Leon Kolb interview, USS Arizona Memorial Oral History collection (hereafter ARME).
 4. PHA, 23:723-26.
 5. Russell Davenport interview, ARME; USS Oklahoma Rescue and Salvage Report, CincPac Reports.
 6. Medal of Honor Recipients, 551, 705.
 7. Matsumura interview; "Summary of War Damage".
 8. Steven Woznick interview, ARME.

9. Report of USS West Virginia, December 11, 1941, CincPac Reports.
10. Statement of Lt. Cdr. John S. Harper, December 11, 1941, CincPac Reports.
11. Statement of Lt. C. V. Ricketts, undated [probably December 11, 1941], CincPac Reports.
12. Reports of USS California, December 13 and December 22, 1941, CincPac Reports; "Summary of War Damage".
13. Warren Harding interview, NTSU.
14. R.D. Nicholas interview, NTSU.
15. Medal of Honor Recipients, 655.
16. Statement of Vernon Oliver Jensen, December 24, 1941, Wallin Papers.
17. USS California Report, December 13, 1941, CincPac Files; Medal of Honor Recipients, 586, 655, 664, 676.
18. Report of USS Vestal, December 11, 1941; Report of USS Nevada, December 15, 1941, CincPac Reports; USS Arizona, "Material Damage Sustained in Attack on December 7, 1941", January 28, 1942, Wallin Papers; "Summary of War Damage".

CHAPTER 10

Horizontal Bombers.

The torpedo attacks were over in a matter of minutes, but within that period the attackers had inflicted severe or fatal damage on five battleships, two light cruisers, and two auxiliary vessels. That success was not without cost to the Japanese; five of the Kate torpedo bombers were lost. After the torpedo runs, while dive bombers still pounded airfields, Fuchida led his horizontal bombers in for another blow at the fleet. He kept the group in a holding pattern at 10,000 feet over Barbers Point while the torpedo planes, dive bombers, and fighters performed their tasks. Fuchida brought his Kates, each armed with an 800 kilogram armor piercing bomb, over Battleship Row shortly after 8:00. The ships' crews below had recovered from the initial shock and delivered antiaircraft fire which made the horizontal bombing run difficult. Fuchida describes the problems of his own approach:

As we closed in, enemy antiaircraft fire began to concentrate on us. Dark gray puffs burst all around. Most of them came from ships' batteries, but land batteries were also active. Suddenly my plane bounced as if struck by a club. When I looked back to see what had happened, the radioman said: "The fuselage is holed and the rudder wire damaged." We were fortunate that the plane was still under control, for it was imperative to fly a steady course as we approached the target. Now it was time for "Ready to release," and I concentrated my attention on the lead plane to note the instant his bomb was dropped. Suddenly a cloud came between the bomb sight and the target, and just as I was thinking that we had already overshot, the lead

plane banked slightly and turned right toward Honolulu. We had missed the release point because of the cloud and would have to try again.[1]

USS Maryland

Fuchida's target was Maryland, which had escaped torpedo damage because she was moored inboard of the luckless Oklahoma. Maryland suffered comparatively light damage. She was hit twice by bombs. One detonated on an awning rope strung above the forecastle and caused fragmentation and blast damage in the immediate vicinity. The other penetrated the hull beneath the starboard waterline near the bow, detonated in the hold, and caused moderate flooding.[2]

Twenty-one year old Wilford Autry's battle station was in Maryland's "battle bags", a compartment on the quarterdeck where the signal flags were stored. While running across the quarterdeck on his way to the battle bags Autry was drenched by spray from the geyser thrown up by one of the torpedo hits on West Virginia. When he reached his station he found the compartment locked and went below to the mess hall, where he cleared away tables and helped pass ammunition to the antiaircraft guns. He went above once more to try to reach his battle station, but the door was still locked. By that time sailors were streaming aboard from the neighboring Oklahoma. A chief petty officer finally arrived to unlock the battle bags, but the signal gang had little to do but stand by for orders.[3]

Gunner's Mate Third Class Werner Land experienced a similar wait for vital keys. The ammunition magazine for his five inch antiaircraft gun was locked and no one could find a chief or an officer with the keys. While the battle raged around them the gun crew debated hotly among themselves whether they should break the lock. The debate was decided in favor of the proposition when they saw Oklahoma capsize. "It was humiliating", Land remembers, to see a battleship turned upside down like a child's toy.[4]

Maryland's crew, despite the light damage, had their hands full. The most serious threat came not from her own bomb damage, but from fallout from the destruction around her. Printer Second Class Merle Newbauer was assigned to man the phones below decks. Frustrated at being so far removed from the action, he responded when a call came from topside for volunteer firefighters. The fires endangering the ship came from the fiercely burning West Virginia moored astern. As soon as he got to the weather deck Newbauer was hit in the knee by a bomb fragment or a bullet. One of Maryland's Black mess attendants threw him under a turret overhang as strafing planes passed overhead. Feeling fit enough to help, Newbauer joined a group playing a fire hose on a blazing oil slick being pushed by prevailing winds from West Virginia toward Maryland. He looked at the scene of destruction in the harbor around him and felt as if he had been hit in the solar plexus. Newbauer and those around him, although their own ship

was not badly damaged, were "just dejected at the thought of the mightiest fleet that ever had been assembled" was now in shambles.[5] It was not just warships, but military morale as well, which would have to be raised from the bottom of Pearl Harbor.

USS West Virginia and Tennessee

High above the agonizing scene Lieutenant Heijiro Abe led his Soryu squadron toward the mooring where West Virginia and Tennessee lay berthed. As he peered through his bombsight he saw antiaircraft rounds bursting below him. Praying he would survive at least long enough to release his bomb, he was dismayed to find that the target was already hidden by billowing smoke from West Virginia's fires. Abe resolutely led his planes back and circled around Hickam for a second pass. This time the antiaircraft gunners were getting his range and his plane was buffeted by uncomfortably close bursts. He released his bomb at West Virginia and his observer confirmed a hit. The pent up emotion was too much for Abe, and he cried in relief. Two bombs hit West Virginia, but although they did some damage, both were duds.[6]

Tennessee, moored inboard of West Virginia, was comparatively lucky. Her outboard partner protected her from torpedo damage and she was hit, like Maryland, by two armor piercing bombs. A hit on the center gun of Turret II put the gun out of commission. Another bomb penetrated the roof of the Turret III,

but failed to explode with full force. Nonetheless, it killed four men inside the turret. A more serious hazard than the bombs were explosions and fires aboard Tennessee's upwind neighbor, Arizona. A massive explosion in Arizona's forward magazine showered Tennessee's quarterdeck with debris. Drifting oil fires on the water forced Tennessee to flood some of her ammunition magazines and turn her screws at five knots to keep the fire away. Because she was wedged between the mooring quays and the crippled West Virginia she could not move, only churn the water with her screws.[7]

Fragments from one of the bombs which hit Tennessee (probably the hit on Turret II) sprayed the signal bridge of West Virginia and mortally wounded Captain Bennion. Lieutenant Commander T. T. Beattie, the ship's navigator, heard the captain groan. A fragment had torn open his abdomen and his intestines were protruding from the wound. Chief Pharmacist's Mate Leak did what he could under the circumstances and dressed the wound, but it was apparent that Bennion would require more medical attention. In addition to the tasks of saving the ship the officers on the bridge also had to find a way to evacuate their captain, despite his protests that he be left on the bridge.[8]

Lieutenant Commander Doir Johnson brought Mess Attendant Doris Miller to the bridge because he thought the husky messman was a good choice to carry the captain to safety. At first Bennion was placed on a cot. But soon it was apparent that he would have to

be lowered from the bridge and a more solid conveyance had to be found. Captain Bennion was lashed to a wooden ladder and lines attached to the four corners, but raging fire on the boat deck made it impossible to lower the improvised stretcher. Smoke and fumes from that conflagration made the signal bridge untenable, and the officers decided to haul the captain up to the navigation bridge. During this ordeal Captain Bennion was in intense pain but still asked about the progress of damage control and insisted that those on the bridge abandon him and save themselves.[9]

While the search was underway for means to move the captain to safety Miller and Lieutenant (j.g.) Freddy White teamed up to fight the ship and control the chaos around them. They manned the two antiaircraft machine guns forward of the conning tower (despite the fact that Miller had no machine gun training) and repelled attacking Japanese planes making further attacks. They also rescued men struggling through the flood of seawater and fuel oil on the sinking ship. Captain Bennion was finally taken off the ladder and carried up to the navigation bridge, where he died still attended by Chief Leak.[10]

Conditions below on West Virginia produced their share of horrors. Lieutenant Commander John Harper, the vessel's damage control officer, directed his repair parties from central station deep in the bowels of the ship. From his post he had to make decisions that condemned some men to death so that others- and the ship- might survive. One particularly agonizing decision is

best described in Harper's own words:

At this time, water commenced to pour down the trunk leading to central station and the watertight door to that trunk was closed and dogged. However, the door was closed with one dog in such a position that it could not be tightened and water began to enter central. About this time personnel from Plot and the forward distribution room were entering central station through the starboard communicating door. These men were covered with oil and water but I do not recall any water entering through the door. Certain men banged and hammered on the port door from the trunk leading to central stating that there was water filling the trunk and wanted entrance into central. We asked how much water was in there and they stated that it was getting high. In as much as we still had communication and counter-flooding seemed to be taking effect, I refused to allow my men with me to open this door and directed the men outside to try to get through Plot and around to the starboard side in order to enter through the starboard door which was not yet leaking water. At the same time, I directed repair II to attempt to open the armored hatch above the trunk in order to let these men escape. Repair II reported back that there was about three feet of water above the hatch and they were unable to open it. I believe that these men were lost, as I am quite certain that no further personnel entered central through the starboard door.[11]

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1. Fuchida and Okumiya, 28-29.
 2. "Summary of War Damage".
 3. Wilford Autry interview, NTSU.
 4. Werner Land interview, NTSU.
 5. Merle Newbauer interview, NTSU.
 6. Abe interview; "Summary of War Damage".
 7. Report of USS Tennessee, December 11, 1941, CincPac Reports.
 8. Statement Lt. Cdr. T. T. Beattie, undated (probably December 1941); Statement of Lt. (j.g.) F. H. White, December 11, 1941, CincPac Reports.
 9. Statements of Lieutenant Claude Ricketts and Lieutenant

Commander D. C. Johnson, undated (December, 1941), CincPac Reports.

10. White and Ricketts statements; Report of USS West Virginia, December 11, 1941, CincPac Reports.

11. Statement of Lt. Cdr. John S. Harper, undated (Dec. 1941), CincPac Reports.

CHAPTER 11

USS Arizona

Of all the ships at Pearl Harbor Arizona suffered most on December 7. Official reports identified eight separate bomb hits in locations ranging from Turret IV to the forecastle deck in the vicinity of Turret I. An even greater blow than the destruction of the vessel was the loss of 1,177 sailors and Marines aboard Arizona. [1]

Major Alan Shapley, commander of Arizona's Marine detachment, was below decks when he heard a loud "bang". His first thought was that one of the ship's boats had dropped onto deck. He went above to investigate, and not until machine gun bullets splintered the teak planking on the quarterdeck did he realize the battleship was under attack. Someone sounded general quarters and Shapley joined other marines and sailors scrambling up the mainmast to the secondary aft fire control station. [2]

Sergeant John Baker set out to make his way up the mainmast hot on the heels of Second Lieutenant Carlton Simonsen. They had barely reached the first platform when bomb fragments from an explosion on the quarterdeck caught the lieutenant in the midsection. The wound, like Captain Bennion's on West Virginia, was obviously mortal, and Baker thought he died "almost instantly". Lieutenant Simonsen lingered long enough to be

discovered by Private James Cory and Corporal Earl Nightengale lying semi-conscious in a pool of his own blood. With his skin pale and eyelids flickering, Simonsen was dying the men realized. Cory and another marine leaned over the officer to see whether they could do anything for him. Too weak to talk, he moved his lips to form the words, "Leave me. Go on." Unable to help Simonsen, they made their way to secondary aft and reported to Major Shapley.[3]

With communications disrupted there was little Shapley and the others in secondary aft could do but watch as their ship was destroyed in a hail of bombs and bullets. There was no panic, but an excited babble of conversation in the crowded compartment made it impossible to hear commands. Corporal Nightengale imposed a semblance of order by shouting for silence. Cory tried to open the windows but found them jammed shut by accumulated grime and smoke particles. He need not have worried, for his ship was destroyed moments later (Cory's watch stopped between 8:12 and 8:13) by an explosion in her forward magazines.

Forward Magazine Explosion

The magazines contained 308 14 inch projectiles, 3,500 5 inch rounds, nearly 5,000 cans of powder, and more than 100,000 rounds of machine gun and small arms ammunition. Cory remembers the explosion as a soft but mighty "whoosh!"; Aviation Machinist's Mate Donald "Turkey" Graham agreed, describing the sound as an

"awful 'Swish'". Seaman Artis Teer saw Arizona explode from his post on neighboring Nevada. "The ship", he said, "seemed to jump at least fifteen or twenty feet upward in the water and sort of break in two." A ball of flame and smoke boiled up to a towering height far above Arizona's tripod masts. Survivors of the explosion had different details engraved indelibly in the memories. Chief Gunner's Mate J. A. Doherty saw "the forecastle waving up and down and fire and smoke coming through the deck". When the foremast toppled over, Seaman Russell Lott in the port antiaircraft director thought at first that his director compartment had been dislodged and tumbled free; for a moment he thought he was dead.[4]

Lott was lucky, for the blast killed almost everyone forward of the quarterdeck. The marines in the mainmast stations were protected by the superstructure from force of the blast, but it was still fierce enough to make Private Cory to cringe from the heat. When he recovered he reported to Major Shapley that smoke and flame were curling out of the quarterdeck engine room ventilators. Corporal Nightengale noted that the entire ship forward of the mainmast (two-thirds of Arizona's length) was aflame. Clearly it was only a matter of time before the blaze consumed their station, and Shapley feared they would be "cooked to death". Since they could serve no useful purpose by remaining in the director Shapley ordered his men to leave.[5]

Down the mast they went, instinctively obedient at first to the

traffic rules which dictated they descend by the port leg of the tripod mast. The railings were hot, and some of the men suffered burns on their hands. On reaching the burning boat deck Nightengale noted that the area was thick with bodies, with burned and wounded men streaming down the break to the quarterdeck. Some fell dead after climbing down the ladder. When he had descended as far as the searchlight platform Cory crossed to the starboard side of the platform to check Lieutenant Simonsen, but found no sign of a heartbeat. At that point he decided to ignore the rules and continue climbing down the mast on the starboard leg since it was closest to Ford Island and offered the best chance of escape from the burning ship. Turning his back to the mast (so he would not have to grasp the hot railings), he clambered down to the boat deck, the galley deck, and then onto the quarterdeck. There he found, huddled against the starboard mount for Arizona's yet to be installed 1.1 inch antiaircraft guns, badly burned men "stacked like cordwood". Most were barely alive and barely identifiable as human beings.[6]

Captain Van Valkenburgh and Admiral Kidd

With the ship all but destroyed, her first lieutenant and damage control officer, Lieutenant Commander Samuel Fuqua, directed rescue efforts from the quarterdeck. The senior officers aboard Arizona at the beginning of the attack were Rear Admiral Isaac Kidd, commander of Battleship Division One, and the

vessel's commander, Captain Franklin Van Valkenburgh. According to the few surviving witnesses who saw the captain and the admiral, they assumed their stations on the navigation bridge and signal bridge respectively. Ensign D. Hein joined Captain Van Valkenburgh and the quartermaster on the navigation bridge and suggested that he take cover in the conning tower. Van Valkenburgh refused and was trying to establish telephone communication with other parts of the battleship when the fatal explosion occurred. Flame shot through the broken bridge windows, and the three men tried to escape through the port door but were unable to leave by that route. Hein continued in his report, "We staggered to the starboard side and fell on the deck just forward of the wheel. Finally I raised my head and turned it and saw that the port door was open. I got up, ran to it, and ran down the port ladders, passing through flames and smoke." Hein finally escaped down the signal bridge ladder and jumped to the boat deck, which had been bent "way under" by the explosion.[7]

Below Decks

The forward magazine blast wreaked as much death and destruction below decks as it did above. There were no survivors from the crews of the two forward turrets.[8] Those manning Turrets III and IV were protected from the full force of the explosion, but their situation was enviable only by comparison. Boatswain's Mate Second Class John Anderson was in charge of a party rigging awnings for church services on the stern when the

attack began. Anderson, who had a tour of duty in China, was one of the few who instantly recognized the strange airplanes as Japanese. He and another member of the detail, Coxswain James Forbis headed for their battle stations in Turret IV.[9]

Their battle stations were at the top level of the turret, but traffic rules required them to first descend to the lower decks and then climb up to their assigned positions. Forbis had almost reached the top when a bomb struck the faceplate of his turret. The force of the explosion threw him down several decks, and smoke in the compartment made it impossible to breathe. He sought refuge in the lower handling room of Turret III. Anderson got no farther than the hatch on the quarterdeck (he had stopped to sound an alarm) when another bomb hit on the stern blew him down the hatch. After recovering he continued downward, stopping at the magazine to help put powder trays in readiness. Anderson no sooner reached his station on the gun seat when the same bomb which knocked down Forbis hit his turret and glanced off. It sounded to him like a "terminal explosion" and he and the others inside the turret caught the unmistakable scent of cordite. The turret crew decided their big guns would be of little use in an air attack, so Anderson notified those in the lower levels he was going on deck to help man the antiaircraft guns.

The experience of those in the lower compartments of Turret IV confirmed Anderson's decision. Chief Turret Captain George Campbell, Boatswain's Mate Second Class William Peil, and

Gunner's Mate Second Class Earl Pecotte were in the lower reaches of the turret when it seemed as though the ship were being ripped apart by explosions. Darkness, flooding, and choking gas formed by contact between seawater and batteries made their position untenable. Campbell ordered everyone to the upper turret. He sent Pecotte outside to the quarterdeck to check for gas and see if power could be restored. The gunner's mate encountered Fuqua, exposed to machine gun fire, directing the removal of wounded. He asked Fuqua if the ship were being abandoned. When the first lieutenant replied, "Yes", Pecotte reported back to the turret captain. Campbell ordered everyone out, but first sent Pecotte and Peil below with a flashlight to search for wounded. Finding no one in the lower compartments, they emerged onto the charnel house on the quarterdeck and helped move the more seriously wounded men into the meager shelter provided by the turret overhang.[10]

Turret III was manned by a mixed bag of men regularly assigned to that turret and refugees, like James Forbis, from neighboring Turret IV. In the lower handling room the effects of smoke and gas were mitigated by compressed air hissing from air lines broken by the force of explosions. Ensign G. S. Flannigan nearly failed to gain entry to Turret III. He and others trapped in a passage below decks had to pound on a door for several minutes before it was undogged from inside. One officer tried to calm the men by giving a running account of the action on the

quarterdeck, saying, "There's nothing that we can do." Ensign Jim Miller took his assigned position in the upper booth of Turret III, and found at first that he could communicate with central plot by telephone.[11]

Gradually, however, gas and smoke made their position untenable just as it had in Turret IV. Forbis and another sailor went to the after steering room in search of gas masks. The masks were there, but they were locked up securely and no one had a key. The situation became progressively worse, and the men began stripping off shirts and stuffing them into embrasures to keep out smoke and gas. A bomb explosion severed Miller's phone link, smoke poured in through the overhead hatch, and he could see nothing but flames outside his turret. Miller left the turret briefly to check the situation on deck. He decided that it would be futile to continue manning the main battery. Miller passed the word to abandon Turret III with little time to spare: water was already flooding into the lower handling room. Flannigan and another ensign, determined to leave in an orderly manner, made sure that all the hatches were closed behind them as they made their way to the quarterdeck.[12]

Fighting Fires

The hellish scene on the quarterdeck made superhuman demands on the survivors. Lieutenant Commander Fuqua's first priority was to control the fire and prevent it from spreading aft of the

mainmast. He directed Ensign H. D. Davison to call the center engine room to get pressure on the fire mains. Davison went to the officer of the deck's booth to make the call. He was in the booth with the boatswain's mate of the watch when fire from another bomb explosion trapped them there. They barely escaped by jumping over the side.[13]

Those manning fire hoses on the quarterdeck experienced the frustration of connecting their hoses and running them out only to find no pressure on the lines. When the bomb struck the top of Turret IV and started a fire Fuqua ordered "Turkey" Graham, "Put that fire out back aft." Graham in turn ordered Aviation Machinist's Mate Milton Hurst, Yeoman Benjamin Bruns, Radioman G. H. Lane, and Aviation Ordnance Mate E. L. Wentzlaff to rig fire hoses on the quarterdeck. Fuqua ordered the water turned on, but loss of pressure rendered the efforts futile.[14]

With fire creeping aft against the wind Arizona's crew tried desperate expedients. Ensign Jim Miller organized a bucket brigade to fight the smaller fires which erupted here and there on the quarterdeck. Boatswain's Mate T. A. White seized a knife and cut down a burning awning, probably left over from the church service which was never held. Those pitiful efforts were obviously inadequate, and Fuqua gave the word to abandon ship. First he ordered Miller and White to go below and check Captain Van Valkenburgh's cabin to make sure he would not be left aboard the burning battleship.[15]

Abandon Ship

Fuqua recalls ordering Arizona abandoned at about 9:00, but it was probably earlier. When James Forbis emerged from Turret IV Fuqua was already ordering men over the side. Forbis was not eager to jump into the water, which was covered with a gelatenous layer of fuel oil. He thought, however, of the after magazines, which were being steadily heated by uncontrollable fires and might at any moment explode like the forward magazines. After considering the alternatives he decided to jump. Jump he did, but he was nearly undone by one of Arizona's boat cranes which had toppled into the water and was lying just below the surface. He struck his head on the crane and was knocked nearly unconscious. Luckily, he was spotted by shipmates in a launch who were pulling survivors from the water. They had trouble hauling him aboard, because he was so slippery from the fuel oil. After they dropped him off on Ford Island he happened to glance at his Waltham pocket watch. Clogged with oil and salt water, it had stopped at 8:50.[16]

Radioman Lane, one of those who tried to fight the blaze with hoses, was blown overboard by an explosion. Knocked unconscious, he woke up on Nevada and found himself a member of her crew for the time being. Wasting no time in convalescence, he helped her regular crew serve powder to the five inch guns. E. L. Wentzlaff and another man swam to a small boat near Arizona, cut it loose,

and took it to the crew's gangway. They boarded the ship, and carried off "wounded, shocked and grotesquely burned shipmates" until the boat was loaded to capacity. Once under way to the hospital ship Solace they plucked struggling swimmers out of the water.[17]

Marines from secondary aft, including Private Cory and Corporal Nightengale, made their way to the after mooring quay by means of a gangway which bridged the distance between the ship and the pier. Cory remembers Commander Fuqua directing men over the side "very calmly, no sweat to him" with words like "Over the side, boys! Over the side, boys!" While the marines made use of the gangway, their route had its hazards. The gangway had broken and was turned over on its side, making it nothing more than a precarious two-by-twelve plank spanning the water. In addition, the settling of the ship had put enormous strain on the mooring lines.

Cory weighed the alternative risks and found them unpleasant. The ship might shift further, and if she did Cory would be crushed between the quay and the vessel if he chose to swim. On the other hand, if he used the plank he might well be decapitated by one of the six inch mooring cables already under visible strain. Faced with a Hobson's Choice, he made his way across the plank, and a snapping cable missed his head by inches.[18]

Nightengale, too, made it to the quay. Suddenly he found

himself in the water; he was probably blown off by a bomb blast. He began swimming for the pipeline connected to the dredge Turbine, but found himself too shocked and fatigued to continue to the pipeline about 50 yards away. He would have drowned had not Major Shapley been swimming nearby. Shapley grasped the corporal by the shirt and told him to hang on to his shoulders. They were only about 25 feet from the pipeline when Shapley's strength deserted him. Nightengale loosened his grip on the major and told him to go on alone, but Shapley refused, found an extra reserve of strength, and carried Nightengale to safety.[19]

John Anderson loaded injured men into one of the many small boats hovering around Arizona. Some were burned so badly that when he picked them up cooked skin slid off their arms. Fuqua urged Anderson to get into one of the boats, but the boatswain's mate had a compelling business to attend to: his twin brother, Delbert, was missing. He told the first lieutenant, "Listen, my brother's still on this ship. I gotta go back and get him." Fuqua forced him to face reality, saying, "He's gone, they're not gonna make it. And we better get off before everyone else is killed, too." As he left for Ford Island in a boat Anderson looked back at the once mighty warship that had been his home. "Everything was on fire," he remembers, "the ship was on fire, the water was on fire and there was people on the crane... and I saw them as we went and they were up in this fire and I thought God amighty, how are they going to make it?"[20]

Rescuing Survivors

Once on Ford Island Anderson was still haunted by the vision of the men on the crane. He and a shipmate named Rose saw an unoccupied whaleboat riding free in the oil covered water. The same thought occurred to them simultaneously and they swam for the whaleboat, climbed aboard, and maneuvered it through the fire to the crane. They found another boat there already rescuing the trapped men. Rose and Anderson took their boat around to Arizona's port side to collect injured men, but found more corpses than survivors. Anderson remembers seeing on the blister top the body of one of the ship's cooks with a knife forced through him by the force of an explosion. With their load of dead and barely living they made for the Pearl Harbor Naval Hospital. They stopped as they passed the sunken West Virginia and asked an officer if they could take any of that ship's wounded, but he declined the offer. The strangest thing, Anderson recalls, is that the officer was dressed in immaculate whites while everyone else was filthy with oil and smoke.

That small boats manned by Anderson, Rose and other sailors managed to evacuate Arizona's seriously injured from the blazing wreckage is due in no small measure to the performance of Lieutenant Commander Fuqua, the ship's senior surviving officer. By his own estimate he supervised the placement of about 70 wounded men in launches.[21] Those who saw him on the quarterdeck agree that he set an inspiring example by his coolness in the

face of strafing machine gun fire and the uncontrollable blaze.

Fuqua won the Medal of Honor for his actions, but the comments of Arizona crewmen testify to his bravery more eloquently than any number of official citations. The authority of his presence was so great that when Earl Pecotte emerged from his turret to leave the ship, Fuqua was the only person he noticed on the quarterdeck. When he ordered Pecotte over the side the gunner's mate asked Fuqua if he, too, were going to swim for shore. The officer replied, "Not until the Japs leave." It was not mere bravado, but his calmness in the face of disaster that characterized Fuqua's performance that morning. To "Turkey" Graham, "It seemed like the men painfully burned, shocked and dazed, became inspired and took things in stride, seeing Mr. Fuqua, so unconcerned about the bombing and strafing...." One of those inspired by his example was Sergeant John Baker: "His calmness gave me courage and I looked around the deck to see if I could help." To E. L. Wentzlaff he "displayed a courage and bravery second to none. I am proud to say I came under his authority and... for the future the confidence of his men is well assured." [22]

USS Vestal

The repair ship Vestal, moored outboard of Arizona, might have escaped unscathed had she not been berthed on Battleship Row on December 7. Her shallow draft allowed the vessel to escape

torpedo damage, but horizontal bombers in Fuchida's first wave made two hits, both about 8:05. The first penetrated three decks and exploded in a storage area. The hull was not ruptured by that bomb, but the explosion severed electrical power cables and the ship's fire main and started a fire in the lower hold. The second bomb struck near the stern at frame 110, passed successively through the carpenter shop, shipfitter shop, shipfitters' locker room, fuel oil tanks, and left a five foot hole in the hull near the bilge keel. The ship began to settle, because flooding from the second hit was compounded by deliberate flooding to protect the forward magazines from the fire ignited by the first bomb.[23]

The forward magazine explosions aboard Arizona damaged Vestal further. It blew a number of men overboard, including her captain, Commander Cassin Young. In the confusion someone gave the order to abandon the ship. As men prepared to go over the side Commander Young swam back to Vestal and ordered the crew back to their stations. With his ship settling perilously near the burning Arizona, Young ordered Vestal underway. At first she anchored about 500 yards northeast of her original berth, but as she continued to settle Young ordered her beached in the shoal waters of Aiea Bay. Even if the vessel could not be kept afloat, she would at least settle in shallow water.[24]

Getting Vestal underway was easier said than done under the prevailing conditions. For one thing, she was still moored to

Arizona. When Chief Campbell emerged from Turret IV an officer (probably Commander Young) on Vestal shouted to cast off the mooring lines which bound the two ships together. Campbell looked about for "Turkey" Graham to execute the order, but saw Graham already at work on the lines. Graham and Seaman Bill Garron, braving the machine gun fire from Japanese planes, were using fire axes to chop the lines free. Because Arizona was settling, they were too taut to cast off in the normal manner. Someone from Vestal called over ungraciously, "Hey, don't cut our mooring lines; we might need them!" Graham kept swinging his ax and retorted, "Get the hell out of here while you can!"[25]

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1. USS Arizona Material Damage Report, January 28, 1942, Wallin Papers; "Summary of War Damage".
 2. Alan Shapley interview, Marine Corps Oral History Collection.
 3. James Cory interview, NTSU; Statement of Earl C. Nightengale, December 15, 1941; Statement of John MacR. Baker, USS Arizona Loss File, Operational Archives.
 4. Artis Teer and James Cory interviews, NTSU; USS Arizona War Damage Report, October 7, 1943, General Correspondence, Records of the Bureau of Ships, Record Group 19, National Archives; Russell Lott interview, ARME; Statement of J.A. Doherty, undated (December 1941), USS Arizona Loss File.
 5. Cory interview; Nightengale Statement; Shapley interview.
 6. Nightengale statement; Cory interview.
 7. Statement of D. Hein, undated (December 1941), Wallin Papers.
 8. USS Arizona Damage Control Report, January 28, 1942, General Correspondence, Records of the Bureau of Ships, Record Group 19, National Archives.

9. John Anderson interview; James Forbis interview, ARME.
10. Statements of George Campbell, Earl Pecotte, and William Peil, USS Arizona Loss File.
11. Forbis interview; Statements of G. S. Flanningan and Jim Miller, undated (December 1941), Wallin Papers.
12. Ibid.
13. Statement of H. D. Davison, undated (December 1941), Wallin Papers.
14. Statements of: Donald A. Graham, December 15, 1941; Milton Thomas Hurst, January 2, 1942; E. L. Wentzlaff, December 15, 1941; S. G. Fuqua, undated (probably December 1941); G. H. Lane, undated (probably December 1941), Wallin Papers.
15. Statement of T. A. White, undated (December 1941), USS Arizona Loss File; Miller statement.
16. Forbis interview; Fuqua statement.
17. Lane and Wentzlaff statements.
18. Cory interview.
19. Nightengale statement.
20. John Anderson interview.
21. Fuqua statement.
22. Baker, Graham, Pecotte, Peil, Wentzlaff statements.
23. Report of USS Vestal, December 11, 1941, CincPac Reports.
24. Ibid.; Prange, 514.
25. Forbis and John Anderson interviews; Campbell and Graham statements.

CHAPTER 12

Ford Island

When Arizona sank she settled on the fresh water line which supplied the air station on Ford Island. The lack of water hampered firefighting efforts and added to the damage. The dive bombing attack on Ford Island which began simultaneously with the torpedo strikes destroyed many of the thirty-five PBY patrol planes and thirty-one utility aircraft at the air station. Because the fighter and bomber squadrons were with their carriers, there were only four fighters and three dive bombers on Ford Island.[1]

For Aviation Machinist's Mate Third Class Ernest Cochran the first minutes of the attack on Ford Island were marked by the same kind of confusion which beset those aboard vessels in the harbor. Cochran, assigned to a utility squadron with the unromantic duty of target towing, had just been relieved from hanger watch and was in his barracks when he heard the first explosions. A boatswain's mate ordered everyone in the barracks to report to their squadrons, but a marine sentry posted outside the barracks shouted at the sailors crowding out the door, "Where do you think you're going? Everybody back inside!" Common sense prevailed eventually, and Cochran and the others left for their units.[2]

He climbed aboard a truck headed in the general direction of his hanger, but the moving vehicle became the target of Japanese strafers. Cochran jumped off, took shelter in an open trench and crawled toward his hanger. He took a breather in a junction box, then sprinted across open ground toward his squadron. Once there he was put to work belting machine gun ammunition. His squadron mates had already begun to mount opposition- inadequate though it was- to the attackers. Cochran saw Aviation Machinist's Mate Brigham Young firing a .30 caliber machine gun from a grounded J2-F biplane. Since their hanger was near Utah's berth, survivors of that ill-fated ship soon joined them offering to help.

A senior petty officer, R. E. "Whitey" Flora, took charge of work in the hanger, directing antiaircraft efforts and ordering the removal of planes to less exposed positions. The men soon ran low on machine gun ammunition, and it became apparent that a party would have to brave the strafing and bombing to cross the exposed area between their hanger and the nearest ammunition supply. When some of the sailors in Cochran's squadron gathered to attempt the dash they were halted by a passing chief petty officer, who ordered them to march in formation to get the ammunition. Flora intervened and told his men to get across the open ground anyway they could. There were limits, after all, to regulations.

Similar improvisation marked the defense of Aviation

Machinist's Mate Carl Hatcher's hanger. Hatcher took a portable workbench fitted with casters and used the vice on the bench as a mount for an aircraft machine gun. He was doing his best to shoot down the attacking planes when a bomb dropped nearby. Luckily for Hatcher it was a dud. Still, he thought, it might be a delayed action bomb. Using another piece of rolling equipment from the hanger, he took an A-frame, hoisted up the bomb, rolled it to the water's edge, and lowered it ever so gently into the harbor.[3]

Kingfisher-Medusa Repair Unit

Merion Croft was assigned to Ford Island's Kingfisher-Medusa repair unit, which occupied Hanger 38 at the south end of the island and serviced the scout planes of the fleet's battleships and cruisers. When he ran from his quarters to the hanger at the beginning of the attack, he clearly saw the Japanese rear seat gunner strafing his area. The gunner could barely see over the ammunition cans surrounding him and had to look over the side of his plane to aim his fire. When aircraft and hangers began to burn Croft helped pull the planes to safety. He was astounded to note that many of the aircraft had 100 pound bombs and 150 pound depth charges in their wing racks. Afraid that the heat would ignite the bombs and depth charges, the sailors carried the explosives and dumped them in the water. When he recalled the experience Croft was amazed that he was able to handle the weight.[4]

The Kingfisher-Medusa repair unit suffered no serious casualties. One bomb hit the hanger but failed to explode. Instead, it spewed a yellow sulphuric powder across the hanger causing caustic burns on a few of the men nearby. Like Carl Hatcher, some of the mechanics in Croft's unit mounted aircraft machine guns in vices clamped to portable workbenches. No one shouted orders; people made suggestions in normal tones. Curiosity overcame fear in many cases, and when Japanese planes came in for strafing or bombing runs men forsook shelter and stood up to watch. At one point a Cadillac ambulance sped past Hanger 38 carrying wounded to the sick bay. The driver was trying to make a turn as he crossed the sloping seaplane ramp and lost control. The ambulance overturned, and Croft and others ran out to the ramp without a word among themselves and tilted the vehicle upright. There were no injuries from the accident, and the ambulance continued to the sick bay.

Damage and casualties on Ford Island were surprisingly light, considering the concentrated attention given the air station by the Japanese. The great majority of the 130 casualties treated at the Ford Island dispensary were burned and wounded who swam or were brought ashore from nearby ships. Eleven bombs hit Ford Island- six of them on or near Hanger 6. That hanger was the only one seriously damaged. Even there, the structural steel framing was left intact, allowing the hanger to be reconstructed. Twenty-six planes, less than half the number on Ford Island, were

destroyed. Most of those were in or near Hanger 6. One bomb landed in the dispensary courtyard and buried itself in the ground before it exploded, leaving a hole seven feet deep and severing electrical, water and steam service to the building. Fortunately, no one was injured.[5]

USS Neosho

The greatest potential disaster for Ford Island came not directly from Japanese bombs, but from the tanker Neosho. The ship was moored at Ford Island's gasoline dock and, despite the fact that she had just completed discharging a load of aviation fuel, was still nearly full of high octane gas when the attack began. Hoses still joined the ship to Ford Island when the attack began; Ensign Arnold Singleton was directing Chief Machinist's Mate Alfred Hansen and Aviation Machinist's Mate Second Class Albert Thatcher in clearing the gas lines when the first bomb dropped. Working under a hail of shrapnel and machine gun bullets (Hansen was wounded twice), the three men continued the delicate task of disconnecting the tanker despite the all too obvious danger of immolation. It took them another 45 minutes, and it was not until 8:42 that Neosho's captain, Commander John Phillips, was able to begin backing the tanker across the channel toward Merry Point. Despite the rain of destruction on battleships moored near Neosho, she suffered no damage while on Battleship Row or on her short journey in reverse.[6]

Even with Neosho gone, there still remained the danger from her cargo, much of which had been discharged into Ford Island's aviation fuel storage tanks. Singleton, Hansen and Thatcher opened the sprinkler valves on the tanks, again risking the danger of fire and explosion. Their work may have averted a much more serious disaster and greater casualties on Ford Island. Singleton was not yet through with his morning's work. He spent the balance of the day supervising the recovery of wounded men struggling ashore, transporting them to the dispensary, and cleaning them of the oil caked on the swimmers. Captain Shoemaker praised Singleton's "bravery and extraordinary devotion to duty" and commended Hansen and Thatcher as well.[7]

Hickam

The Army Air Corps base at Hickam Field, lying directly east of Pearl Harbor, received an even heavier pounding than Ford Island. The base housed the headquarters of the Hawaiian Air Force and the 18th Bombardment Wing. The wing's twelve B-17's, thirty-two B-18's and thirteen A-20's were potentially the most threatening retaliatory force the Americans could launch against Nagumo's carriers. Hickam was, therefore, an important target for for the raiders, and the Japanese began their strikes against the bomber base as they launched their torpedoes against the Pacific Fleet. Like the attack on the fleet the raid caught Hickam by surprise. Hangers, planes and men on the ground quickly fell victim to attacks by fighters, dive bombers and high flying horizontal

bombers.

Captain Gordon Blake, Hickam's operations officer, was in his office preparing for the arrival of the B-17's from California (the same flight which had caused Lieutenant Tyler to dismiss the Opana radar contact) when the attack began. His first thought was to warn the B-17's. He raced to the control tower to send a radio message but was unable to make the transmission. The next best course, he decided, was to drive out on the field to be there when they landed. Leaving the tower, he found that his staff car was missing; it had been commandeered as an ambulance to move the rapidly mounting casualties. By one of the incongruities of war Blake found himself riding on the back seat of a motorcycle. His improvised staff car was provided by a member of a Honolulu motorcycle club- dressed in full leather gear- which had turned out its membership to respond in the emergency.[8]

As Captain Blake sped about the base he beheld the appalling spectacle of burning buildings, shattered bodies, and the destruction of more than half the bombers caught defenseless on the ground. Of Hickam's twelve B-17's, all but eight were rendered useless; twenty-two of the thirty-two B-18 medium bombers and eight of the thirteen A-20 light attack bombers met the same fate.[9] Some individual units were nearly wiped out. The 50th Reconnaissance squadron had two B-17's and four B-18's; only one of the B-18's survived the attack. The men of the

squadron suffered serious casualties when they were strafed as they fled across open ground to a safer position after a bomb hit their hanger.[10]

Some of the other squadrons were luckier. Quick thinking led the ground crews of the 72nd Bomb squadron to disperse their aircraft as soon as the attack began. As a result of their timely reaction the unit had only one B-18 lightly damaged. In addition, the men of the 72nd had the satisfaction of exacting at least some toll from the Japanese. Master Sergeant Olef Jensen directed the emplacement of machine guns, and one crew under Staff Sergeant R. R. Mitchell was credited with shooting down one plane.[11]

Consolidated Barracks

On the whole antiaircraft fire at Hickam was as inadequate in deterring the Japanese as it was at Pearl Harbor. Lieutenant James Dyson noted that antiaircraft rounds burst consistently short of the horizontal bombers flying at 10,000 feet.[12] It was perhaps one of those horizontal bombers which inflicted heavy casualties at Hickam's huge new consolidated barracks. The headquarters squadron of the 11th Bomb Group reported 245 casualties from among its 350 men, including sixteen killed and fifty disabled. The men were crowded in a barracks doorway trying to comprehend the events about them when bombs exploded on either side of the door.[13]

First Lieutenant Frederick Cooper, commander of Headquarters Squadron, 17th Air Base Group, saw the bombs strike the barracks and marveled at the flight discipline of the raiders: "The formation was perfect... and the timing on the dropping of the bombs was so perfect that I could follow them down in V formation right to the ground, right to impact." [14] Cooper's clerks set up machine guns on the parade ground, but they lacked the water cans necessary for operation. The same cluster of bombs which wreaked havoc on the barracks also struck the parade ground and the baseball diamond. The ballfield was near Hickam's underground gasoline storage, and some speculated that the bombs which fell on the diamond were meant for the gasoline tanks. [15] There is no evidence, however, to support the view that Japanese intelligence believed that the ballfield covered the storage tanks.

Honolulu Fire Department Responds

Japanese bombs may have missed the main fuel storage, but they ignited fires aplenty at Hickam. Most of the base's firemen were killed and their equipment destroyed early in the attack. At 8:10 someone from Hickam telephoned Bellows Field, a small airstrip on the other side of the island, and commandeered Bellows' single fire truck. Units of the Honolulu Fire Department's Kalihi and South Beretania Street stations responded to additional calls. When firefighters Richard Young and Anthony Lopez of Kalihi arrived at the scene they found the dead driver slumped over the wheel of one Hickam Field fire engine which had

been driven only twenty feet before it had been strafed. The other engine had been destroyed in the station.[16]

Honolulu Fire Department Lieutenant Frederick Kealoha assumed command of the civilian firefighters only to find much of his equipment unusable. The water main had been severed by a bomb blast, but Kealoha's men pumped water from the flooded bomb crater to the fires by laying more than a mile of hose from the broken main to the fires. Intermittent Japanese attacks put many of their trucks out of commission, but the resourceful firefighters used brown soap and toilet paper from nearby latrines to plug holes in their radiators. Working under falling bombs and strafing, three Honolulu firefighters were killed at Hickam and five wounded, including Lieutenant Kealoha.[17]

Civilian Workers Help

Other civilians also helped fight fires in Hickam's shops, hangers and flight lines. General Mechanic Helper William Garretson converted a gas tanker to a water truck in record time. The truck was driven to nearby Bishop Point, filled with seawater, and returned just in time to supply Kealoha's firefighters with water to save the critically important main shop building. Another mechanic helper, Clifford Oliver, drove a truck into a burning repair building to remove aircraft engines. James Mahr, Robert Awong, Nicolas Lenchanko, Volney McRoberts, and Charles Baker were credited with preventing the fires from

spreading to Building 35.[18]

Civilian worker Carl Brown did his unappreciated best to help save an OA4, one of the few undamaged observation planes on the airstrip. When it looked as though the aircraft would be destroyed someone shouted, "For God's sake, save that plane!" Brown, who was neither a pilot nor a mechanic, somehow managed to start the plane and taxi it to a distant part of the runway. Bullets from strafers and antiaircraft machine gun fire pierced the plane's fabric, but Brown zig-zagged across the field until he reached a safe spot. After he gratefully "abandoned ship", he was confronted by a furious soldier screaming, "Get the hell out of here! Don't you know this is a combat area?"[19]

Hickam Casualties and Damage

Under these chaotic conditions the orderly handling of casualties was impossible. Captain Charles Brombach roamed the repair area in a truck looking for men in need of first aid. The Hickam hospital was, in the words of one witness, "covered with wounded and dying, laying on litters and some on mattresses brought to the grounds from the barracks. More wounded were being brought in by every conceivable sort of transportation. Bread wagons, milk wagons, hand carts and anything that was handy."[20]

The casualties at Hickam were the greatest of any army post on December 7. With 158 dead and missing and 336 wounded, Hickam

accounted for three-fourths of the army casualties. With more than half the field's bombers out of commission, there remained little chance of immediate retaliation against the Japanese task force (assuming it could be located). Damage to Hickam's ground facilities, although not disastrous, was serious. Important buildings which escaped with "light" damage included the new main shop, equipment repair, new steam plant, and the partially completed armament building. Facilities which were total or near total losses were the engineering administration office, drafting unit, blueprint and specification files, parachute section, and aircraft engine overhaul and assembly section. When General Martin, the Hawaiian Air Force commander, was informed of the damage one witness said, "I never saw a more dejected person." [21]

Fort Kamehameha

Fort Kamehameha, a coast artillery post adjacent to Hickam, suffered spillover from the attack on the air base. Colonel William McCarthy, commander of the 1st Battalion, 55th Coast Artillery, heard explosions and machine gun fire shortly before 8:00. He ran out of his quarters and saw a Japanese plane streak over the post toward Hickam Field. He alerted his 155 millimeter mobile battery commanders to proceed to their assigned coast defense positions along Oahu's southwest shoreline. As he reached the battery encamped at nearby Ahua Point, a low flying Japanese fighter struck a tree, hit another tree, and crashed

into a wall. The dead pilot was left lodged in a tree, but the fuselage smashed into the ground and the engine continued tumbling around the corner of the ordnance shop. One coast artilleryman was decapitated by flying wreckage and another killed by the spinning propeller, which cut off his head arms and all four limbs.[22]

Private Creed Short, the post ambulance driver, was in the motor pool cleaning his vehicle. When the attack began he had just finished waxing the left fender. Leaving the wax job unfinished he sped to the dispensary but received no orders from the officers there. He took the initiative and drove to the site of the crash witnessed by Colonel McCarthy to pick up the injured. Captain Frank Ebey, commander of McCarthy's Battery B, quickly organized his men in setting up .30 caliber machine guns on antiaircraft mounts in Fort Kamehameha's tennis courts. He checked his watch when they began firing and noted with satisfaction that it was 8:13- less than twenty minutes after the first bomb fell.

His personal satisfaction notwithstanding, Ebey still had to get his men and guns out to Barbers Point, ten miles to the west. The problem was not the distance, but the route. To reach Barbers Point his battery had to load on a barge, cross the Pearl Harbor channel, and disembark on the other side. They were delayed for a time while the few ships in Pearl Harbor able to get underway sortied at speeds which would have given the

harbormaster apoplexy on any other day. Ebey's barge, handled coolly by Quartermaster Jack Barros and crewed by a mix of soldiers, sailors and civilians, made six trips across the channel under fire. On one crossing two fighters singled out the craft and commenced a strafing attack. None of his men were injured, but it seemed to Ebey as though "they were unloading a truckload of high explosive ammunition" on his helpless barge. The battery's .30 caliber machine guns (still on antiaircraft mounts for just such a contingency) fired back, but it was fire from nearby naval vessels, Ebey conceded, that destroyed the planes in midair.[23]

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1. PHA, 12: 351-52; 357-58.
 2. Ernest Cochran interview, NTSU.
 3. Carl Hatcher interview, NTSU.
 4. Merion Croft interview, ARME.
 5. PHA, 12:357-58, 23:729-38; Report of Naval Air Station, Pearl Harbor, December 21, 1941, Fourteenth Naval District Reports.
 6. Ibid.; Report of USS Neosho, December 11, 1941, CincPac Reports. Neosho was sunk at the battle of the Coral Sea less than six months later.
 7. Report of Naval Air Station, Pearl Harbor.
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13. Eleventh Bomb Group, Headquarters Squadron reports (Microfilm Roll B0067), A.F. History.
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18. Hawaiian Air Depot Engineering Department "Journal of Events and Production Report", December 1941 (Microfilm Roll A7380); Memo from Orville C. Fuhr to Engineering Officer, Hawaiian Air Depot, May 11, 1943, in "History, Air Depot, APC #953....", A.F. History.
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21. Report of Maj. R. L. Tscharner, undated, in ibid; Hawaiian Air Force "Report of Casualties", December 16, 1941 (Microfilm Roll 740.3911-1); Hawaiian Air Depot Engineering Department, "Journal of Events and Production Report", December 1941.
22. PHA, 22:262-71.
23. Ibid.

CHAPTER 13

Wheeler Field

Destruction of the bombers at Hickam vastly increased the odds for Nagumo's carriers to escape unscathed. But the chances for the Japanese aircraft to complete their mission depended on forstalling opposition from U.S. interceptors. The Fourteenth Pursuit Wing, headquartered and concentrated at Wheeler Field in central Oahu, was the fighter command responsible for controlling the skies over Hawaii. Commanded by Brigadier General Howard Davidson, the wing included ninety-nine relatively modern P-40's and thirty-nine obsolete P-36's. These fighters were unarmed and on a routine alert status and required four hours preparation before they could be readied for combat.[1] Two of Davidson's pursuit squadrons, the 44th and the 47th, were temporarily based at nearby Haleiwa and Bellows Field for gunnery practice.

The first attackers were observed approaching Wheeler from slightly north of east at 5,000 feet (a few, probably strays, had come from the west through Kolekole Pass). Arranged in a large V formation, they circled counterclockwise and dove toward the hanger line. There the parked pursuit planes lay helpless against the onslaught of bombs, cannon fire and machine gun bullets. The resulting havoc disrupted Japanese flight discipline, for as Wheeler's official report noted, "After first dive bombing phase enemy planes lost practically all order and

all formation. Attack continued with gunfire. During gunfire phase enemy attacked from all directions with complete disregard of collision possibilities." [2]

General Davidson was in his quarters shaving when the first Japanese planes screamed down on Wheeler. His first reaction was irritation. He thought the returning Enterprise pilots were "flat hatting" the Army air base en route to their own airstrips. Davidson made a mental note to write Kimmel and quash the nuisance for once and for all. When he heard the first explosions, followed by strafing, Davidson knew that his Sunday morning had been disturbed by something more than a prank. There was little he could do to save his command from destruction, but he did manage to shepherd to safety his twin daughters, aged ten, who rushed out of the house to pick up the shiny brass 20 millimeter shells spewed onto the ground by strafing Japanese fighters. [3]

At the other end of Wheeler's rank scale Private First Class Edmund Russell was on duty at the mess hall. The night before had been a relatively uneventful Saturday night spent watching the movie "Dive Bomber". Russell was beginning the day's work by reading the Sunday menu to see how much meat had to be removed from the freezer when he heard the first dive bombers bearing down on the field. His first thought, like Davidson's, was that navy or marine pilots were having a little Sunday morning fun at the army's expense. When he heard the first explosion Russell

thought one of the planes had crashed, but when he heard a second and then a third blast he knew it was something out of the ordinary. Russell's first reaction was to run for the nearest cover, a row of eucalyptus trees near Wahiawa School. It was not until the planes began strafing and he saw the rising sun insignia on their wings that he realized the shocking truth- the innocent entertainment of the night before had been transformed into terrifying reality.[4]

The Japanese concentrated their attack on the hanger line, but their bombs found other targets as well. A post exchange warehouse and another storage building were hit. Tents housing sleeping ground crewmen and the 6th Pursuit Squadron barracks were also struck by bombs. Men blown out of upper story windows of the barracks suffered fractures.[5]

Wheeler's disaster planning had been less than brilliant. Antiaircraft defense for the post had been left in the hands of a skeleton crew from the base fire department, which had been given six hours training in the operation of a .50 caliber antiaircraft machine gun. Evidently it had not occurred to anyone that an emergency requiring antiaircraft defense might well place a heavy burden on the fire department too. Nonetheless, the gun was mounted on the firehouse roof. The firefighters decided that, since they had never actually fired the weapon, their services would be more valuable fighting the blazes than in manning the machine gun. Seeing the gun unmanned, a stockade guard and a

prisoner took over antiaircraft responsibility for the post.[6]

Others at Wheeler responded as best they could under the circumstances. And the circumstances were grim indeed. The burning planes were igniting nearby aircraft. The entire complement of P-40's belonging to the 72nd Pursuit Squadron was destroyed, and exploding ammunition stored in a nearby hanger made rescue efforts particularly dangerous for the men of that unit. Still, Staff Sergeant Charles Fay of the 72nd taxied planes clear of the burning hanger area despite two wounds from machine gun fire. Private Donald Plant was killed by strafing fire while removing a wounded man, and others fired small arms at the raiders in a futile attempt at resistance.[7]

Major Kenneth Bergquist, operations officer of the 14th Pursuit Wing, realized there was little he could do at Wheeler. He reasoned that he could be most effective by providing General Davidson with an accurate picture of the general situation. He commandeered a staff car and driver and headed for the information center at Fort Shafter. Bergquist had barely left Wheeler when he met a string of Japanese planes heading north from Pearl Harbor. They headed toward his staff car, so he ordered his driver to stop and take cover. The driver ran into the brush by the side of the road while Bergquist crouched behind a rear wheel.

The driver, in his haste, had not set the brake securely, and the major had to do a "squat walk" to follow the car as it rolled

slowly downhill toward Pearl Harbor. Despite a spray of machine gun bullets from the planes- some of which hit the car- Bergquist's only injury was a cut finger where he had grasped the fender of his rolling vehicle. When the attack was over he was unable to find his driver, and figuring the man had joined another group taking cover in the bushes, Bergquist got in the car and drove to Fort Shafter on his own. Later he learned that the driver had been wounded in the leg. Despite the urgency of his trip to the information center, Bergquist felt badly for years afterward that he had inadvertently left the wounded man behind.[8]

Schofield Barracks

Schofield Barracks, the sprawling infantry post next door to Wheeler Field, was also attacked, although damage and casualties were far less severe. One bomb landed in the front yard of Major General Maxwell Murray, commander of the 25th Infantry Division. Murray's first response to the attack was to order ammunition issued to his artillery units. Next, he ordered machine guns set up on the roofs of the barracks buildings, but he found that his men had already mounted their .30 caliber guns atop the barracks and were firing back.[9]

Elzer Coates, a soldier in the 34th Engineer Regiment, had trouble convincing his buddies that Wheeler and Schofield were actually under hostile attack. In fact, several members of the

34th climbed to the barracks roof for a grandstand view of the "drill". They were finally convinced by a shower of dirt which dispersed a group of men standing on the ground below. The men broke into their armory for machine guns, but found them useless because there was no belted ammunition. While they were trying to belt the ammunition a lone Japanese plane flew over their area and bombed and strafed two large tanks which supplied the post with fresh water. The bomb fell between the tanks and exploded harmlessly, but Coates remembers water spurting from the machine gun holes in the tanks.[10]

The great American writer James Jones, then a company clerk in the 27th Infantry Regiment, drew on his memories of army life and the December 7 attack for his From Here To Eternity. His actual memory of the day more prosaic:

Absolutely nobody was prepared for it. At Schofield Barracks in the infantry quadrangles, those of us who were up were at breakfast. On Sunday morning in those days there was a bonus ration of a half-pint of milk, to go with your eggs or pancakes and syrup, also Sunday specials. Most of us were more concerned with getting and holding onto our half-pints of milk than with listening to the explosions that began rumbling up toward us from Wheeler Field two miles away. "They doing some blasting?" some old-timer said through a mouthful of pancakes. It was not till the first low-flying fighter came skidding, whamming low overhead with his MG's going that we ran outside, still clutching our half-pints of milk to keep them from being stolen, aware with a sudden sense of awe that we were seeing and acting in a genuine moment of history.[11]

Antiaircraft protection for the Schofield area was the responsibility of the 98th Coast Artillery Regiment. Ironically,

it was not the 98th's 3 inch antiaircraft guns which brought down Japanese planes, but weapons issued to the unit for infantry defense. Lieutenant Stephen Saltzman and Sergeant Lowell Klatt were assigned to communications duties with the regiment. After seeing planes roar through Kolekole Pass they moved their men and equipment to their assigned position at the eastern edge of Wheeler Field. About 8:30 Saltzman heard two Val dive bombers straining to pull out of a dive. He seized a Browning Automatic Rifle (BAR) from a nearby guard, dropped to his knees, and (after making sure they were not American planes) began firing. Sargeant Klatt followed the lieutenant's example. The two planes continued their dive, and the lead plane began strafing the two men. The aircraft passed out of sight behind a building, and Klatt and Saltzman heard a loud explosion. Running around the corner of the building, they found they had downed one of the planes. It is a measure of the confusion that prevailed that they mistakenly identified the plane's wings, engine, and propeller as being American made.[12]

U.S. fighter opposition: Welch and Taylor

The auxilliary airfield at Haleiwa, temporary home of the 47th Pursuit Squadron, lay about ten miles north of Wheeler on Oahu's north shore. Haleiwa, unlike the other airfields, was not the object of a concentrated attack. Perhaps the lack of air units permanently stationed there led the Japanese to believe Haleiwa unworthy of their attention. The attackers made one strafing

pass at about 8:30, but only one plane (a P-36) was damaged and the attack was driven off by rifle and machine gun fire.[13] The Japanese had bigger fish to fry elsewhere.

The light damage at Haleiwa permitted pilots of the 47th to offer most of what little fighter opposition the Japanese faced on December 7. Sunday morning found Second Lieutenants George Welch and Kenneth Taylor at Wheeler Field. A hasty telephone call to Haleiwa alerted ground crews to begin preparing planes for combat. They drove the ten miles to Haleiwa and found the crewmen working feverishly to ready the squadron's pursuit planes. At about 8:20 Taylor and Welch were airborne in P-40's. They were handicapped by the fact that their .50 caliber machine guns were inoperative, and the planes' only effective armament were four wing-mounted .30 caliber guns in each aircraft.[14]

The two officers winged southward from Haleiwa searching for enemy aircraft. As they passed Wheeler they saw smoke billowing from the destruction below, but the first wave attackers had already departed from the immediate vicinity. Welch and Taylor were directed by ground radio control to the Barbers Point area. There they found a group of about a dozen Japanese planes assaulting the Marine Corps air base at Ewa from an altitude of 1,000 feet. They dived into the formation and began firing. One of Welch's guns jammed, but each man shot down one Val on that first pass. Taylor then downed another dive bomber as it attempted to escape out to sea. Welch's trouble with his jammed

machine gun was compounded by a hit from an incendiary bullet just behind his seat. His plane began to smoke and he climbed into a cloud bank to check the damage. The smoke abated and he rejoined Taylor in the fray. His persistence was rewarded when Welch downed yet another plane over the water. Taylor managed to inflict damage on at least two others.

After the fight near Ewa Welch and Taylor needed more fuel and ammunition. They landed at Wheeler to replenish and took to the air once again at 9:00. Welch took off without incident, but a second group of Vals arrived at Wheeler as Taylor was about to leave. He took off in the face of a strafing attack by the oncoming attackers. They made no hits, and Taylor maneuvered to close on the tail of what he thought was the last Japanese in the group. As fired at his target he himself came under fire from the rear by yet another Val. Wounded by a bullet through his left arm and fragments in his leg, Taylor began to climb desperately for survival. His luck held as Welch came to his aid and shot down the attacker. The Val crashed halfway between Wheeler and Haleiwa before his rear gun scored hits on Welch's engine, propeller and cowling. The two Americans pursued the retreating Japanese, with Welch shooting down one more for a tally of four Japanese planes for the day. When Taylor exhausted his ammunition he returned to Wheeler hors d' combat from his wounds.

Other Pilots

Welsh and Taylor were not the only pilots of the 47th to take advantage of the Japanese inattention to Haleiwa. First Lieutenant Robert Rogers and Second Lieutenants Harry Brown and John Dains also made the drive from Wheeler to Haleiwa. Arriving at the airfield after escaping strafing attacks on the road, the three got airborne individually at about 8:50, Dains in a P-40 and the others in P-36's. These P-36's lacked working .50 caliber guns and were armed with only a single .30 caliber apiece. Rogers and Brown found each other near Haleiwa and, after circling warily before establishing identification, found a small group of Japanese planes headed north, probably back to their carriers. Brown attacked, scored a possible hit, then overshot his target when the Japanese pilot cut his throttle, dived and lowered his flaps. Rogers and Brown then proceeded to Kaena Point at Oahu's northwestern tip. Dains' engaged at least one Japanese aircraft, returned to Haleiwa with his damaged aircraft, and took off again. Meanwhile, First Lieutenant John Webster left the small field in a P-36.

Back at Wheeler First Lieutenant Lewis Sanders organized a group of planes and pilots of of the 46th Pursuit Squadron. Sanders, with Lieutenants Othniel Norris, John Thacker and Philip Rasmussen, obtained four P-36's and readied for takeoff at 8:50. Norris left his plane with the engine running to search for a new parachute, and Second Lieutenant Gordon Sterling, an inexperienced pilot from the 45th Pursuit Squadron, seized the

opportunity. Sterling climbed into the fighter and joined the rest of the group as it taxied out to the runway. Sanders was directed by fighter control to take his group to Kaneohe and Bellows and provide air cover against Japanese attackers at those bases. Another of the 46th's pilots, Second Lieutenant Fred Shifflet, commandeered a working P-40 from another squadron, took off from Wheeler, and returned with the plane riddled with holes. About 30 minutes after Sanders' group departed First Lieutenant Malcom Moore was airborne from Wheeler in another P-36.

While Rogers and Brown patrolled at Kaena Point they were joined by Webster and Moore, who had flown up from Wheeler on his own. The four found an abundant selection of targets, for the Japanese had designated Kaena Point as the rendezvous point for the return flight to the carriers. Rogers and Webster teamed up to attack two Japanese planes, but Rogers' aircraft was seriously damaged and Webster suffered a leg wound. Both were forced to return to Haleiwa, but not before Brown saved Rogers from a close call. Two planes came after Rogers and he dove into a steep escape. Rogers bluffed one of them off course with a feint and destroyed the other with a burst of fire from less than 50 feet. Moore attacked another plane, but it escaped into the clouds. Brown meanwhile faced over a dozen Japanese singlehandedly, but a head-on approach dispersed their formation and he escaped. He then encountered the plane which had run from Moore. Brown

attacked; the carrier pilot headed out to sea trailing smoke, and Brown abandoned the pursuit. Moore, Webster, Brown and Rogers all succeeded in landing safely at Haleiwa.

Air Combat Over Kaneohe

While the other Army pilots fought the Japanese along the Ewa-Wheeler-Kaena Point axis, Sanders, Sterling, Rasmussen and Thacker flew southeast to Kaneohe and Bellows. Flying at 11,000 feet, Sanders spotted Japanese planes about one mile below. He signaled his group to close up for the attack and was shocked to see Sterling had taken Norris' place. He had no choice but to put the inexperienced pilot on his right wing and led the formation into a dive on a group of nine raiders over Kaneohe Bay. Sanders fired on the leader, saw smoke billow from his target, and made a 360 degree turn to clear his tail. He completed the turn in time to see Sterling shoot down a plane. Sterling had no time to savor his victory, for instantly a Zeke was on his tail. The obsolete P-36 never had a chance, and Sterling went down in flames.

Rasmussen, meanwhile, was having troubles of his own. His .50 caliber machine gun malfunctioned and "ran away" in uncontrolled firing when he cocked it. Still, he managed to shoot down a Val. Immediately after his victory, he saw Sterling and his victim both hit the water. Rasmussen continued to watch as Sanders exacted quick revenge by attacking the Japanese fighter from

behind. Rasmussen had little time to contemplate the action. Two Zekes made a broadside attack, extensively damaging his plane. He recalls:

I thought I had been killed. I was sure that the top of my head had been shot off. I could feel a mass up there and felt sure it was my brains, but I was having such a fight to control the plane that it took a minute or two before I could gingerly put a hand to the top of my helmet. All that was there was a pile of plexiglass; no blood, not a scratch.[15]

After downing the plane which had claimed Sterling, Sanders made a circuit of the area and encountered another Zeke head-on. As they closed each pilot began to climb and maneuver to obtain a clear shot at the other's tail. Sanders' obsolete P-36 was no match for the more modern and powerful Japanese fighter, so he broke off the engagement before he became yet another casualty. John Thacker's guns jammed on his first pass, but he continued making dry runs at the Japanese. When his plane was hit by 20 millimeter cannon fire he headed home to Wheeler, but he was mistaken for Japanese and driven off by ground fire. Lacking any alternative, Thacker climbed back into the clouds. Rasmussen, barely in control of his plane (he later counted more than 500 holes in it), soon arrived escorted by Sanders. Rasmussen's plane was in imminent danger of falling victim to the law of gravity, so he had no choice but to attempt a landing in the face of antiaircraft fire from Wheeler's now alert defenders. Miraculously, both he and Sanders made safe landings, followed shortly by Thacker.

Two more interceptor sorties were made on December 7. Lieutenants Dains and Welch left Haleiwa at 9:30 for the third and final flight of the day for each pilot. By this time Dains had traded his battered P-40 for a P-36, while Welch still flew the newer fighter. The Japanese planes were returning to their carriers by then, and neither pilot found any targets. On their return to Wheeler they were fired on by trigger-happy antiaircraft gunners. Welch landed safely, but Dains was killed when he crashed on a nearby golf course. John Dains and the unfortunate Gordon Sterling were the only deaths from among the Wheeler and Haleiwa pilots who took to the air. Collectively, they were credited with ten confirmed kills and an uncertain number of probables.

Camp Malakole

That total undoubtedly accounted for more than half the Japanese planes downed by the army on December 7. The army's coast artillery units assigned to antiaircraft defense were for the most part unable to ready their equipment in time to respond to the attack. In many cases those units were assigned battle positions miles away from their quarters and, and their ammunition supplies were often stored in distant locations. Typical was the experience of the 251st Coast Artillery Regiment, a California National Guard unit called to active duty and posted at Camp Malakole near Barbers Point.

First Lieutenant Willis Lyman of Battery E was preparing himself for the Sunday morning dedication of Camp Malakole's new chapel when he received a telephone call from the wife of another officer in the regiment. The woman, calling from the Wheeler-Schofield area, was worried. There was a lot of noise and "big black things dropping around the place". Lyman assured her it was nothing to be worried about- just some early morning practice. After hanging up the telephone he stepped out onto his porch and looked in the direction of Pearl Harbor. He saw explosive bursts in the air and at the same time spotted a small group of planes headed for his camp. Lyman reached for his binoculars for a better look. The rising sun insignia on the planes told the story, and he ordered his battery's two .30 caliber machine guns (intended for ground protection, not antiaircraft work) into action.[16]

The post's sergeant of the guard, June Dickens, got his first inkling of the attack when two Japanese planes roared down the camp's main street strafing. Dickens responded with his available armed guards. The most effective was provided by two men in a fire tower armed with BAR's (posted as anti-sabotage guards) and machine guns mounted on two trucks on alert for saboteurs. A marine unit on the beach nearby for antiaircraft machine gun practice got an unexpectedly realistic drill and joined in with their weapons. At least one plane fell into the ocean just off Malakole.[17]

Protecting the fleet in Pearl Harbor was a different matter. It took Battery B nearly an hour to assemble its 3 inch guns and move them into position at the West Loch Naval Ammunition Depot. Sergeant Eugene Camp's truck was strafed repeatedly as it moved along the back roads to the battery's assigned location. Camp was surprised that there seemed to be a military policeman stationed at every major intersection along his route. Battery B was luckier than some other antiaircraft units. Since its assignment included the depot's ammunition bunkers, its 3 inch shells were already prepositioned at the firing site. Still, the artillerymen, augmented by some 20 Oglala survivors, had no targets by the time they were ready to go into action.[18]

Kaneohe Bay

On the opposite side of the island the naval air station at Kaneohe Bay was possibly the first installation on Oahu to be attacked. Kaneohe was home for Patrol Wing One, a PBY unit. The day before the attack the station's personnel had been lectured on the danger of sabotage at a Saturday morning inspection. Partly because of the concern with sabotage, most of the planes of Patrol Wing One were parked together on the seaplane ramp; four were moored in the bay about a thousand yards apart, and four were in Hanger 1. There were thirty-six planes, nearly all of them PBY's, at Kaneohe.[19]

The post commander, Commander Harold Martin, was enjoying a cup

of coffee shortly after 7:45 when he noticed about a dozen fighters approaching the base at 800 feet. As they rounded nearby Hawaiiiloa Ridge and approached the airfield Martin's young son pointed out the rising sun insignia on the planes. Before he had a chance to alert his men the fighters commenced to strafe the base, setting many of the patrol planes afire with incendiary bullets. In front of the base administration building the marine guard was assembled for the morning colors ceremony. As the strafing began the corporal in charge of the color party began to run up the colors, but his assistant was resolved to wait until 8:00. The corporal hoisted on the halyard while his assistant, a much lighter man, hung on grimly. The determined assistant went halfway up the flagstaff before he let go.[20]

The first attack destroyed the patrol planes moored on the bay. At 8:15 a second group of attackers hit Kaneohe. This group of approximately eighteen planes included about ten dive bombers and inflicted more damage. Sailors and civilian construction personnel tried to drag burning planes clear of the ramp area. Some men seized rifles and machine guns and fired back at the Japanese. Chief Petty Officer John Finn took a .50 caliber machine gun from one of the planes on the ground and continued firing even after suffering several painful wounds. Sam Aweau, a quick-witted civilian contractor working on the base, called Hickam and Bellows and passed on news of the attack on Kaneohe. Aweau's presence of mind, however, was of no avail and he was not

believed. Other civilians worked alongside the sailors and marines under fire. Construction workers quickly set about repairing severed water and electrical lines. Commander Martin praised Mrs. Spencer, the post's civil service telephone operator, for her "calmness and initiative" throughout the attack.[21]

The base suffered yet a third attack at approximately 9:00 when a squadron of fighters from Soryu led by Lieutenant Fusata Iida hit Kaneohe once more. For Lieutenant (j.g.) Iyozo Fujita, Iida's friend and one of his flight leaders, the Pearl Harbor attack was his first time in combat. The squadron circled the island twice in search of fighter opposition. Finding none they dived on the base from the east across the pali, the spectacular line of cliffs behind Kaneohe. Fujita was nervous enough on his first combat mission, and puffs of smoke from anti-aircraft bursts did little to calm him. Nervous or not, Fujita and the rest of the squadron did their duty. This third attack exacted the greatest loss of life at the station when a bomb exploded in a hanger crowded with men drawing ammunition.[22]

The Japanese paid for their persistence when Iida's plane was hit by ground fire and began streaming fuel. Fujita saw the white fuel vapor trailing from the plane. Iida pointed to the remaining planes in the squadron, then northward in the direction of the carriers, then to himself, and finally to the ground. The message was clear to Fujita: the squadron leader was

ordering them to return to the task force while he would hold to an agreement previously reached among the pilots themselves. If one of them were unable to return to the carrier he would crash dive into an enemy target rather than bail out. The pilots had even left their parachutes behind on Soryu to guarantee the commitment. Iida went down, but missed any targets of importance and crashed into a hillside. Despite the loss of Lieutenant Iida, the Japanese attack on Kaneohe could hardly have been more successful. Every plane on the base was destroyed or badly damaged.[23]

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CHAPTER 14

Bellows Field

Of all the instances of surprise on December 7, the most inexplicable is that of Bellows Field. Bellows, some eight miles southeast of Kaneohe, was a small airfield established less than a year before. Most activities were housed in temporary structures, and the personnel slept in tents. The station's only permanently assigned unit was the 86th Observation Squadron, but the 44th Pursuit Squadron was temporarily based at Bellows for gunnery training. Contractor Sam Aweau had phoned the base with news of the attack on Kaneohe, and Hickam had called at 8:10 with an urgent request for firefighting equipment (which was dispatched immediately).[1]

It is something of a mystery, then, why the men at Bellows were surprised at 8:30 when a lone Japanese plane (probably a stray from the Kaneohe attack group) made a half-hearted strafing pass over the post. One man suffered a leg wound, but there were no serious casualties or damage. Lieutenant Colonel Leonard Weddington, Bellows' commanding officer, was fetched from his nearby home by his driver, but- incredibly- there was no general alarm sounded. Private First Class Raymond McBriarty, an aerial gunner with the 86th Observation Squadron, witnessed the attack and saw the Japanese markings on the plane. The event excited an animated discussion among McBriarty and the other men, but they

received no instructions from their officers or noncoms.[2]

In the absence of any direction, McBriarty went to church. He could not help wondering about the strafing, though, and had a difficult time keeping his mind on the service. His puzzlement increased when a B-17, one of the flight which had made such an untimely arrival from California, made a forced landing at the small airstrip. The bomber, with three wounded men aboard, went off the runway and ploughed into a knoll. Services continued, but the congregation's attention was by now far removed from the divine proceedings.

How much longer force of habit would have held the men in church will never be known, for a group of about nine Japanese planes made a concerted and deadly strafing attack at 9:00. These planes were Lieutenant Iida's squadron, which had just ravaged nearby Kaneohe. They targeted the O-47's, O-49's and P-40's on the airstrip. They also set fire to a gasoline tanker truck. The air raid signal sounded at last, and the chapel emptied as the men rushed to their units. Some airmen and troops from the 299th Infantry Regiment (a Hawaii National Guard unit activated earlier that year and bivouacked nearby) fired back ineffectively with Springfield rifles.[3]

Second Lieutenant Phillip Willis of the 86th Observation Squadron slept through the first strafing. He had returned to the post just before dawn after a night of vigorous elbow bending

at the Hickam officers club. And why not, he had reasoned. He was going to leave the island Monday as a burial escort for the body of a fellow pilot killed in a training accident. The noise of the second attack roused him from his slumber. Still hungover and wearing his tuxedo trousers and shirt, Willis donned his helmet and flight jacket. To complete the outfit he reached into his footlocker and pulled on a pair of cowboy boots. He remarked, more to himself than anyone else, "Us Texans like to die with our boots on." [4]

When Willis got to the runway he saw Lieutenant Hans Christiansen attempting to climb into the cockpit of his P-40. Christiansen was hampered by his awkward parachute pack, so Willis ran to the plane and pushed the fighter pilot from behind. At that moment one of Iida's pilots found his mark and riddled Christiansen and the P-40 with machine gun fire. Willis was covered with Christiansen's blood but saved from injury by the parachute, which stopped the slugs.

Two other Bellows pursuit pilots got into the air, but without the success enjoyed by their colleagues in the 46th and 47th Squadrons. Lieutenant George Whiteman took off from Bellows under fire from two Zekes, but managed to get airborne. Before he reached a thousand feet he was shot down in flames. Lieutenant Bishop was lucky enough to escape with his life, but his P-40 was shot down over Kailua Bay before he could engage the Japanese. Despite a leg wound and a badly wrenched back Bishop swam ashore

at Lanikai Beach.[5]

Private McBriarty, meanwhile, had gone directly to the armament shack when the air raid signal sounded. He drew the rear seat machine gun for his O-47 and, followed by another airman carrying ammunition for the gun, mounted the weapon in his squadron commander's plane. He was loading the ammunition for the plane's fixed guns when the strafers returned for another pass. McBriarty dove to the ground, and when the planes passed he climbed into the rear cockpit seat and readied his weapon. When the next flight came by McBriarty began firing from the grounded plane. He was sure that at least some of the 450 rounds he fired had struck home. McBriarty saw holes appear in the fuselage of one Zeke, although it did not crash, and he fired directly into the engine of another which seemed to be diving right toward him. The second pilot, McBriarty noted:

pulled awful hard on the stick, not as any regular pilot would do, and I might say he was an awful poor pilot, because the way he was following in on his gunnery line, why, he tried to fire- to follow me straight in, and to correct his fire, why, he gave it too much rudder from one side and then too much rudder on the other side, and he completely missed his target.[6]

Given the disparity between the Japanese and American performances on December 7, McBriarty's criticism seems a bit picayune.

Ewa Marine Corps Air Station

The Marine Corps air station at Ewa was as helpless as Bellows and Kaneohe. At 7:55 about twenty Japanese fighters streaked around the Waianae Range from the northwest and began strafing the base. Using incendiary, explosive and armor piercing rounds from 7.7 millimeter machine guns and 20 millimeter cannons, the Zekes made repeated passes as low as twenty feet. For the first ten to fifteen minutes they concentrated on the tactical aircraft parked on the strip. After those targets were demolished they turned their attention for another five to ten minutes to personnel and aircraft under repair.[7

During the first strafing attack Lieutenant Colonel Claude Larkin, commander of the installation and Marine Aircraft Group Twenty One, was wounded. Nevertheless, Larkin organized the base's meager defenses. These consisted primarily of rifles and .30 caliber machine guns taken from damaged planes. Technical Sergeant William Turnage supervised the setting up of Ewa's improvised antiaircraft defenses. Master Technical Sergeant Emil Peters and Private William Turner operated a machine gun from the rear seat of a damaged plane. Turner was fatally wounded by one of the strafers. The men fought fires and parked vehicles on the runway to forstall the possibility of a landing by airborne troops.

Others did what they could to aid the wounded. Pharmacist's Mate Second Class Smith jumped into an ambulance with Private First Class James Mann at the wheel. The two drove out to the

burning planes only to be caught by strafers. Mann and Smith crawled beneath the ambulance for shelter. The vehicle proved to be more of a target than a shield, and Smith was wounded in the left calf (fifty-two bullet holes were counted in the ambulance). Returning to the dispensary, Smith's wound was treated and he joined the rest of the medical staff in tending to other casualties.[8]

In the short lull which followed the second attack came six SBD's from the Enterprise air group. Larkin and the others expected additional attacks soon. The marines told the navy pilots that to remain on the field, even for a quick refueling, would be to court the fate of other planes caught on the ground. The Enterprise pilots elected to take their chances with the Japanese aloft rather than the certain destruction which awaited them if they remained on the ground. During the ensuing aerial confusion Colonel Larkin reported at least one collision between a Japanese plane and an Enterprise plane.[9]

Ewa did not have long to wait for another blow. The second attack came at 8:35, this time from the direction of Pearl Harbor, and included dive bombers. The Vals dropped their bombs on remaining planes and strafed the field with fixed wing guns. The rear gunners threw in parting shots as the bombers pulled up and away. The attack lasted about twenty minutes and completed whatever destruction was neglected by the first group. Again the Marines returned fire with rifles, Thompson submachine guns, and

anything else at hand. Private Mann, who had driven his ambulance to the garage to change its four punctured tires, joined in with his rifle.[10]

One more group of planes returned to strafe Ewa halfheartedly sometime between 9:00 and 9:30. This attack by about fifteen planes, was characterized by Larkin as "light and ineffectual". The final attack caught Sergeant Carlo Micheletto trying to extinguish the fires set during the earlier attacks. On the approach of the third group Micheletto seized a rifle and crouched behind a pile of lumber. While firing at the attackers he was shot through the head and killed instantly. By that time the Japanese had destroyed or put out of commission all of the forty-seven marine aircraft at Ewa. The only flyable planes remaining at the field, ironically, were four Enterprise planes which had landed late in the attack, refueled, rearmed and ordered held on the ground by Admiral Bellinger.[11]

Enterprise flight

Into the melee above Ewa flew the morning flight from the Enterprise task force. Although some planes managed to land (at least temporarily) at the marine airfield, most had to take their chances in the confusion. Lieutenant Clarence Dickenson was mistaken for an attacker and came under fire from the ground. The Japanese, however, had no trouble recognizing his Dauntless dive bomber and made repeated passes at his plane.[12]

Dickenson's rear seat gunner, Radioman First Class William Miller, managed to shoot down one of their tormenters before he fell victim to Japanese gunfire. The plane was crippled by the attacks, and Dickenson was forced to parachute into the sugar cane fields which covered most of the Ewa plain. The pilot hitchhiked to Ford Island, his original destination.

Other pilots and aircrewmembers were not as fortunate. Eight of the original seventeen planes crashed or disappeared, although some were later repaired. Some of the aircraft went down on Oahu; some fell into the sea. One managed a forced landing on Kauai. Eight of the airmen were dead or missing.[13]

Lieutenant Commander Hopping of Scouting Squadron Six managed by making a low approach to land on Ford Island amid the attack. His first thought was to broadcast a warning to Admiral Halsey and the other Enterprise pilots who might be approaching Oahu in blissful ignorance. He tried the radio in the control tower, but found it lacked the power to send the message. He climbed back into his own plane and used its radio to broadcast the warning. With little else to do for the moment Hopping occupied himself with professional observations on the techniques employed by his Japanese counterparts. Of the Vals he noted, "attacks were made in a glide rather than a dive, [and] pull-outs were as low as 400 feet." [14]

Commander Young, leader of the Enterprise Air Group, made a

similar landing on Ford Island and, like Hopping, had time to make some professional observations. He wrote:

My only criticism of this particular attack [second wave dive bombers] was that they all came in from the same direction instead of making a divided attack, however the ineffectiveness of our AA fire, lack of air opposition and the manner in which they pressed their attack home in this particular instance combined to make the attack practically perfect.[15]

B-17 Flight from California

Like the Enterprise pilots, Major Landon's twelve B-17's of the 19th Bomb Group flew into Oahu unaware of the Japanese attack. The heavy bombers approached not in one formation, but singly. The long fourteen hour flight from California required that each plane's course and throttle settings be adjusted individually to minimize fuel consumption. The demands of the great distance on the planes' fuel capacity also dictated that their defensive armament be sacrificed for fuel. Second Lieutenant Irwin Cihak, Landon's bombradier, recalls that he had only a single .50 caliber machine gun aboard, and it was packed in cosmoline and stored in a crate.[16]

As Landon's plane approached Oahu from the northeast the crew noticed the heavy pall of smoke over the island. Cihak and others aboard the aircraft speculated and wondered: was it possible that the sugar cane fields were being cleared by burning on a Sunday? Nearing Kaneohe at 5,000 feet the airmen noticed a formation of planes in single file heading their way. navy

fliers, thought Cihak. As the B-17 passed just above the "navy" planes they saw that the olive drab planes were marked with the rising sun. Cihak looked down on the formation as the last Japanese pilot in line glanced up at the heavy bomber, and for an instant each glimpsed the face of the enemy.

Landon dove to gain speed as the last Zeke in line pulled out to pursue the B-17. The Japanese pilot fired a few short bursts before returning to his group. He scored no hits, but Cihak had an uncomfortable moment as he saw tracers stream past his plane. Landon flew over Pearl Harbor en route to Hickam (strictly against the rules, but who cared under the circumstances). Another plane taxiing on the runway forced him to circle out to sea for a second approach. Landon made it safely this time, touching down about 8:15. Cihak and others in the crew abandoned the aircraft as soon as it stopped rolling and ran for the dubious cover of mangrove trees on the south edge of the runway to avoid the strafing.[17]

The Japanese were not the only danger the B-17's had to contend with. Many Americans, including some antiaircraft crews, mistook the planes for Japanese. Even Hickam's Major Brooke Allen-himself a B-17 pilot- failed to recognize Landon's planes as American. Perhaps it was the modified appearance of Landon's new "E" model B-17's (the B-17E had an extended fuselage to accommodate a tail gunner); more likely it was the stress of the moment. Allen exclaimed to himself, "Where did the Japs get

four-engine bombers?" It was not until he saw one come in for a landing at Hickam that he realized it was a friendly aircraft. The harried bomber pilot made his approach with a Japanese fighter on his tail and antiaircraft bursts exploding around him. To make matters worse, a truck pulled out onto the runway to block his landing. The pilot's perseverance paid off when he landed safely after circling around for another approach.[18]

Miraculously, all of Landon's bombers made it. Two landed at Haleiwa, one at Wheeler, one at Bellows, and seven at Hickam. The twelfth made an expedient landing on the Kahuku golf course. Some came down in forced landings; others were damaged on the ground by strafers. One B-17 was totally destroyed and three "badly damaged".[19] There were some casualties among the crews from gunfire and the crash landings but, everything considered, they fared far better than might have been expected. The rugged construction of the B-17, which figured in its later successful career, was undoubtedly a factor in the surprising low attrition of Landon's group.

1. Report of Executive Officer, Bellows Field, December 20, 1941, in "Reports of Japanese Attack on Bellows Field, Hawaii on 7 Dec 1941" (Microfilm Roll 740.674-1A); A.F. History.

2. PHA, 22:293-96; 23:741-45.

3. Fujita interview.

4. Phillip Willis interview, NTSU.

5. Report of Executive Officer, Bellows Field, December 20, 1941.
6. PHA, 22:294.
7. Report of Marine Aircraft Group Twenty One, December 30, 1941, Personal Papers of Major General Claude A. Larkin, U.S. Marine Corps Historical Center, Washington (hereafter Larkin Papers).
8. Ibid.
9. PHA, 23:712-13.
10. Report of Marine Aircraft Group Twenty One, December 30, 1941, Larkin Papers.
11. Ibid.
12. Report of USS Enterprise Air Group, December 15, 1941, CincPac Reports.
13. PHA, 23:611-12.
14. Report of Scouting Squadron Six, undated, CincPac Reports.
15. Report of USS Enterprise Air Group, December 15, 1941, CincPac Reports.
16. Irwin Cihak interview with author, December 4, 1983, Honolulu.
17. Ibid.
18. PHA, 22:124-27.
19. Ibid., 1:38.

CHAPTER 15

USS Monaghan and Midget Submarine

The air attack was a stunning success, but Admiral Mito's submarines had contributed little to the Japanese effort. Only one of the midget submarines is known definitely to have penetrated Pearl Harbor. The craft entered the channel lying to the northwest of Ford Island, and her periscope and conning tower were spotted by lookouts on ships in the area. At 8:35 the seaplane tender Tangier received a report of a submarine in the channel; within minutes a sailor on Curtiss, another seaplane tender, spotted the sub. The destroyer Monaghan, skippered by Lieutenant Commander William Burford, noticed Curtiss' flag hoist warning of a submarine in the channel. Monaghan, the ready duty destroyer, was preparing to get underway, having received an earlier order to join Ward outside the channel entrance and investigate the pre-attack submarine contact in that area.[1]

To Lieutenant (j.g.) Hart Kait, Monaghan's gunnery officer, it looked as though the submarine was "bobbing and zig-zagging" near the channel's west bank as it glanced off the channel bed. It is more likely that the submarine was maneuvering desperately to avoid the fire of the ships in the area. The air attack had been underway for more than half an hour, and every deck gun in the harbor was manned by keyed up crews. Fifty caliber machine gun bullets churned the water. Curtiss opened fire at 700 yards with

one of her 5 inch guns; two rounds fell short, and a third seemed to hit the conning tower. Tangier's 3 inch antiaircraft gun got off six rounds. Monaghan's Number 2 gun fired once but missed, hitting and setting fire to a floating derrick moored on the opposite side of the channel.[2]

Monaghan was by then underway at ten knots. Burford ordered flank speed from the engine room and passed the word to ram the sub. The helmsman, Chief Quartermaster D. E. Williamson, assured the captain that he saw the submarine and headed straight for the target about 1,000 yards away. On the destroyer's stern Torpedoman Second Class A. F. Parker and Chief Torpedoman G. S. "Al" Hardon worked feverishly to prepare Monaghan's depth charges. The submarine fired a single torpedo at her charging nemesis. To Carpenter Third Class G. J. Bennet aboard Monaghan it seemed the missile would strike the protective guard around the ship's screws, but the torpedo porpoised twice and struck the Ford Island shore in a harmless geyser of dirty water. Ensign J. W. Gilpin, Monaghan's communication officer, had another worry: as the destroyer converged on her target would other vessels cease fire, or would they continue and destroy both the hunter and her prey?[3]

Fortunately for Monaghan, fire control on the seaplane tenders ordered their guns to halt as the destroyer fouled the target. Back on the stern Hardon and Parker set the charges for the shallowest possible depth, 30 feet. Burford's vessel struck the

submarine a glancing blow on Monaghan's port side as the word was passed to release depth charges. Events were moving too quickly, though, for the normal relaying of orders, and Hardon had already let one charge go before the order was given. He released a second charge in quick succession. The explosions in the shallow channel lifted the destroyer's stern 3 or 4 feet out of the water, and she was lucky not to sustain any damage from the explosions. The order came to drop a third depth charge just as Monaghan ran aground next to the floating derrick. Hardon held his fire, knowing that a blast while the ship was stationary would destroy the warship. His initiative in releasing the first depth charge and his decision to ignore the order for a third release earned him high praise in action reports for his "keen judgement". Luck, too, was with Monaghan that morning, for the depth charges were loaded with a low grade explosive normally reserved for training exercises. A full battle load might have destroyed Monaghan as well as the submarine.[4]

Although the submarine was crushed, the air raid was continuing and who knew what else might be lurking under the turgid waters of Pearl Harbor? Burford ordered ordered all engines back full speed to clear his ship, but the destroyer was stuck. On the bow sailors played CO2 fire extinguishers on the burning derrick as engine room hands strained to deliver full power in reverse. Someone called out another submarine sighting, and Monaghan's guns opened up on a "periscope" that later turned out to be a

black cage buoy.

Monaghan was fouled not on the shoal near the derrick, but on one of the structure's anchor cables. Carpenter Bennett was preparing to go over the side and cut the cable with a fireax. He had already thrown his ax onto the barge and passed a line over when the destroyer suddenly broke free. A final thrust of her engines freed the vessel, but not before giving a civilian yardworker aboard the derrick the fright of his life. A fragment from one of the wild shots at the cage buoy severed a cable on the derrick structure, bringing a clatter of gear down near the man. Bennett saw him throw off his helmet, run off the barge into the shallow water, stagger ashore and throw himself into the passenger door of his car parked on the beach. He slid over to the driver's side, found himself without his keys, bailed out the driver's door, and fled into the cane fields.[5]

After freeing his ship Burford continued the sortie to his offshore patrol station outside the harbor entrance. The entire action for Monaghan, from first sighting of the submarine to clearing the derrick, had taken roughly ten minutes.[6]

Pennsylvania, Cassin and Downes

Of all the ships in Pearl Harbor the most helpless were those in drydock. Immobilized and with vital power systems curtailed, they were the choicest targets of opportunity for the Japanese on the morning of December 7. Pearl's largest drydock, Drydock One,

held the Pacific Fleet flagship, Pennsylvania, and the destroyers Cassin and Downes. The two destroyers lay side by side at the head of the drydock, with the flagship behind them. Three propeller shafts had been removed from Pennsylvania and the hull was covered with scaffolding. Downes and Cassin were just as unprepared for battle. Neither vessel had belted machine gun ammunition ready, and breech blocks had been removed from their 5 inch guns for modifications. Hatches and passageways were blocked by temporary ventilation ducts. To compound their vulnerability, the bottom of the caisson was far below the surface level; the ships were, in effect, in a "hole" which limited their field of view.[7]

Cassin's skipper, Lieutenant Commander Daniel Shea learned of the attack when a chief gunner's mate caught him on his way to breakfast and announced, "Captain, they're here, bombing Hickam Field." Downes' captain and executive officer were ashore; her senior officer, Lieutenant (j.g.) J. D. Parker, finished checking the ship for fire hazards (navy yard workmen had been working aboard the ship throughout the night) and went to the wardroom for a look at the morning paper. He heard explosions, but thought they were from work in progress in the drydock until the ship's general alarm rang.[8]

On Pennsylvania the foremast antiaircraft machine guns were manned and firing back within minutes. Confusion on other guns forced men to break locks on ammunition boxes before they could

go into action. Japanese planes soon spotted the battleship and began to strafe the vessel, but without any noticeable effect. Lieutenant Parker set Downes' forward repair party to removing the improvised vent trunks so the ship's watertight doors could be sealed. Ammunition crews spurred on by Chief Gunner's Mate Henry Cradoct began the laborous work of belting .50 caliber ammunition (it took fifteen minutes for the first belt to reach the guns). Two of Downes' resourceful gunner's mates, Michael Odietus and Curtis Schultze, began to search for replacement breech blocks for the 5 inch guns. Sailors on Cassin turned to the same tasks, but as on Downes, they were hampered by an interruption of electrical power from the dock.[9]

It took Odietus and Schultze 45 minutes to secure and install the breech blocks. But, with the ship out of the water and perched precariously on blocks, what would happen when the guns were fired? Would the recoil knock her over? No one knew. Lieutenant Parker asked another officer on the dock. He suggested, "Fire a shot and see how you make out." Parker accepted the pragmatic advice, and the test firing proved that a destroyer could fire her 5 inch guns while up on blocks in drydock.[10]

The guns on all three ships in Drydock One, despite their limited field of view, joined the chorus of antiaircraft fire. George Walters, a civilian yard worker, had an unsurpassed view from the cab of a traveling crane 50 feet above the drydock. He

moved the crane back and forth over Pennsylvania to create an obstacle to low flying planes. At first, the gunners cursed Walters for interfering with their fire, but they learned to use him as a "director", following his movements to anticipate the approach of planes they could not see. The advantage provided by Walters' unorthodox fire direction was offset by smoke from the battleship's boilers as Pennsylvania's engine room gang worked frantically to raise steam.[11]

The Japanese did not press an attack against the drydocked ships during the first wave attack, but everyone aboard the vessels knew it was just a matter of time. The flagship of the Pacific Fleet, lying helpless in drydock, was just too tempting a target. Two navy yard officers told Commander Shea to prepare for flooding the drydock by closing up exposed openings on the destroyers. Shea immediately set his men to work closing the thirty ports on Cassin which had been removed for the installation of heavier hull plating. Aboard Downes Chief Machinist's Mate Charlie Johnston drove his men in a race to close the necessary valves. Shortly before 9:00 Captain Charles Cooke of Pennsylvania summoned Shea by semaphore to report aboard the flagship. Cooke wanted to make sure the destroyers were ready for flooding.[12]

Cooke's message was interrupted when the anticipated attack began on the ships in drydock. The Pennsylvania signalman sending the summons had to dive for the deck halfway through his

message "due", in Shea's words, "to terrific gun fire from enemy and own ship". Only temporarily daunted, the signalman rose to his feet after the first flurry of fire and completed the message. The Japanese planes- horizontal bombers and dive bombers- approached the drydock in several small formations from all directions simultaneously. Parker looked up to see "three shining glints high in the air... almost in the sun." The shining glints rapidly became three Vals as they plunged toward their target. As the planes bore in Parker thought at first they would hit Pennsylvania, but a bomb hit abreast of Downes' Number 3 gun on the drydock floor between the two destroyers. "The next occurrence", according to Parker, "was a loud explosion... followed [by] an instantaneous fire which flamed up above the after decks." [13]

Other hits on all three ships followed in quick succession. Two more bombs hit Downes aft. Cassin took a bomb on her stern. The clouds of smoke pouring out the hole added to the hellish scene. Two more bombs hit her superstructure. -A hit on the drydock near her starboard bow damaged Pennsylvania's hull. Another bomb penetrated the battleship's boat deck and exploded in a 5 inch gun casemate, killing twenty-eight officers and men. Among those killed were Lieutenant Commander J. E. Craig, the ship's first lieutenant, and Lieutenant (j.g.) Richard Rall, a physician working at his post in the battle dressing station. [14]

With no water pressure, fires on the destroyers raged out of

control. Parker ordered gun crews off their weapons to fight the fires, but additional bomb hits fed the flames and made their task hopeless. Parker then ordered the after part of Downes evacuated and the after magazines flooded to prevent explosions. Fires aboard Cassin were so fierce the Number 3 machine gun erupted in flames. It was soon evident that, regardless of their crews' efforts, the destroyers could not be saved. Parker and Shea reluctantly gave the orders to abandon ship. Parker attempted to go below to make sure all his men were off, but the flames forced him back. Although forced to abandon the ship, Downes' crew showed no diminution of devotion to duty. Chief Johnston saved one man by rolling him over to smother the flames on his burning clothes. Yeoman Second Class Milo Skjerven saved the ship's muster rolls and the transfer and receipt records. Fireman Edward Kwolik at first refused to heed the order to leave and kept a fire hose trained on the after engine room hatch until the men below emerged. Boatswain's Mate Lewis Hite had to chase the last members of the crew off the ship before Lieutenant Parker left. By the time he left the vessel a "solid sheet of flame" covered the quarterdeck.[15]

Damage on Pennsylvania was kept under control, but the ship's efforts to repel the attack were hampered by shortages in the antiaircraft gun crews. Henry Danner, a civilian shipyard worker, helped make up for the shortage by joining one of the battleship's gun crews. By 9:15 attacks on the drydock were

sporadic and ineffective. One plane spattered the shield of Pennsylvania's maintop machine gun nest with bullets, but caused no damage or casualties. Pennsylvania's guns returned the fire and scored a hit. The plane went down in flames near the base hospital, nearly hitting the building and adding to the carnage.[16]

When the destroyers' crews reached dockside they were greeted by a strafing attack. They took cover in a nearby ditch. Parker rallied the Downes men. Fires on their own ship were out of control and secondary explosions made it impossible to get near the vessel. Parker sent his crew to man hoses against Cassin's inferno. They formed a makeshift firefighting force which included sailors, civilians and marines. William Blanchard, Norman Delaura, Sau Chan Lee, Jonah Mawae, Nai You Choi, and other yard workers braved the flames. Marine Sergeant H. F. Abbot, in charge of the base fire department, brought his men and equipment to the drydock. The marine firefighters had their problems. Private First Class O. E. Hill kept the engine running on his 500 gallon pumper by holding a rag against the circulating water line while someone else went in search of spare parts. Private M. D. Dallman remained working his pumper at the head of the drydock despite clouds of suffocating smoke. Private First Class D. O. Femmer managed to keep his 750 gallon pumper running only by making emergency repairs on the spot when it broke down.[17]

The shipyard's photographer, Tai Sing Loo, joined the effort. He recorded his experience in stream of consciousness prose:

We put our hoses directed the depth charges keeping an Officer came by said keep up the good work we had our hoses right at it all the time, and I turn around and saw an officer order all men stand back some thing may happen, So I obey his order and ran back sudden really happen the terrific explosion came from the destroyer flew people were hurt and some fell down.[18]

Ponciano Bernardino, a hoseman from Pearl Harbor's submarine base fire station, managed a group of American Legionnaires and other civilian volunteers who arrived at the drydock about 8:30. When the dive bombers began to strafe the area many of his volunteers ran for a nearby lumber pile. He coaxed them back to the hoses by pointing out that the large group of men seeking shelter would present an attractive target, but if they returned to the hoses they would be hidden from strafers by the pall of smoke billowing over the drydock. His logic brought the volunteers back and they remained at their work until the flames were out.[19]

At 9:20 water finally began to enter the drydock caisson. Burning oil on the surface presented a new hazard. As the water rose the floating blaze threatened to "cook off" Pennsylvania's forward magazines. Although there was no explosion, there were several worried moments as the heat became intense enough to melt the paint on the battleship's starboard bow. Torpedoes and ammunition aboard the destroyers went off like giant firecrackers and metal splinters flew about the drydock area. Lieutenant

Parker received a head wound from one of the fragments, but was soon back directing his men. A piece of torpedo tube from Downes weighing at least 500 pounds was blasted into the air and landed on Pennsylvania's forecastle. Cassin rolled over and smashed against Downes, causing still more damage. Cassin's crew was particularly concerned about the ship's depth charges and maintained a constant stream of water on the charges. It is a tribute to the skill and courage of the drydock's makeshift fire department that the blazes were extinguished by 10:45, less than two hours after the first hits on the three ships.[20]

FLUSHLEFT[USS Shaw]

Some 300 yards west of Drydock One lay the navy yard's Floating Drydock 2. The destroyer Shaw and tug Sotoyomo were in for repairs and, like the ships in Drydock One, they fell victim to the second wave attackers. Between 9:00 and 9:30 Shaw received three hits. The floating drydock took another five bombs. Uncontrolled fire ignited Shaw's forward ammunition magazine, which exploded in a pyrotechnic fireball hurling debris more than a half mile across the harbor. The ship's bow was completely severed.[21]

Surprisingly, the drydock remained afloat after the explosion. Yard workers E. L. Bellinger, P. M. Milker, R. A. Christie, F. C. Schilling, M. A. Paulo, and V. E. Teves hurried to the stricken drydock and undertook the hazardous job of disconnecting the live electrical cables leading into the burning destroyer. Other yard

workers pitched in to fight the fires. Shop 70 contributed a crew including Lawrence Harnar, Abraham Ignacio, William Broyard, Anthony Cerny, Ralph Tyler, Norman Cabral, John Davis, Lloyd Cantrelle, and Marvin Correa. These men shuttled between Drydock One and the floating drydock trying to fight both fires at the same time. Their best efforts were not enough, however, and it became apparent the fires could not be contained. In order to prevent the dock from being completely destroyed by flames it was sunk intentionally by opening the sea valves.[22]

USS Honolulu

Moored less than a quarter mile southeast of Drydock One were the light cruisers Honolulu, commanded by Captain Harold Dodd, and St. Louis, skippered by Captain George Rood. Both ships worked frantically to prepare to sortie when the attack began. At 8:10 Honolulu's crew lit the fires under boilers 5 and 6. At 8:20 boilers 1 and 2 were lit off. At 8:25 the crew secured electrical and steam power lines from the dock; only the fresh water line remained in place. At 8:28 the fires under Honolulu's boilers 3 and 4 began to burn, and at 9:05 all six boilers were cut into the main steam line.[23]

Honolulu never managed to get underway. At 9:25 a group of dive bombers bore in for an attack. One bomb landed on the adjacent dock 15 feet from the cruiser's hull, penetrated the dock, and exploded under water. The concussion opened up two of

her port oil tanks to the sea. The tops of three other fuel tanks were ruptured, flooding both oil and water into the ammunition storage areas. Oil and water surged into wiring passages, magazine decks bulged from the blast, and the Turret II handling room began to leak. The damage, although not as serious as that suffered by some other ships, was enough to force Captain Dodd to scratch his plans to get under way.[24]

USS Raleigh

The dive bombers also found attractive targets in the ships berthed to the northwest of Ford Island. Raleigh, still struggling to remain afloat after being torpedoed, fell victim once again to Japanese planes. The Vals came in, strafing as they dived on the cruiser. Her 1.1 inch guns hit two of the planes. At 9:10 a third plane released a bomb which hit the after deck between a 3 inch and a 1.1 inch antiaircraft gun. It struck a glancing blow on an ammunition box, penetrated the deck, went through a locker in the carpenter shop, passed through another deck, and crashed through a seaman's bunk. The bomb then penetrated a fuel tank, pierced the hull of the ship on the port quarter below the water line, and exploded on the harbor bottom.[25]

More dive bombers came at Raleigh, but the antiaircraft fire of nearby ships, as well as the cruiser herself, prevented any more hits. Still, the cruiser was in precarious shape. She began to

settle ever deeper and developed a bad list to port. The normal draft of 19 feet had increased to 30, and there was still another 15 feet of water under the keel. Captain Simons ordered all unnecessary topside weight thrown over the side. Airplane cranes, torpedo tubes, torpedoes, booms, ladders, chests, anchors and chains went into the water. Simons kept a yeoman busy throughout the proceedings recording the exact location of every object on the bottom, and all- the captain later claimed- were recovered by divers after the attack. Raleigh's crew worked all day and throughout the night of December 7-8 before the ship was safe from the danger of sinking or capsizing.

USS Curtiss

Dive bombers from the second wave also attacked Curtiss, exacting fearsome vengeance for her part in the sinking of the midget submarine rammed by Monaghan. At 9:05 a Val piloted by Lieutenant Mamoru Suzuki attacked the ships northwest of Ford Island and was hit by fire from Curtiss, Raleigh and perhaps other vessels. Suzuki's crippled plane crashed, deliberately according to some observers, into Curtiss' Number 1 boat crane on the starboard side. The plane disintegrated, the gas tank exploded, and the tender was in serious danger from the resulting blaze.[26]

At 9:12 another group of dive bombers came at Curtiss. One bomb hit the stern mooring buoy, another fell short, a third overshot

the mark, but a fourth bomb hit the starboard side of the boat deck. It passed through the carpenter shop, the radio repair shop and exploded on the main deck in the ship's hanger. It destroyed everything within a 30 foot radius of the blast, compounded the fire started by Suzuki's crash, and killed twenty-one men. Within 15 minutes the after engine room had to be evacuated because of smoke and broken steam and water lines. Still, Curtiss' crew continued to fight. The forward antiaircraft gun crews remained at their station and at 9:28 reported firing at a group of high-flying planes passing over the ship from bow to stern. In the radio transmitting room the bomb explosion broke the back of Radioman Second Class James Raines and ignited reels of film stored in the adjacent movie projection booth. Despite his injuries and the flames and choking smoke Raines helped another radioman remove another man from beneath a fallen transmitter.

Ensign R. G. Kelly was injured by the bomb blast, but he continued directing his midship repair party in fighting fires and repairing damage. Shipfitter First Class R. C. Dorsett's thorough knowledge of the ship's structure was invaluable in rescuing injured men and minimizing the damage. Chief Water Tender J. H. Mosher, Chief Machinist's Mate F. Beach, and Machinist's Mate First Class S. F. Safransky braved the smoke and steam to return to the evacuated after engine room. They started the pumps and managed to clear the area of water. On the boat

deck Seamen R. R. Bieszoz and J. A. D'Amelio worked under a hail of machine gun fire to control the flames there. The work of Curtiss' crew was rewarded at 9:36, when the fires were brought under control.[27]

Nevada's Sortie

Of the eight battleships at Pearl Harbor only one, Nevada, succeeded in getting underway during the attack. Despite the torpedo and bomb damage inflicted by the first wave attackers, the senior officer aboard Nevada, Lieutenant Commander Francis Thomas, wanted to get the ship moving. Fires from neighboring Arizona were becoming so severe that they threatened his own ship. Thomas took his post managing activities below decks and left the work above decks to Lieutenant Lawrence Ruff. Normally it took hours for a battleship to get underway, but by chance Nevada was halfway ready when the attack began. Ensign Joseph Taussig, officer of the deck on the last peacetime watch, had ordered a second boiler lit off to relieve the load on the boiler supplying auxilliary power for the ship. The result was that Nevada had two hot boilers- the one supplying the power and the one which had just been lit.[28]

Below decks the crew worked urgently to raise steam pressure as quickly as possible. Fireman Dan Wentrcek bent to the task of changing the burner tips on boiler 1. The size of the burner tips determined the size of the flame, and Commander Thomas had

ordered the largest be put into service. Wentrcek removed the burners, which were covered with hot oil, juggled them onto a workbench, replaced the tips, and struggled to replace the burners. It was a dangerous job, because concussions from bombs and antiaircraft guns could create a "backblast" forcing air down the stack. The blast would throw a sheet of flame into the face of a man unlucky enough to be standing in front of the burners at the wrong moment. Wentrcek was acutely aware of the possibility as he replaced the burners. He "was moving pretty dadgummed fast" and had barely finished and stood to the side when a blast of flame came through the spot where he had been working.[29]

Topside the deck gangs labored at the thousand and one tasks necessary to get a great ship underway. Chief Boatswain Edwin Hill, at 47 no longer a young man, clambered onto one of the mooring quays, cut loose an ammunition lighter, and cast off Nevada's lines. As the battleship drifted away Hill dove into the harbor and swam to his ship before it could leave him behind. Thomas requested a tug, but none was available. It mattered little, because with Chief Quartermaster Rober Sedberry at the helm the ship moved away so smoothly that Chief Signalman Pryor watching from the signal tower reported, "I could see no tugs, apparently they pushed her out from the inboard side." [30]

As with so many events on December 7, no one was sure what time Nevada got underway- Pryor thought it was 8:55; the ship's action report said 8:40. All agreed, though, that it was shortly before

the arrival of the second wave bombers. Chief Quartermaster Sedberry did a masterful job of maneuvering the ship down the channel past the burning Arizona, the sunken West Virginia and the capsized Oklahoma. The quartermaster deftly slipped the battleship between the dredge Turbine and the listing Oglala- a gap barely 100 yards wide. Nevada had the bad luck to be caught in the narrow channel just as the second wave of Japanese bombers appeared over Pearl Harbor. Fuchida, circling lazily over the harbor, recognized a golden opportunity. If only his planes could sink the battlewagon in the channel! His airmen could turn Nevada into a cork which would bottle up Pearl Harbor for weeks, perhaps months, to come.[31]

The battleship was abreast of the blazing floating drydock at 9:07, when dive bombers swarmed down on Nevada. Ensign Taussig, seriously wounded in the earlier attack, lay immobilized in a stretcher near the starboard antiaircraft director. Communication cables from the director were severed and the guns operated under local control, so there was little Taussig could do in any case. Ensign T. H. Taylor, commanding the port antiaircraft battery, directed his guns under strafing and falling bombs. Wounded, burned and deafened when a blast ruptured his eardrums, Taylor continued to direct his battery. At one point a pile of ammunition boxes turned red hot from flames; Taylor grabbed a hose and played the stream on the boxes until they were no longer in danger of exploding. Others on the

antiaircraft guns, inspired by the examples of Taussig and Taylor, remained at their posts despite the rain of bombs and bullets. Nevada's battle report singled out Boatswain's Mate First Class Solar and Seaman W. F. Neundorf, both killed in action, as gunners whose leadership and courage were especially worthy of mention.[32]

During the brief but ferocious attack most of the bombs hit Nevada's forward deck, turning the area into useless wreckage. There were so many holes in the deck, some from bombs penetrating on their way down, others from explosions within the ship, that it was impossible to tell with any certainty how many missiles struck the vessel. As power failed on ammunition elevators crewmen carried antiaircraft shells topside by hand. Some gun crews suffered terrible attrition. A bomb exploded in the casemate adjacent to Seaman Artis Teer's 5 inch gun. The blast blew through the steel bulkhead killing two men outright and knocking out Teer and severely wounding him in the back and buttocks. The rest of the crew abandoned the position, and thinking Teer dead, left him behind. He came to feeling no pain, but disoriented and in shock. He saw the gun mount in flames and through the fog of shock remembered there was a round in the chamber. He knew it would explode from the heat, so Teer staggered to the gun, elevated it, trained it out to sea and fired. That done, he was overcome with exhaustion. He said to himself, "I'll lay down here and die." [33]

He passed out once more and then regained consciousness again. He walked up to the next gun emplacement, where the bomb had exploded, and found two survivors there. One was terribly burned walking back and forth screaming in pain. The other walked with him, offering what comfort he could. With dive bombers still raining bombs and bullets on Nevada Teer moved forward to the next gun. He was still in shock "just looking for somebody to talk to". There the crew was uninjured. They wrapped Teer in a blanket and lowered him in a stretcher to a small boat alongside the stricken ship.

Crewmen below decks, too, faced their share of danger. Chief Carpenter's Mate James Curley commanded a repair party in the forward part of the ship which was sealed in a watertight compartment while bombs exploded nearby. He and his men watched helplessly as the armored deck heaved up and down from repeated blasts. Curley was overcome by smoke and passed out. When someone brought him to with artificial respiration he must have wondered whether it might have been better to remain unconscious. Machinist Donald Ross' station was in the forward dynamo room. When the smoke, steam and heat became too much he drove the other men out of the compartment. He manned the dynamo alone until he passed out. When he was rescued and resuscitated he went back and secured the station. Ross then went to the after dynamo, where he worked until he collapsed again. Once more he was carried out and brought around, and once again he

returned to the dynamo until finally he was ordered to abandon the post.[34]

Ensign Charles Merdinger was deep below, five decks down in the plotting room, the communications nerve center of the ship. Because of heavy casualties on the antiaircraft guns, word was passed below to send some of his men above as replacements. Merdinger selected those he felt superfluous. It was "a real Hobson's Choice", he remembered. Some of the men sent above were certain they were going to their deaths; some of those left behind thought they were doomed to drowning. Still, there were no objections voiced, even though Merdinger knew that "by virtue of experience or age or anything else I certainly wasn't the senior man there." It was at that moment the young ensign "realized the value of the gold braid on the hat." [35]

The fury of the attack soon had Nevada listing to starboard and settling by the bow. It was as clear to observers on shore as it was to Fuchida that the ship might well sink in the channel. Accordingly, Commander Thomas ran the ship aground at 9:10 at Hospital Point, just below the floating drydock, in obedience to a signal from the tower. To Seaman Eric Rabe in the signal tower it looked as though her bow almost touched Shaw's stern. Again, Boatswain Hill had a key role to play. The ship was still under attack, but someone had to go forward and release the anchor. Hill moved across the forecastle, began to prepare the anchor, and perished in a series of bomb explosions. Once she was

aground attacks on Nevada ceased, but the current swung her stern around into the channel stream. Several tugs, including Hoga, YT 129, YT 152 and YT 153, came alongside her port bow and played hoses on the fires. When the fires were under control an hour and a half later the tugs shifted Nevada to the opposite shore of the channel and grounded the ship on Waipio Point.[36]

1. Report of USS Tangier, January 1, 1942; Report of USS Curtiss, December 16, 1941; Report of USS Monaghan, December 30, 1941, CincPac Reports.

2. Ibid; PHA, 32:309; Tangier's claim to have hit the conning tower was confirmed when the sunken sub was later raised. The conning tower was found to have been holed by a 5 inch projectile.

3. Report of USS Monaghan; G. J. Bennett interview, NTSU.

4. Ibid.

5. G. J. Bennett interview.

6. Report of USS Monaghan.

7. Albert Fickel interview, ARME; Report of USS Pennsylvania, December 16, 1941; Report of USS Cassin, December 13, 1941; Report of USS Downes, undated, CincPac Reports.

8. Report of USS Downes; Report of USS Cassin.

9. Ibid.; Report of USS Pennsylvania.

10. Report of USS Downes.

11. Lord, 139-40; Report of USS Pennsylvania, December 16, 1941, CincPac Reports.

12. Report of USS Downes; Report of USS Cassin.

13. Ibid.

14. Ibid.; Report of USS Pennsylvania.

15. Ibid.

16. Report of USS Pennsylvania; Memo Cdr. H. A. Turner to Manager, Pearl Harbor Navy Yard, December 13, 1941, Fourteenth Naval District Reports.
17. Memo Lt. W. R. Spear to Captain of the Yard, Pearl Harbor Navy Yard, December 20, 1941, Fourteenth Naval District Reports.
18. Statement of Tai Sing Loo, Hawaii War Records Depository, University of Hawaii Library, Honolulu (hereafter HWRD).
19. Statement of Ponciano Bernardino, HWRD.
20. Report of USS Downes; Report of USS Cassin; Report of USS Pennsylvania.
21. Lord, 142.
22. Report of Public Works Officer, Pearl Harbor Navy Yard, December 15, 1941, Fourteenth Naval District Reports.
23. Log of USS Honolulu, December 7, 1941, Operational Archives.
24. Ibid.
25. Report of USS Raleigh, December 13, 1941; Supplementary report of Capt. R. B. Simons, June 10, 1943, CincPac Reports.
26. Report of USS Curtiss.
27. Ibid.; Lord, 142-43.
28. Report of USS Nevada, December 15, 1941, CincPac Reports; Lord, 135-36.
29. Dan Wentrcek interview, NTSU.
30. Statements of CSM W. Pryor and SM3 A. J. Houghton, undated, Fourteenth Naval District Reports.
31. Ibid.; Report of USS Nevada; Prange, 536.
32. Report of USS Nevada; PHA, 23:704-05; Lord, 137.
33. Report of USS Nevada; James Clark interview, ARME; Artis Teer interview, NTSU.
34. PHA, 23:719-20; Medal of Honor Recipients, 668.
35. Charles Merdinger interview, USNIOH.
36. Report of USS Nevada; Lord, 138-39; Statements of various

signal tower personnel and reports of various yardcraft,
Fourteenth Naval District Reports.